
Flood Money: The Challenge of U.S. Flood Insurance Reform in a Warming World

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ABSTRACT

Congress's reforms of the National Flood Insurance Program ("NFIP") in 2014 continued its misguided approach to flood insurance policy, ignoring the increased risks of floods posed by climate change and giving generous subsidies to flood-prone properties. The Article analyzes the recent reforms against a backdrop of the NFIP's history, impacts, and structure, and makes recommendations for steps Congress should take when it revisits the program in 2017. The NFIP has encouraged retention of older flood-prone properties and building in flood-prone areas, which makes little sense given the risks we face. The NFIP, deeply in debt to the Treasury Department, rests in part on an approach to flood risk where risks are pooled but what individuals pay is often not based on actual flood risk. This solidaristic approach to flood risk, where the government subsidizes hundreds of thousands of flood policies, is not based on need or any other credible policy principle.

Further, the justifications for continuing the subsidies are weak when compared to other contexts where the federal government has been involved in solidaristic approaches to insurance such as the Affordable Care Act, unemployment insurance, and promoting insurance in urban areas. Congress should gradually remove flood insurance subsidies, fund

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accurate maps, and allow rates to be based on risk. Because flood insurance is mandatory for mortgage-holders in flood-prone areas, and risk-based rates may be overly harsh for low-income homeowners, a limited means-tested program should be passed which would allow these homeowners to receive insurance at reduced rates.

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INTRODUCTION

In 2012, Congress responded to decades of criticism of the National Flood Insurance Program (“NFIP”), which supplies flood insurance to homeowners, and passed substantial reforms by a large bipartisan majority.¹ Huge general subsidies for the highest risk properties² and massive storms³ led to a debt of \$24 billion that the NFIP owed the

1. The 2012 reforms were known as the Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12), Pub. L. No. 112-141, §§ 100201–100249, 126 Stat. 405, 916–69 (codified at 42 U.S.C. §§ 4001–4130 (2012)). Criticisms have centered on the program’s deficits, subsidies, environmental effects, incentives, costs, rate-making, communication, and mapping. *See infra* Part II.

2. *See infra* Part I.A.4 and Part I.B.2.

3. Hurricane Katrina in 2005, Hurricane Ike in 2008, and subsequent storms such as Superstorm Sandy have led to very high flood losses. *See* HOWARD C. KUNREUTHER & ERWANN O. MICHEL-KERJAN, AT WAR WITH THE WEATHER: MANAGING LARGE-SCALE

Treasury Department.⁴ In the 2012 reforms, Congress moved away from the solidaristic approach to flood risk⁵ that it had used for almost five decades, which generously subsidized premiums for the highest risk properties, to an actuarial approach in which premiums eventually would

RISKS IN A NEW ERA OF CATASTROPHE 4–10 (2011) (showing hurricane costs prior to Sandy); Don Jergler, *EQECAT: Colorado Floods \$2B in Economic Losses and Climbing*, INS. J. (Sept. 20, 2013), <http://insurancejournal.com/news/west/2013/09/20/305896.htm> (reporting that the catastrophe modeling firm known as EQECAT estimates \$50 billion in losses from Superstorm Sandy, much of which was insured, and \$2 billion from early September 2013 Colorado floods, only a tiny fraction of which was insured); U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-13-607, FLOOD INSURANCE: MORE INFORMATION NEEDED ON SUBSIDIZED PROPERTIES 2 n.2 (2013) [hereinafter GAO, 2013 SUBSIDIZED PROPERTIES REPORT] (noting that losses from Superstorm Sandy led to increasing FEMA's borrowing limit in January 2013). The response to Katrina highlighted with stunning force some of the shortcomings of U.S. flood policy. Adam F. Scales, *A Nation of Policyholders: Governmental and Market Failure in Flood Insurance*, 26 MISS. C. L. REV. 3, 7 (2007) (outlining how the events of Katrina were precisely predicted well in advance but the response prepared in advance was wholly inadequate). The literature on Hurricane Katrina is too vast to summarize here. See generally ON RISK AND DISASTER: LESSONS FROM HURRICANE KATRINA 109 (Ronald J. Daniels, Donald F. Kettle & Howard C. Kunreuther eds., 2006) [hereinafter ON RISK AND DISASTER]. The insurance litigation brought by homeowners to recover some of their losses from Hurricane Katrina showcased some of the challenges and failures of U.S. flood insurance and U.S. private insurance. After Hurricane Katrina, it was revealed that many people who should have had insurance both for flood and other risks did not have it. Donald T. Hornstein, *The Balkanization of CAT Property Insurance: Financing and Fragmentation in Storm Risks*, 11 RUTGERS J.L. & PUB. POL'Y 9, 7–8 (2013); Charlene Luke & Aviva Abramovsky, *Managing the Next Deluge: A Tax System Approach to Flood Insurance*, 18 CONN. INS. L.J. 1, 11 n.48 (2011); Scales, *supra*, at 14. Further, many homeowners litigated the 'concurrent cause provisions' in their policies, which provided that if a covered cause (wind) combined with an excluded cause (flood) to cause loss to a homeowner, the entire loss was not covered. These clauses, which often resulted in homeowners having minimal or nonexistent coverage, were upheld by the Fifth Circuit. Hornstein, *supra*, at 12–14.

4. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-14-127, FLOOD INSURANCE: STRATEGIES FOR INCREASING PRIVATE SECTOR INVOLVEMENT 1 (2014) [hereinafter GAO, 2014 PRIVATE SECTOR INVOLVEMENT REPORT].

5. See JOHN O'NEILL & MARTIN O'NEILL, JOSEPH ROWNTREE FOUND., SOCIAL JUSTICE AND THE FUTURE OF FLOOD INSURANCE (2012), available at <http://www.jrf.org.uk/sites/files/jrf/vulnerable-households-flood-insurance-summary.pdf> (explaining solidaristic and actuarial concepts of insurance; a solidaristic approach involves risk pooling with payment into the pool in accordance with an agreed upon arrangement usually based on a concept of equity or need; actuarial approach also involves risk pooling but payments into the pool are based on the best estimate of the individual's risk). See generally TOM BAKER, INSURANCE LAW & POLICY 12–15, 21 (2012) (discussing a solidaristic concept of insurance and the relationship between insurance and social responsibility); KENNETH S. ABRAHAM, DISTRIBUTING RISK: INSURANCE, LEGAL THEORY, AND PUBLIC POLICY (1986).

be based on a house's actual flood risk.⁶ Congress also made other changes, such as supplying more funds for making accurate maps.⁷ The reforms meant that rates of homeowners with properties at high risk of flood would, in some cases, rise substantially over time. Faced with the resulting furor over rising rates, in March 2014 Congress reversed many of the reforms by a large bipartisan majority.⁸ Congress largely reinstated its prior solidaristic approach of huge general subsidies to high-risk properties while making other changes.⁹ In 2017, Congress must revisit the NFIP.¹⁰ This Article analyzes this extraordinary saga, which raises basic issues of governance, risk, the federal government's role, and climate change.¹¹ Congress has an opportunity to learn from the debacle of the failed reforms, and this Article draws lessons from the reform failure and makes recommendations for steps Congress should take in 2017.¹²

Floods, both coastal and riverine, are the most costly form of natural disaster in the United States.¹³ Floods from rain in Colorado in 2013 and from Superstorm Sandy in 2012 resulted in massive human and financial losses.¹⁴ Floods are likely to get much more frequent, severe, and expensive in the coming decades due to the effects of climate change and population growth.¹⁵ Floods and their costs create huge, interlocking

6. An actuarial approach to insurance requires that individuals "bear the costs of their own risks when you align the costs they face with their associated level of risk." O'NEILL & O'NEILL, *supra* note 5, at 6.

7. Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12), Pub. L. No. 112-141, §§ 100201–100249, 126 Stat. 405, 916–69 (codified at 42 U.S.C. §§ 4001–4130 (2012)). See generally *Questions About the Biggert-Waters Flood Insurance Reform Act of 2012*, FEMA.GOV, http://www.fema.gov/media-library-data/20130726-1912-25045-9380/bw12_qa_04_2013.pdf (last visited Sept. 19, 2014) [hereinafter *FEMA 2012 Overview*]; *Summary of Biggert-Waters Act of 2012*, NAT'L ASS'N INS. COMMISSIONERS, http://www.naic.org/documents/cipr_events_2012_cipr_summit_overview.pdf (last visited Sept. 19, 2014) [hereinafter *NAIC Overview*]; U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-06-497T, GAO'S HIGH-RISK PROGRAM 7 (2006) [hereinafter *GAO, 2006 FLOOD INSURANCE HIGH-RISK REPORT*] (outlining fiscal issues with flood program).

8. Homeowner Flood Insurance Affordability Act of 2014, Pub. L. No. 113-89, §§ 3–4, 128 Stat. 1020, 1021–22 (to be codified at 42 U.S.C. §§ 4014(g), 4015).

9. See *infra* Part III.B.

10. § 100203(b), 126 Stat. at 916 (codified at 42 U.S.C. § 4026).

11. See *infra* Parts I–III.

12. See *infra* Part IV.

13. *Flood Insurance*, INS. INFO. INST. (July 2014), http://www.iii.org/issues_updates/flood-insurance.html [hereinafter *INS. INFO. INST., Flood Insurance*].

14. See, e.g., Jergler, *supra* note 3 (estimating Superstorm Sandy and Colorado flooding costs).

15. See generally, e.g., FED. EMERGENCY MGMT AGENCY, 2011-OPPA-01, ADMINISTRATOR POLICY, FEMA CLIMATE CHANGE ADAPTATION POLICY STATEMENT (2011) [hereinafter *FEMA CLIMATE CHANGE ADAPTATION STATEMENT*] (outlining the

public policy and governance issues, many of which have questions of risk and insurance at their core. Floods in populated areas raise thorny, enduring questions about the roles of many actors, including governments at all levels, the private insurance industry, and individuals, in paying for flood losses and preventing future losses.¹⁶

Compensation of flood losses in the past century has largely come from the federal government in the form of disaster relief and, since 1968, in the form of flood insurance supplied by the federal government.¹⁷ Among industrialized nations, the United States alone bears all the underwriting risk of these policies.¹⁸ At the same time, land use planning has been largely a local and state governmental concern.¹⁹ Private insurance has rarely insured for homeowners' risk of flood for more than 50 years.²⁰ Dilemmas concerning what to do about flooding

agency-wide directive to integrate climate change adaptation planning, including planning for more intense storms, extreme flooding, and higher sea levels in its processes); U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-13-359T, GAO'S 2013 HIGH-RISK SERIES: AN UPDATE (2013) [hereinafter, GAO, MANAGING CLIMATE CHANGE RISKS] (adding to the GAO's high-risk list the following: "Limiting the Federal Government's Fiscal Exposure by Better Managing Climate Change Risks"); AECOM, THE IMPACT OF CLIMATE CHANGE AND POPULATION GROWTH ON THE NATIONAL FLOOD INSURANCE PROGRAM THROUGH 2100 (2013).

16. See *infra* Part I.A. Debates about the federal government's role in connection with floods stretch back to the nineteenth century. DAVID MOSS, WHEN ALL ELSE FAILS: GOVERNMENT AS THE ULTIMATE RISK MANAGER 258–62 (2001). See generally JAMES M. WRIGHT, ASS'N OF STATE FLOODPLAIN MANAGERS, THE NATION'S RESPONSES TO FLOOD DISASTERS: A HISTORICAL ACCOUNT (Wendy L. Hessler ed., 2000) [hereinafter THE NATION'S RESPONSES] (providing a historical review of governmental responses to floods).

17. Scales, *supra* note 3, at 7; GAO, 2006 FLOOD INSURANCE HIGH RISK-REPORT, *supra* note 7, at 7.

18. INS. INFO. INST., *Flood Insurance*, *supra* note 13.

19. Scales, *supra* note 3, at 12.

20. SOSS, *supra* note 16, at 262 (explaining that private insurance companies discontinued selling flood insurance by the end of 1928); Luke & Abramovsky, *supra* note 3, at 22 (highlighting the absence of a private market for homeowners flood insurance); GAO, 2006 FLOOD INSURANCE HIGH-RISK REPORT, *supra* note 7, at 7 (highlighting the absence of a private market for homeowners flood insurance). While standard homeowners policies exclude flood, generally they cover damage from wind. However, this wind coverage is being "hollowed out" by policy language, large deductibles, and in some cases insurers deciding not to cover wind. The most well known examples are the now-standard concurrent causation clauses, which provide that if wind damage combines with water damage, the entire loss is uncovered. These clauses were upheld after Hurricane Katrina in extensive litigation, which was resolved by the Fifth Circuit. Hornstein, *supra* note 3, at 6–12. This has led some states to develop windstorm insurance plans, which, along with state hurricane insurance plans, this Article does not discuss in detail. See *infra* Part IV.C. See generally KUNREUTHER & MICHELKERJAN, *supra* note 3.

and insurance are international in scope.²¹ The general subsidies, costs, rate-making, and environmental effects of the NFIP have long been widely criticized,²² and reforms have periodically been made.²³ Despite criticisms of federal flood policies and suspicion of the federal

21. Climate change and population growth are leading to more and increasingly costly floods in many parts of the world. See THE WORLD BANK, NATURAL HAZARDS, UNNATURAL DISASTERS 169–86 (2010); THOMAS F. STOCKER ET AL., INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2013, at 50 (2013), available at http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf. The Geneva Association, an international think tank for the insurance industry, considers climate risk serious and warns that ocean warming may lead to much more severe storm losses which may overwhelm traditional catastrophe models if adequate mitigation is not performed in advance. FALK NIEHÖRSTER, GENEVA ASS'N, WARMING OF THE OCEANS AND IMPLICATIONS FOR THE (RE)INSURANCE INDUSTRY 3 (2013), available at https://www.genevaassociation.org/media/616661/ga2013-warming_of_the_oceans.pdf; see also sources cited *supra* note 15. Currently the United Kingdom, Canada, and many other countries are struggling with what to do about flooding and insurance. The UK is considering a plan known as “Flood Re,” which will involve a surcharge on all policies in order to cover floods, a policy known as “bundling,” since old models have not proven workable. Tim Ross, *Everyone Faces Higher Bills for Flood Insurance*, TELEGRAPH (Aug. 23, 2013, 10:00 PM), <http://www.telegraph.co.uk/topics/weather/10263654/Everyone-faces-higher-bills-for-flood-insurance.html>; *The Future of Flood Insurance: What Happens Next*, ASS'N BRITISH INSURERS, <https://www.abi.org.uk/News/News-releases/2013/06/~link.aspx?id=E483D07DA3BD43BDB730A671A1C853CA&z=z> (last updated July 17, 2014). Canada historically has regarded flood risks as uninsurable, and households have not been able to purchase flood insurance. *Canadian P & C Industry Researching the Possibility of Offering Overland Flood Insurance*, CLAIMS CANADA (Oct. 2010), <http://www.claimscanada.ca/issues/article.aspx?aid=1000390323&er=NA>. The Calgary floods of 2012 resulted in pressure on insurance companies and government to cover losses. Jacqueline Nelson, *Insurance Brands Feel Force of Floods*, GLOBEADVISOR.COM (July 17, 2013), <http://www.globeadvisor.com/servlet/ArticleNews/story/gam/20130717/RBINSURERSHAME0716ATL>. See also Peter Hannam, *Flood Cover Rises to Unaffordable Levels*, SYDNEY MORNING HERALD (Feb. 17, 2013), <http://www.smh.com.au/environment/water-issues/flood-cover-rises-to-unaffordable-levels-20130216-2ejvb.html> (discussing flood insurance issues in Australia).

22. See *infra* Parts II, III; see, e.g., GAO, 2006 FLOOD INSURANCE HIGH RISK-REPORT, *supra* note 7, at 5; John Tierney, Op-Ed, *Ben Franklin Had the Right Idea for New Orleans*, N.Y. TIMES (Sept. 3, 2005), <http://www.nytimes.com/2005/09/03/opinion/03tierney.html>; Judith Kildow & Jason Scorse, Op-ed, *End Federal Flood Insurance*, N.Y. TIMES (Nov. 28, 2012), <http://www.nytimes.com/2012/11/29/opinion/end-federal-flood-insurance.html>.

23. See *infra* Parts I and II; see, e.g., Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004, Pub. L. No. 108-264, 118 Stat. 712 (codified at 42 U.S.C. § 4001 (2006)) (amended 2012). See generally Rachel Lisotta, Comment, *In Over Our Heads: The Inefficiencies of the National Flood Insurance Program and the Institution of Federal Tax Incentives*, 10 LOY. MAR. L.J. 511, 517–524 (2012) (summarizing reforms prior to 2012).

government, when a flood strikes, officials, communities, and individuals in flood-stricken communities routinely rely on federal aid.²⁴

Flooding and the losses it creates present perplexing public policy dilemmas, which are likely to become even more vexing in the future. Flood losses raise difficult public policy issues for at least three reasons. First, flood losses are a problem that all individuals, except the very wealthy, generally cannot manage on their own; if a home is destroyed by flood, resources from insurance, government, or some other source are needed if homeowners are to rebuild. Second, the complex, varied nature of flood risks makes them particularly challenging from a public policy point of view. For example, flood risk varies radically between and within different regions. Further, flood risks are in no one's individual control.²⁵ Yet the amount of damages caused by floods also depends significantly on how properties are constructed, as well as where they are located.²⁶ Thus, the risks are partly within individuals' control and partly beyond it.²⁷ Moreover, flood risks change over time and require expensive mapping to predict.²⁸ Third, when there is an actual flood, the losses in a particular area are likely to be astronomical; flood risks are characterized as "correlated risks" because they lead to very widespread losses from the same hazard. This potential for extensive

24. See William P. Marshall, *National Healthcare and American Constitutional Culture*, 35 HARV. J.L. & PUB. POL'Y 131, 144–147 (2012) (highlighting particularly American distrust of government). Federal disaster aid is triggered by presidential disaster declarations under the Stafford Act. Gregory J. Lake, *Federal and State Disaster Response: An Introduction*, 41 COLO. LAW. 95, 95 (2012). Federal disaster aid declarations are more common in presidential election years than in off-years. KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 122–126.

25. The risks of increased severe weather and sea level rise linked with climate change have been widely publicized. *E.g.*, FEMA CLIMATE CHANGE ADAPTATION STATEMENT, *supra* note 15. Some people choose to subject themselves to those risks by buying property in flood-prone areas; others may lack the resources to move, raising questions about whether living in a flood prone location is a true choice. See generally Kathleen Tierney, *Social Inequality, Hazards, and Disasters*, in ON RISK AND DISASTER, *supra* note 3, at 109. For further discussion, see *infra* Part IV.

26. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-11-429T, FLOOD INSURANCE: PUBLIC POLICY GOALS PROVIDE A FRAMEWORK FOR REFORM 8 (2011) [hereinafter GAO, 2011 PUBLIC POLICY GOALS REPORT] (describing FEMA mitigation efforts and stating that 30,000 properties had been mitigated using FEMA funds between fiscal years 1997 through fiscal year 2007); INS. INFO. INST., *Flood Insurance*, *supra* note 13 (citing research that buildings constructed to NFIP standards suffer about a fifth of the damage annually of buildings not constructed to such standards).

27. See generally ABRAHAM, *supra* note 5, at 19–20 (using an example of a group of people who are more at risk of certain harm and yet may take some precautions against it, to illustrate complexity of risk classification issues).

28. *E.g.*, FEMA CLIMATE CHANGE ADAPTATION STATEMENT, *supra* note 15.

loss makes it very difficult for private companies to profitably sell flood insurance.²⁹

Two recent developments from outside the field of insurance may help with the public policy challenges of flood insurance. First, newly developed mapping technology will permit a much more nuanced analysis and dissemination of information about flood risk than was possible in the past.³⁰ Second, research on how humans evaluate risk and make decisions has burgeoned during the past few decades. This research, falling broadly under the rubric of behavioral economics, has shown that the decision-making behavior of individuals differs in significant ways from the model predicted by classical economics.³¹ By recognizing how human behavior concerning risk differs from traditional models, this research bears directly on insurance and insurance law and helps explain some of the otherwise puzzling human behavior concerning flood insurance.³² With improved mapping data and greater understanding of how humans make decisions, flood insurance and policy may be improved.

Governments understandably become involved with floods, flood risks, and flood costs, but there are no simple economic, political, or legal responses.³³ The dilemma of the federal government's role

29. See *infra* Part II.B (explaining supply and demand side issues connected to flood insurance); HOWARD C. KUNREUTHER, MARK V. PAULY & STACEY MCMORROW, INSURANCE AND BEHAVIORAL ECONOMICS: IMPROVING DECISIONS IN THE MOST MISUNDERSTOOD INDUSTRY 83–88 (2013) [hereinafter INSURANCE AND BEHAVIORAL ECONOMICS] (explaining effects of correlated risks on insurance supply); Scales, *supra* note 3, at 11 (explaining how floods lead to correlated losses, in contrast to other casualty losses such as fire and auto accidents, which tend to be uncorrelated).

30. See, e.g., *Levees and the National Flood Insurance Program*, NAT'L ACAD. SCIS. (2012), <http://nas-sites.org/levees/report-summary/> [hereinafter NAT'L ACAD. OF SCIS., *Levee Report*]; Dave Owen, *Mapping, Modeling, and the Fragmentation of Environmental Law*, 2013 UTAH L. REV. 219 (explaining how mapping technology can improve environmental law).

31. Works popularizing this research include RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS* (2008) and DANIEL KAHNEMAN, *THINKING, FAST AND SLOW* (2011).

32. See *infra* Part II.B.2.

33. See generally Michael J. Trebilcock and Ronald J. Daniels, *Rationales and Instruments for Government Intervention in Natural Disasters*, in ON RISK AND DISASTER, *supra* note 3, at 89–94 (outlining divergent normative perspectives—libertarian, corrective justice, economic efficiency, distributive justice, communitarian—on both the justifications for governmental intervention in natural disasters and the means that might be used for government to intervene and concluding there are no unitary answers); Craig Brown & Sara Seck, *Insurance Law Principles in an International Context: Compensating Losses Caused by Climate Change*, 50 ALBERTA L. REV. 541, 541–76 (2013) (asserting that there are no probable international solutions to compensate losses caused by climate change).

stretches back more than a century.³⁴ It has become a political necessity for the federal government to supply billions of dollars in disaster relief annually, although it was not so 100 years ago.³⁵

When government gets involved with insurance, it can take an approach that is solidaristic, actuarial, or a combination of the two. A solidaristic approach to insurance is one where risks are pooled, but the amount an individual pays is not closely tied to the amount of risk faced by the particular individual.³⁶ The NFIP was based in significant part on a solidaristic approach.³⁷ Solidaristic approaches to insurance are often used when a particular policy need for broad coverage is considered compelling, such as Britain's or Canada's National Health Service.³⁸ The solidaristic approach contrasts with an actuarial approach, in which risks are also pooled, but the amount people pay is based on the best estimates of the risks faced by the individual.³⁹ Private insurance companies in a functioning market take an actuarial approach.⁴⁰

Federal flood policy should respond to the growing challenge of more frequent and destructive flooding. Yet bipartisan majorities have moved the NFIP in opposite directions in the past two years, first reforming it in 2012 and then repealing many of those reforms in 2014. This Article explains how the NFIP started and evolved, how it has worked, why it is proving so difficult to reform, and how it should be changed when Congress takes up the issue of flood insurance in 2017.

Part I outlines federal flood policy, highlighting the solidaristic approach to flood risk which has focused on providing heavily subsidized flood insurance to risky properties and has resulted in the NFIP's current deficit of \$24 billion. Part I also outlines the NFIP, including its evolution, goals, subsidies, bailouts, and the relationships between floodplain management, disaster relief, and flood insurance. Part II assesses the NFIP prior to the 2012 reforms, showing how its goals conflicted—while the reform aimed to save the federal government money by reducing the amount of property at risk of floods, it also had a goal of providing flood insurance on “reasonable terms and conditions” to people who could otherwise not acquire it. Part II also sketches the many challenges of insuring flood risk, from both a supply and demand

34. THE NATION'S RESPONSES, *supra* note 16, at 7.

35. S OSS, *supra* note 16, at 258–262.

36. O'NEILL & O'NEILL, *supra* note 5, at 7.

37. *See infra* Parts I.A.4, I.B.2.

38. O'NEILL & O'NEILL, *supra* note 5, at 7. With these national health programs, the coverage is funded through tax revenues rather than premiums. *Id.*

39. *Id.* at 6.

40. *Id.*

perspective, and highlights insights from behavioral economics that help explain why demand is so low even though the price is far below cost. Part II also outlines consequences of the NFIP, including increased development in flood-prone areas, incentives to not renovate older properties, and enduring deficits. Part III explains the reforms of 2012 and 2014, explaining how and why the move towards risk-based actuarial rates and away from solidaristic “affordability” concerns begun by Congress in 2012 was largely undone in 2014. Part IV offers recommendations to Congress, suggesting that further continuing the general subsidies to risky properties, coupled with the incentives these subsidies create, is unjustifiable, particularly given climate change. The case for continuing broad subsidies in this context is much weaker than other contexts where the federal government has been involved with insurance, such as federal unemployment insurance, urban property insurance, and the Affordable Care Act. Given the weak case for subsidies and their negative consequences, Congress should gradually phase out the general subsidies and require that rates be based on risk. At the same time, the fact that flood insurance is mandatory for mortgage-holders suggests that an affordability plan is needed; Congress should adopt a narrow means-tested program for the truly needy. Further, although it is extremely unlikely, Congress should pass a comprehensive framework to deal with the long-term effects of climate change. Fixing the flood program, by contrast, is a realistic goal. If mapping of flood risk is protected from political influence, rates are gradually adjusted to reflect flood risk, and a carefully targeted affordability plan is included, U.S. flood insurance policy will be substantially improved.

I. FEDERAL FLOOD POLICY AND FLOOD INSURANCE: BACKGROUND, BASICS, AND EVOLUTION

A. *Background and Basics*

How and why did the federal government become so deeply involved in floods and homeowners’ flood insurance? This section outlines the historical trajectory, basics, and evolution of the NFIP since its inception in 1968. The historical trajectory begins with flood control, leads to disaster relief, and then reaches insurance.

1. Origins of Federal Involvement with Floods: Mississippi Flooding

The federal government's involvement in flooding began in the nineteenth century in connection with periodic inundation of the Mississippi Delta.⁴¹ Locally constructed levees eventually proved inadequate to protect the growing agricultural communities from recurrent floods, and as the century wore on, pressure built on Congress to develop coordinated flood control.⁴² Starting in 1917, many federal flood control acts were passed, authorizing levee construction and other measures aimed at controlling floodwaters.⁴³ Federal disaster aid began in 1927 when a huge flood along 2000 miles of the Mississippi devastated multiple communities.⁴⁴ After 1927, citizens and politicians increasingly expected disaster relief payments from the federal government, and payment size grew as population growth, development in flood-prone areas, and floods continued.⁴⁵

2. Flood Insurance Program Origins: A Market Void, the Great Society, and a Drive Towards Implementation

Insurance came into the picture with the National Flood Insurance Act of 1968 (the "Flood Act"), which created the NFIP. Concern about the growing costs of disaster relief, the lack of private insurance availability, and development in flood-prone areas led to the Flood Act and later revisions.⁴⁶

The Flood Act was passed as part of the Housing and Urban Development Act of 1968 ("HUD Act"), a fact that is seldom noted.⁴⁷ The HUD Act provided not only for the NFIP but also for urban property protection and reinsurance.⁴⁸ Rural interests that wanted flood insurance (mostly for river flooding at that time) came together with urban interests that wanted relief from losses to property caused by recent riots; without

41. THE NATION'S RESPONSES, *supra* note 16, at 4–5.

42. *Id.* at 6; see Mark C. Niles, *Punctuated Equilibrium: A Model for Administrative Evolution*, 44 J. MARSHALL L. REV. 353, 392–403 (2011) (analyzing impact of 1927 Mississippi flood).

43. THE NATION'S RESPONSES, *supra* note 16, at 7–12; Scales, *supra* note 3, at 6.

44. MOSS, *supra* note 16, at 258; Scales, *supra* note 3, at 7; Niles, *supra* note 42.

45. MOSS, *supra* note 16, at 258–262.

46. While the insurance industry had opposed prior acts with a similar purpose in the 1950s, in 1968 the industry supported the proposal. *Id.* at 262–65.

47. THE NATION'S RESPONSES, *supra* note 16, at 33–34.

48. *Id.*

both these interests, the NFIP likely would not have come into existence.⁴⁹

It is worth reflecting on why the federal government would be involved in property insurance for individual homeowners. After all, in the United States, we have a robust private insurance industry that insures losses to property and an oft-stated preference for markets.⁵⁰ When homes are mortgaged, lenders require that homeowners purchase property insurance covering risks to their homes; the vast majority of homeowners now have this coverage.⁵¹ Yet, private homeowners coverage does not cover flood and water damage and has excluded these types of losses since at least the mid-twentieth century.⁵² The federal government provided flood insurance in part to try to fill this void in the market coverage of these losses.⁵³ The NFIP was passed in an era when optimism about the government solving problems was at its zenith and when a large Democratic majority filled both houses under the leadership

49. *Id.* at 33.

50. This stated preference for markets is much moderated by other considerations such as the importance to society and legislators of the activity at hand. For example, automobile insurance is not left to the market; drivers are required to buy liability insurance and insurance for their own injuries in many states, and insurers in every state are required to sell liability insurance to high-risk drivers they would rather not insure. See Jennifer Wriggins, *Mandates, Markets, and Risk: Auto Insurance and the Affordable Care Act*, 19 CONN. INS. L.J. 275, 301–04, 318–21 (2013). States regulate property insurance rates for excessiveness, inadequacy, and unfair discrimination. Angelo Borselli, *Insurance Rates: Regulation in Comparison with Open Competition*, 18 CONN. INS. L.J. 109, 128–32 (2011).

51. Scales, *supra* note 3, at 17–18.

52. KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 84–85; MOSS, *supra* note 16, at 262; Scales, *supra* note 3, at 17; GAO, 2006 FLOOD INSURANCE HIGH-RISK REPORT, *supra* note 7, at 6–7; Luke & Abramovsky, *supra* note 3, at 21–22.

53. The congressional findings and declaration of purpose for the National Flood Insurance Act state:

The Congress also finds that (1) many factors have made it uneconomic for the private insurance industry alone to make flood insurance available to those in need of such protection on reasonable terms and conditions; but (2) a program of flood insurance with large-scale participation of the Federal Government and carried out to the maximum extent possible by the private insurance industry is feasible and can be initiated.

42 U.S.C. § 4001 (2012). Market failure is a widely accepted reason for the government to provide insurance, and many believe that there was market failure before the federal government began providing federal flood insurance. Scales, *supra* note 3, at 17–18. *But see* Eli Lehrer, *Watery Marauders: How the Federal Government Retarded the Development of Private Flood Insurance*, ISSUE ANALYSIS, Aug. 2007, at 21–22 (arguing federal policy such as levee construction and federal government support of flood insurance made private market sale of flood insurance even more unattractive than it would otherwise have been). In any event, with barriers to entry like expensive flood maps and the highly correlated risk of floods, it was not an enticing market for the private sector. Scales, *supra* note 3, at 17–18.

of President Johnson.⁵⁴ It was part of a shift in government risk management that took place in the 1960s, emphasizing government protection of consumers, homeowners, and others from myriad risks.⁵⁵

The new law had room for a flexible timetable to implement the flood insurance program, and a number of experts recommended proceeding with it on a pilot basis.⁵⁶ Experts recommended caution because identifying flood hazard areas, setting insurance rates, and giving technical advice to states and communities on floodplain management would be very expensive, time-consuming, and complicated.⁵⁷ However, the first administrator of the program, in tune with the spirit of the Great Society, moved aggressively to establish a national program.⁵⁸

3. The Flood Act's Broad Goals for the National Flood Insurance Program

The Flood Act envisioned several goals for the NFIP. On the one hand, as phrased by the Government Accountability Office ("GAO"), the NFIP was intended "to reduce the federal government's escalating costs for repairing flood damage after disasters."⁵⁹ On the other hand, its primary public policy goal was to provide "flood insurance in flood-prone areas to property owners who otherwise would not be able to obtain it," under "reasonable terms and conditions."⁶⁰ Another goal was to improve floodplain management so that flood losses would be less severe than they otherwise would be.⁶¹ The statute also called for a

54. See Scales, *supra* note 3, at 19.

55. MOSS, *supra* note 16, at 8–9, 264.

56. 42 U.S.C. § 4001; THE NATION'S RESPONSES, *supra* note 16, at 33.

57. THE NATION'S RESPONSES, *supra* note 16, at 33.

58. *Id.* at 34. The term 'Great Society' was President Lyndon Baines Johnson's term to refer to his legislative agenda in the 1960s, including aid to education, Medicare, urban renewal, antipoverty programs, expansion of social security, and the Voting Rights Act. See Lyndon B. Johnson, WHITE HOUSE, <http://www.whitehouse.gov/about/presidents/lyndonbjohnson/> (last visited Sept. 4, 2014). See generally JOHN A. ANDREW III, LYNDON JOHNSON AND THE GREAT SOCIETY (1999).

59. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-10-631T, NATIONAL FLOOD INSURANCE PROGRAM, CONTINUED ACTIONS NEEDED TO ADDRESS FINANCIAL AND OPERATIONAL ISSUES 4 (2010) [hereinafter GAO, 2010 CONTINUED ACTIONS NEEDED REPORT].

60. *Id.* at 5; 42 U.S.C. § 4001(a).

61. The congressional findings and declaration state in part:

[A]s a matter of national policy, a reasonable method of sharing the risk of flood losses is through a program of flood insurance which can complement and encourage preventive and protective measures; and if such a program is initiated and carried out gradually, it can be expanded as knowledge is gained and experience is appraised, thus eventually making flood insurance coverage

unified floodplain management program.⁶² The ultimate goal was twofold: (1) that the federal government could develop a workable flood insurance product that would pay for homeowners' flood losses, and (2) that this insurance, coupled with incentives for local communities to have and enforce land use measures that would reduce the damage from floods, would ultimately lower the amount of funding needed for federal disaster relief.⁶³

4. The Basic Framework

The broad framework was a carrot approach: if communities in flood-prone areas adopted floodplain management strategies and land use codes acceptable to the federal government, the residents of those communities would be eligible to purchase government-provided flood insurance which they could not purchase otherwise.⁶⁴ Even the most high-risk properties located in flood zones would be sold insurance; no risk was too great to be insured.⁶⁵

However, there was no stick to go with the carrot to limit development in floodplains and ultimately reduce federal disaster relief costs. Few mechanisms existed to ensure that communities enforced their land-use regulations.⁶⁶

available on reasonable terms and conditions to have persons who have need for such protection.

42 U.S.C. § 4001(a). Further:

[A] program of flood insurance can promote the public interest by providing appropriate protection against the perils of flood losses and encouraging sound land use by minimizing exposure of property to flood losses; and (2) the objectives of a flood insurance program should be integrally related to a unified national program for management.

42 U.S.C. § 4001(c). Scales, *supra* note 3, at 12, 14.

62. "Unified national program for floodplain management[.] The Congress further finds that . . . (2) the objectives of a flood insurance program should be integrally related to a unified national program for flood plain management" 42 U.S.C. § 4001(c).

63. Scales, *supra* note 3, at 12, 14. Land use planning is, of course, typically a local and state concern. *Id.* at 12.

64. KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 84–85; Scales, *supra* note 3, at 12; INS. INFO. INST., *Flood Insurance*, *supra* note 13, at 2. If a person lived in a high risk area and her community did not adopt a management plan, the federal insurance was not available. However, all or virtually all inhabited flood-prone areas have adopted an acceptable management plan. Luke & Abramovsky, *supra* note 3, at 8.

65. Scales, *supra* note 3, at 13; U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-09-12, FLOOD INSURANCE: FEMA'S RATE-SETTING PROCESS WARRANTS ATTENTION 11–18 (2008) [hereinafter GAO, 2008 FEMA'S RATE-SETTING PROCESS REPORT].

66. Scales, *supra* note 3, at 13; Luke & Abramovsky, *supra* note 3, at 8–11; KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 17; Christine A. Klein & Sandra B. Zellmer, *Mississippi River Stories: Lessons from a Century of Unnatural Disasters*, 60 SMU L. REV. 1471, 1496–98 (2007).

Subsidies are a key aspect of the NFIP and have been part of the program from the beginning. Congress specified that the oldest properties, those built before 1974 or before the first flood maps were issued, would receive subsidized flood insurance rates.⁶⁷ These rates have been less than half of what actuarial, full-risk rates would be—between 35 and 45 percent.⁶⁸ Congress’s rationale for these subsidies (also known as pre-Flood Insurance Rate Map subsidies or “pre-FIRM”) was that, in order to encourage participation and because these houses were not built with flood risk in mind, they should be eligible for deeply discounted rates.⁶⁹ Flood insurance policies were standardized, “off-the-rack” policies, providing limited coverage: a maximum of \$250,000 for the house structure and \$150,000 for contents.⁷⁰ Congress expected that the subsidies would be temporary, as old, risky houses would be replaced by new, more flood-resistant homes.⁷¹

Another significant characteristic of the NFIP is its allocation of risk. In an arrangement that the Insurance Information Institute describes as “unique” in the developed world, the NFIP and the Treasury Department bore all of the risk of the flood policies written under the NFIP.⁷² Private companies selling government policies would take no risk.

Finally, the government needed to determine which parts of the country were at high risk of flooding. Consequently, the Flood Act

67. *FEMA 2012 Overview*, *supra* note 7; Scales, *supra* note 3, at 16; GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 1, 9.

68. U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-11-297, ACTION NEEDED TO IMPROVE ADMINISTRATION OF THE NATIONAL FLOOD INSURANCE PROGRAM 52 (2011) [hereinafter GAO, 2011 ACTION NEEDED REPORT] (reporting that rates for older properties in high-risk zones are 40–45% of what full risk rates would be); INS. INFO. INST., *Flood Insurance*, *supra* note 13 (reporting that subsidized rates have been 35–45% of what full risk rates would be).

69. *FEMA 2012 Overview*, *supra* note 7; Scales, *supra* note 3, at 16; GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 1, 9. These are also known as “Pre-FIRM” subsidies. *Id.*

70. See *Standard Flood Insurance Policy Forms*, FEMA.GOV, <http://www.fema.gov/national-flood-insurance-program/standard-flood-insurance-policy-forms> (last visited Feb. 16, 2014); INS. INFO. INST., *Flood Insurance*, *supra* note 13. They do not cover damage to finished basements. *Id.* The First Circuit Court of Appeals has decided that a bank can require flood insurance for the full value of the house, not just the remaining amount due on the mortgage. *Kolbe v. BAC Home Loans Servicing*, LP, 738 F.3d 432, 446 (1st Cir. 2013).

71. GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 2.

72. INS. INFO. INST., *Flood Insurance*, *supra* note 13; see Scales, *supra* note 3, at 14.

called for the creation of detailed maps revealing flood risk which would then be used to set rates.⁷³

B. Evolution of the National Flood Insurance Program from 1968-2012

How did the NFIP evolve from its start in 1968 to the 2012 reforms? Throughout its existence, the NFIP has been housed in various agencies, including first the Department of Housing and Urban Development (“HUD”), then the Federal Emergency Management Agency (“FEMA”), and finally the Department of Homeland Security (although still within FEMA).⁷⁴ This section highlights the expansion of the NFIP and subsidies, the bailouts that resulted from its financial structure, the mandates that resulted from lack of demand for the product, and the mapping of flood-prone areas.

1. Community Participation

The framework of the NFIP made flood insurance available to those communities that adopted land use codes and floodplain management strategies that were acceptable to the federal government. By 2010, participating communities covered virtually all inhabited areas subject to floods.⁷⁵ Roughly 22,000 communities had taken the steps necessary to participate.⁷⁶

2. Expanded Subsidies

Congress, as noted above,⁷⁷ required subsidized rates for old houses—those built before 1974 or before a flood insurance rate map was published.⁷⁸ FEMA, in administering the NFIP, later instituted a second type of subsidy known as “grandfathering.” These grandfathering subsidies applied in two circumstances.⁷⁹ First, when

73. KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 84–85; GAO, 2010 CONTINUED ACTIONS NEEDED REPORT, *supra* note 59, at 7; GAO, 2008 FEMA’S RATE-SETTING PROCESS REPORT, *supra* note 65, at 11–18.

74. Scales, *supra* note 3, at 13–14.

75. Apparently the few flood-prone areas that did not participate either had few structures or only small areas of serious flood risk. If a person lived outside a high-risk area she could still purchase flood insurance. Luke & Abramovsky, *supra* note 3, at 8.

76. GAO, 2010 CONTINUED ACTIONS NEEDED REPORT, *supra* note 59, at 4. As of July 2013, the 22,000 figure was still used. GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 5.

77. *See supra* Part I.A.4.

78. *See supra* Part I.A.4.

79. *See supra* Part I.A.4.

flood risk maps changed so that a house which had been in a low risk zone was remapped into a high risk zone, the initial lower rate still applied to the house.⁸⁰ Second, when a policyholder in a high risk zone built a house in compliance with flood maps, she could keep rates that reflected that compliance, even if a later map showed yet more risk and would have resulted in a higher premium without the subsidy.⁸¹ FEMA introduced these additional subsidies, according to the GAO, “because of external pressures to reduce the effects of rate increases, considerations of equity, ease of administration, and promoting management.”⁸² Overall, the highest risk properties received the biggest subsidies.⁸³

Congress and FEMA adopted the two types of subsidies to encourage participation, increase administrative ease, and promote an undefined concept of fairness. “[E]xternal pressures,” perhaps more accurately defined as “political pressures,” to keep rates down, also played a role in Congress’s adoption of the subsidies.

The same number of properties—roughly one million—remained subsidized from the start of the program until 2012. These subsidized policies made up a smaller proportion of the total number of flood policies as the total number of flood insurance policies increased.⁸⁴ There are currently about 5.5 million flood policies in the United States; about one-fifth of these policies had subsidized rates immediately prior to the flood insurance reforms of 2012.⁸⁵ Many of these subsidized policies insured properties that suffer repetitive flood losses. In 2010, the GAO estimated that the repetitive loss policies comprise only one percent of policies, but they “account for 25% to 30% of claims.”⁸⁶ The supposedly non-subsidized, or full-risk policies (the remaining four-fifths

80. GAO, 2010 CONTINUED ACTIONS NEEDED REPORT, *supra* note 59, at 7, 14. This is the type of subsidy most commonly referred to as “grandfathering” in this context. The “old house” subsidies are sometimes referred to as grandfathered also.

81. *Implementation of the Biggert-Waters Flood Insurance Reform Act of 2012: One Year After Enactment: Hearing Before the Subcomm. on Econ. Policy of the S. Comm. on Banking, Housing, & Urban Affairs*, 113th Cong. (2013), 2013 WLNR 23334770 [hereinafter FEMA Administrator 2013 Written Testimony] (written testimony of Craig Fugate, Administrator, Federal Emergency Management Agency) (explaining types of subsidies).

82. GAO, 2011 PUBLIC POLICY GOALS REPORT, *supra* note 26, at 4; Scales, *supra* note 3, at 15.

83. GAO, 2010 CONTINUED ACTIONS NEEDED REPORT, *supra* note 59, at 7, 14.

84. Originally 70% of the policies had been subsidized. Scales, *supra* note 3, at 16.

85. *FEMA 2012 Overview*, *supra* note 7; GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 6. The actual number is closer to 1,153,000. *Id.* at 31–32. As of December 31, 2013, the precise number was 5,497,151. *Policy Statistics*, BUREAUNET, <http://bsa.nfipstat.fema.gov/reports/1011.htm> (last visited Feb. 14, 2014). Florida had 2,037,707 policies as of that date. *Id.*

86. GAO, 2010 CONTINUED ACTIONS NEEDED REPORT, *supra* note 59, at 7, 14.

of the policies) also do not reflect the actual risk of flooding; it is fair to say that *all* the NFIP policies were subsidized prior to the passage of the 2012 reforms.⁸⁷ About 70 percent of flood policies are located in five states: Florida, Texas, California, Louisiana, and New Jersey; Florida's policies alone comprise about 40 percent of the total.⁸⁸

3. Repeated Bailouts

The flood insurance subsidies meant that the NFIP would not always be able to support itself. In fact, it was designed to run a deficit in years with large flood losses.⁸⁹ As the GAO has stated, the NFIP was “not designed to be actuarially sound.”⁹⁰ The NFIP's financial structure has not allowed it to build up a reserve fund, and it has had to borrow from the Treasury Department when premiums do not cover losses.⁹¹ The NFIP has had staggering deficits at times, especially in recent years.⁹²

4. Purchase Mandates in High-Risk Zones

Purchase of flood insurance was initially voluntary; legislators assumed that homeowners in areas at high risk of flood would want to buy the insurance, particularly in light of the generous subsidies. However, demand was unexpectedly low. Congress then added the requirement that, whenever any federally regulated bank has a mortgage in a high-risk flood zone, flood insurance must be on the property throughout the life of the loan.⁹³ Borrowers must buy the insurance, and

87. *Id.* at 5–7. In this article, the term “subsidies” generally refers to the explicit general subsidies for older home and grandfathered properties. See Parts I.A.4, I.B.2.

88. KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 112–13; *Policy Statistics*, *supra* note 85.

89. KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 111–12. As of May, 2013, FEMA owed the Treasury Department \$24 billion. GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 2. This was never expected to be fully paid back. *Id.*

90. GAO, 2010 CONTINUED ACTIONS NEEDED REPORT, *supra* note 59, at 5–6. For a program to be “actuarially sound,” the total premiums collected should more than offset the total claims paid out. Sunset provisions have always been part of the law, and Congress has even let the program lapse at times. See generally, e.g., Christina Equi, *Oops, They Did It Again. Because of Congress, There is No Flood Insurance Available! What is a Lender to Do?*, METAVANTE REGULATORY SERVICES: HOT ISSUE (Metavante Corp., Milwaukee, Wis.), Apr. 1, 2010, 2010 WL 1641007.

91. KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 112–13; Scales, *supra* note 3, at 16–17.

92. GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 1–2.

93. KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 86. This requirement was put into place in 1973 and expanded in 1994. GAO, 2010 CONTINUED ACTIONS NEEDED REPORT, *supra* note 59, at 4; INS. INFO. INST., *Flood Insurance*, *supra* note 13.

lenders must make sure that they do.⁹⁴ By contrast, when a house in a high-risk zone has no mortgage, there is no flood insurance purchase requirement.⁹⁵ No purchase mandate exists for properties outside high-risk zones.⁹⁶

5. Mapping and Rate-Setting

The NFIP developed flood maps for the entire nation, as set out in the Flood Act. However, this was a difficult and expensive project for which Congress did not provide sufficient money.⁹⁷ The NFIP set flood insurance rates as was required.⁹⁸

6. Sale by Private Companies: The “Write-Your-Own” Program

Because of weak demand even for discounted flood policies,⁹⁹ Congress made reforms to encourage private companies to sell the insurance based on the idea that private companies are better than the government at selling insurance. The flood insurance provided through the NFIP has gone through different iterations, but in 1983, the NFIP became a public-private partnership in which the NFIP acted as the actual underwriter while private insurers, such as homeowners insurance companies, generally sold the policies, receiving sales commissions and compensation for loss-adjustment expenses.¹⁰⁰

94. INS. INFO. INST., *Flood Insurance*, *supra* note 13. This requirement, often known as the “lenders’ mandate,” effectively applies to all properties that are mortgaged. Scales, *supra* note 3, at 18.

95. Luke & Abramovsky, *supra* note 3, at 13–16.

96. *Id.* at 13–16.

97. Oliver A. Houck, *Rising Water: The National Flood Insurance Program and Louisiana*, 60 TUL. L. REV. 61, 159–63 (1985–1986).

98. See generally GAO, 2008 FEMA’S RATE-SETTING PROCESS REPORT, *supra* note 65.

99. See LLOYD DIXON ET AL., RAND CORP., THE NATIONAL FLOOD INSURANCE PROGRAM’S MARKET PENETRATION RATE, at xix, 1 (2006), available at http://www.rand.org/content/dam/rand/pubs/technical_reports/2006/RAND_TR300.pdf; see *infra* Part II.B.2 (describing limited demand for flood insurance and reasons).

100. KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 85; Scales, *supra* note 3, at 14. This is known as the “Write-Your-Own” (“WYO”) program, although it seems to be a misnomer because the policies are written by the NFIP. Scales, *supra* note 3, at 14. The companies collect premiums, enroll policyholders, and administer claims. *Id.*; see 42 U.S.C. § 4071(a)(1) (2012). Private companies, selling federal policies, are referred to as “fiscal agents” of the federal government. See 42 U.S.C. § 4071(a)(1) (2012).

7. Floodplain Management and Flood Mitigation

One of the NFIP's goals was to improve floodplain management and mitigation so that losses from floods would be reduced.¹⁰¹ The Flood Act gave the Secretary of the HUD the authority to set minimum criteria for zoning in floodplains.¹⁰² The NFIP's broad framework, as outlined earlier, required communities that wanted residents to be able to buy flood insurance to pass ordinances satisfying criteria set by the program. When communities passed such ordinances, they became eligible for grants to reduce flood losses, and then residents of those communities could purchase flood insurance.

FEMA has worked to help homeowners and communities mitigate properties by supporting improvements aimed to reduce flood damage, such as demolition, relocation, and elevation. 30,000 properties were mitigated using FEMA funds between 1997 and 2007.¹⁰³ Building codes aimed at reducing flood risk play an important role in flood mitigation; for example, certain codes require new construction in a high risk area to conform to elevation requirements which will likely reduce flood damage.¹⁰⁴ Existing buildings in flood zones, on the other hand, are treated very differently. They do not need to be updated to be in compliance with current building codes unless they are being repaired or reconstructed and the work is worth more than 50 percent of the market value.¹⁰⁵ In addition to supporting mitigation, a large part of federal

101. "Mitigation" is defined in this context as risk reduction measures such as storm shutters and the use of flood-resistant building material. KUNREUTHER & MICHELEKERJAN, *supra* note 3, at 249–50. Mitigation measures can significantly reduce the costs of repairs. *Id.* at 250–51. The 1968 federal legislation stated:

It is the further purpose of this chapter to (1) encourage state and local governments to make appropriate land use adjustments to constrain the development of land which is exposed to flood damage and minimize damage caused by flood losses, (2) guide the development of proposed future construction, where practicable, away from locations which are threatened by flood hazards

42 U.S.C. § 4001(e) (2012).

102. Luke & Abramovsky, *supra* note 3, at 8–11; Houck, *supra* note 97, at 69.

103. GAO, 2011 PUBLIC POLICY GOALS REPORT, *supra* note 26, at 6.

104. INS. INFO. INST., *Flood Insurance*, *supra* note 13.

105. *Id.*; see 44 C.F.R. §§ 51.1, 60.3(c)(2). This regulation creates incentives to not engage in expensive renovations but to keep renovations limited so as not to be required to rebuild to code. It encourages not renovating or breaking up large renovation projects into small projects so as not to pass the 50% threshold. FRENCH WETMORE ET AL., AM. INSTS. FOR RESEARCH, AN EVALUATION OF THE NATIONAL FLOOD INSURANCE PROGRAM: FINAL REPORT 42 (2006), available at http://www.fema.gov/media-library-data/20130726-1602-20490-1463/nfip_eval_final_report.pdf.

floodplain management has consisted of levee construction and maintenance.¹⁰⁶

8. Relationship to Federal Disaster Relief

One of the goals of the NFIP was to reduce disaster relief costs.¹⁰⁷ Federal disaster relief is activated by a federal declaration of an area as a disaster area under the Stafford Act.¹⁰⁸ Immediate rescue efforts are part of disaster relief, but disaster relief also includes housing assistance.¹⁰⁹

The line between disaster housing assistance provided by FEMA and benefits supplied by individually purchased flood insurance coverage is not always clear. FEMA states that its disaster housing assistance “is not intended to restore your damaged property to its condition before the disaster.”¹¹⁰ FEMA lists the following under “housing needs/temporary housing”: “financial assistance may be available to the homeowner to repair damage from the disaster to their primary residence that is not covered by insurance. The goal is to make the damaged home safe, sanitary, and functional.”¹¹¹ Flood insurance must be used before relief may be received, according to the FEMA website.¹¹² FEMA also provides rebuilding and other loans for people in flood-damaged areas.¹¹³

106. See NAT'L ACAD. SCIS., *Levee Report*, *supra* note 30; THE NATION'S RESPONSES, *supra* note 16; Luke & Abramovsky, *supra* note 3. Levees are structures built to hold back water so that people can live nearby. Levees both reduce and increase risk—they reduce it by holding back the water, but they also increase it by creating the impression that they are totally safe. Luke & Abramovsky, *supra* note 3; see NAT'L ACAD. SCIS., *Levee Report*, *supra* note 30; THE NATION'S RESPONSES, *supra* note 16.

107. 42 U.S.C. § 4001 (2012).

108. Lake, *supra* note 24, at 95.

109. *Disaster Assistance Available from FEMA*, FEMA.GOV, <http://www.fema.gov/disaster-assistance-available-fema>, (last visited Oct. 22, 2013).

110. *What is Disaster Assistance?*, FEMA.GOV, <http://www.fema.gov/what-disaster-assistance> (last visited Oct. 22, 2013).

111. There is similar language that “[f]inancial assistance may be available to homeowners to replace their home destroyed in the disaster that is not covered by insurance.” *Disaster Assistance Available from FEMA*, *supra* note 109. FEMA notes that the grants are funded by taxpayers and have a limit. *What Specific Items are Covered by “Housing Assistance”?*, FEMA.GOV, <http://www.fema.gov/apply-assistance/what-specific-items-are-covered-housing-assistance> (last visited Oct. 15, 2014). Repair assistance may cover structural parts of the home such as foundation, outside walls, roof, windows, floors, walls, ceilings, septic, or sewage system. *Id.* It may also cover well or water system, heating, ventilating, and air conditioning system, utilities, anchoring and blocking a mobile home, and other elements. *Id.*

112. The website specifies that these grants cannot be given if someone has insurance to cover them. See *supra* note 110 and accompanying text. These grants seem to cover much of what would otherwise be covered by insurance. FEMA’s literature urges people at risk to buy insurance because it puts you “in control” while disaster relief is uncertain. See *infra* notes 184–87 and accompanying text; *infra* text accompanying note 220.

113. *Disaster Assistance Available from FEMA*, *supra* note 109.

Further, FEMA supplies temporary housing assistance, which flood insurance does not.¹¹⁴ Although FEMA tries to sharply distinguish between flood insurance and disaster relief, there is some overlap.¹¹⁵

9. The NFIP in 2012

By 2012 the NFIP had developed into a multifaceted program that had mapped the country for flood risk and had the participation of almost all flood-prone communities across the country. There were about 5.5 million flood policies and about one-fifth were heavily subsidized. Deep subsidies and huge storms had led to significant deficits. Because of low demand, mortgage holders in flood-prone areas were required to keep flood insurance in place. Private companies sold policies to increase demand, though the U.S. government shouldered all the risk. Floodplain management included grants for mitigating properties so they were more resistant to floods, zoning laws requiring elevation of new structures but not older structures, and levee construction and maintenance. Federal disaster relief included both rescue efforts and housing assistance, some of which overlapped with flood insurance benefits. Although the NFIP was ambitious, its impossible goals would eventually lead to reform.

II. FEDERAL FLOOD INSURANCE POLICY: ASSESSMENT OF THE NATIONAL FLOOD INSURANCE PROGRAM PRIOR TO THE 2012 AND 2014 REFORMS

This section discusses the NFIP's progress towards its goals, reviews its impacts, and summarizes criticisms of it. Before focusing on the negatives and criticisms, it is important to note the NFIP's successes.¹¹⁶ It has made flood insurance widely available, both within and outside flood zones.¹¹⁷ Approximately \$1 billion annually in flood losses are avoided because of mitigation and floodplain management

114. OIXON ET AL., *supra* note 99, at 53–54.

115. *See infra* notes 183–86 and accompanying text. Reflecting this problem of the relationship between flood insurance and disaster relief, some homeowners whose houses were damaged by Superstorm Sandy wished that they did not have flood insurance and could instead have relied solely on disaster relief. Alan Krawitz, *After Flood Insurance Problems Persist, Some in South Queens, Rockaway Say They Feel They Would Have Fared Better Without It*, FORUM NEWSGROUP (Jan. 9, 2014), <http://theforumnewsgroup.com/2014/01/09/after-flood-insurance-problems-persist-some-in-south-queens-rockaway-say-they-feel-they-would-have-fared-better-without-it/>.

116. *See infra* note 117.

117. GAO, 2010 CONTINUED ACTIONS NEEDED REPORT, *supra* note 59, at 8. In high-risk zones it is estimated that roughly 50% of homes have flood insurance. DIXON ET AL., *supra* note 99, at xvi.

measures.¹¹⁸ The NFIP has mitigated thousands of buildings so they will be more resistant to flood damage going forward.¹¹⁹ Most new buildings in flood zones are built according to NFIP standards and are more resistant to flood damage than they would be otherwise.¹²⁰ But Congress, in establishing and continuing the NFIP, set itself impossible challenges and created incentives which are increasingly problematic given climate change risk.

A. The National Flood Insurance Program's Conflicting and Unattainable Goals

The goals of the NFIP were in conflict and exceedingly unlikely to be met even in the best of circumstances and even in the absence of climate change. The NFIP, as noted above, had three main goals: first, providing insurance to people in flood-prone areas who could not otherwise get it on “reasonable terms and conditions;”¹²¹ second, reducing disaster relief costs;¹²² and third, improving floodplain management so that disaster relief costs are reduced.¹²³ The aim of providing flood insurance on *reasonable terms and conditions* conflicts with the aim of *saving* federal money expressed in the second and third goals. This conflict becomes apparent when one analyzes the goal of supplying insurance on “reasonable terms and conditions” for people in flood-prone areas who could not otherwise obtain insurance.¹²⁴ If “reasonable terms” means “affordable” and the insurance is affordable because it does not reflect the actual flood risk, as is the case with the NFIP, then the premiums will not cover the losses sustained. Consequently, the NFIP will lose money. Having a government insurance program with premiums that are lower than they would be if they reflected actual flood risk is a solidaristic approach to flood risk.¹²⁵ Flood risk is a very difficult risk to insure, as the next section explains.¹²⁶ “Affordable flood insurance” is almost a contradiction in terms for older houses in high-risk areas if we think of “insurance” rates as being based on individual risk. The government losing money on the insurance

118. FRENCH WETMORE ET AL., *supra* note 105, at 8–9; CAMILO SARMIENTO & TED R. MILLER, AM. INSTS. FOR RESEARCH, COSTS AND CONSEQUENCES OF FLOODING AND THE IMPACT OF THE NATIONAL FLOOD INSURANCE PROGRAM at ix (2006).

119. GAO, 2011 PUBLIC POLICY GOALS REPORT, *supra* note 26, at 6.

120. FRENCH WETMORE ET AL., *supra* note 105, at xi.

121. 42 U.S.C. § 4001 (2012).

122. *Id.*

123. *Id.*

124. *Id.*

125. See O'NEILL & O'NEILL, *supra* note 5, at 6–7.

126. See *infra* Part II.B.

aspect of the program, then, is a predictable part of providing affordable insurance for people in flood-prone areas.

Moreover, the general aim of saving federal money, as expressed in the second and third goals of reducing disaster relief costs and improving floodplain management, was very unlikely to succeed. Congress presumed that the federal government would not have to pay as much for disaster assistance if there were enforced rules in flood-prone areas requiring safer construction and if people bought insurance for flood damage.¹²⁷ This plan made theoretical sense, but there have been at least three major problems in practice. First, if below-market insurance is available and federal management such as levee construction encourages people to move to and feel safe in flood-prone areas, more property, not less, will be at risk of flood damage. Furthermore, supplying cheap insurance for older buildings may discourage replacing or renovating them to improve their flood resistance.¹²⁸ Higher disaster-relief costs may result.¹²⁹ Second, the program had no practical way to compel safer construction in flood-prone areas, again resulting in more at-risk property.¹³⁰ And third, one of the enduring problems with flood insurance is lack of demand resulting in many losses remaining uninsured.¹³¹ Ironically, the goal of saving federal money through improved floodplain management practices leading to less at-risk property was undermined by the very fact of offering below-market insurance in high-risk areas, as well as by the lack of enforcement of land-use regulations that might reduce flood damage. Before 2012, the program did not support the goals related to saving the federal government money, though it did make flood insurance widely available at low prices. The general goal of a unified floodplain management policy also remained distant.¹³²

B. The Difficulty of Insuring Flood Risk at an Inexpensive Price

The aim of insuring flood losses faces inherent challenges. In a way, this is obvious because if flood risk was easy to insure, there would be insurance available for it. But to understand the NFIP's challenges, it is important to understand the issues from an insurance perspective. A number of factors on both the supply side and the demand side help

127. See generally *supra* Part I.A.4; FRENCH WETMORE ET AL., *supra* note 105; SARMIENTO & MILLER, *supra* note 118.

128. SARMIENTO & MILLER, *supra* note 118, at x.

129. KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 262–63.

130. See *supra* Part I.A.4, I.B.7.

131. See *supra* Part I.B.4; *infra* Parts II.B.2, III.A.1.d.

132. 42 U.S.C. § 4001(c) (2012).

explain why floods are difficult to insure privately. This explains in part how the United States set itself an impossible task by aiming to provide flood insurance to homeowners on “reasonable terms and conditions.” Few bother to consider why private insurers have declined to offer basic homeowners coverage for floods for the past 50 years. For example, one op-ed writer criticizing the 2012 reforms states that the NFIP had “cornered the market” for flood insurance, as if it were a desirable risk that the federal government had stolen from the private market rather than a difficult and unprepossessing risk the federal government began to cover in the absence of private market coverage.¹³³

1. Supply Side

- a. Correlated and Ambiguous Risk

Floods and other natural disasters cause correlated losses.¹³⁴ The losses from these events are likely to be massive, close in time, and centered upon one geographical area. Insurance works by diversifying risk; correlated risk is the opposite.¹³⁵ The presence of correlated risks makes insurance companies reluctant or unwilling to sell insurance.¹³⁶

In addition, the probability and extent of natural disasters is difficult to predict, particularly with climate change.¹³⁷ When risks are ambiguous, pricing insurance is troublesome, and insurance tends to be extremely expensive to account for the ambiguity of the risk. Thus, it may be priced too high for customers to be willing to buy it.¹³⁸

- b. Adverse Selection

Adverse selection is the tendency of higher-risk individuals to be more inclined to purchase insurance than lower-risk individuals.¹³⁹ In

133. John Romano, *From Top to Bottom, FEMA Has Botched Handling Flood Insurance Rates*, TAMPA BAY TIMES (Feb. 7, 2014, 10:06 PM), <http://www.tampabay.com/news/politics/from-top-to-bottom-fema-has-botched-handling-flood-insurance-rates/2164725>.

134. See *supra* text accompanying note 29; Scales, *supra* note 3, at 10–11; Luke & Abramovsky, *supra* note 3, at 23–24.

135. See generally ABRAHAM, *supra* note 5.

136. Indeed, natural disasters, even with the various exclusions in private insurance policies, have seriously strained private insurers. See, e.g., Hornstein, *supra* note 3, at 14–15; FED. INS. OFFICE, U.S. DEP’T OF THE TREASURY, ANNUAL REPORT ON THE INSURANCE INDUSTRY 47–49 (2013).

137. See sources cited *supra* notes 15, 21; KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 132–133.

138. KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 134–135.

139. See, e.g., BAKER, *supra* note 5, at 6–7.

theory, adverse selection leads to a pool containing more higher-risk members than insurance companies anticipate, which leads to more claims than predicted, higher prices, and eventual market failure.¹⁴⁰ Some have questioned the actual influence of adverse selection in insurance markets.¹⁴¹ Classically, the concept has been applied to health and life insurance in which the insured may have access to better information about his or her risks than the insurance company, and it is typically referred to as an “information problem” for that reason.¹⁴² Adverse selection is viewed by the insurance industry as having been an important deterrent to providing private flood insurance.¹⁴³

In the case of flood insurance, where rates are based on maps setting out flood zones that are available to both the insured and the insurer, that classic information-imbalance issue is less persuasive than in other contexts.¹⁴⁴ But individuals still have much more information about their individual properties than companies writing insurance for the NFIP, so adverse selection may nonetheless still have effects on the willingness of insurance companies to provide flood insurance.¹⁴⁵

Private insurance uses several methods to try to counter adverse selection. Part of underwriting, in the absence of regulation, is that private insurance companies may choose not to insure people who they think are high risk, they may charge high-risk people more, or they may choose not to renew policies which they believe carry too much risk.¹⁴⁶ The NFIP has not been allowed to decline flood insurance to properties that are high risk, and there have been strict statutory limits on rate increases.¹⁴⁷ Thus, the NFIP is vulnerable to adverse selection.¹⁴⁸

140. Scales, *supra* note 3, at 8–9.

141. See generally, e.g., Peter Siegelman, *Adverse Selection in Insurance Markets: An Exaggerated Threat*, 113 YALE L.J. 1223 (2004).

142. Luke & Abramovsky, *supra* note 3, at 25.

143. Scales, *supra* note 3, at 9.

144. *Id.*

145. While flood insurance is required for lending in flood hazard zones, this requirement has been lightly enforced particularly after the closing. Luke & Abramovsky, *supra* note 3, at 14–16. Individuals often let their flood policies lapse after closing. *Id.* Banks often sell the first mortgage on a property to another bank which does not enforce the requirement. INS. INFO. INST., *Flood Insurance*, *supra* note 13; see *supra* Part I.B.; see *infra* Part III.A.1.d. For those individuals that keep their policies in force, it is possible that their decisions reflect having information about their properties’ particular vulnerabilities that makes them riskier to insure than the rest of the risk pool. That would be adverse selection currently at work.

146. ABRAHAM, *supra* note 5, at 45–50.

147. GAO, 2010 CONTINUED ACTIONS NEEDED REPORT, *supra* note 59, at 5–6.

148. Also, as noted above, it charges the highest risk properties (the oldest properties built without flood risk in mind) the lowest rates. See *supra* Part I.A.4.

c. Moral Hazard

Moral hazard is the idea that, if an individual is insured for a loss, she will take fewer precautions to avoid it, and, collectively, losses will be greater than if there was no insurance for the losses.¹⁴⁹ It also applies beyond the insurance context to the theory that any sort of cost-shifting, including post-disaster assistance, decreases individuals' loss-avoiding behavior.¹⁵⁰ Insurance companies try to control moral hazard through mechanisms such as co-pays and deductibles so that individuals will exercise the same level of care that they would without insurance.¹⁵¹

The way moral hazard comes into play in the context of flood insurance is that insurance available at a subsidized, affordable price for homes in a high-risk area may increase the willingness of people to live in flood-prone areas and if they do, to not take adequate precautions for their property.¹⁵² As noted earlier, roughly one percent of the properties insured by the NFIP have accounted for almost a third of the losses.¹⁵³ Disaster relief may have moral hazard effects when people in flood-prone areas, knowing that the federal government provides disaster relief, decide not to buy flood insurance or let policies lapse when they do.¹⁵⁴ The idea that flood insurance and disaster assistance increases people's willingness to live in flood-prone areas is accepted by many scholars¹⁵⁵ but not all.¹⁵⁶ Floodplain-management zoning regulations are

149. BAKER, *supra* note 5, at 4–5.

150. Luke & Abramovsky, *supra* note 3, at 27. The extent, meaning, and significance of moral hazard has been brilliantly questioned in Tom Baker, *On the Genealogy of Moral Hazard*, 75 TEX. L. REV. 237 (1996).

151. Luke & Abramovsky, *supra* note 3, at 27–28; BAKER, *supra* note 5, at 4–5.

152. Luke & Abramovsky, *supra* note 3, at 28.

153. GAO, 2010 CONTINUED ACTIONS NEEDED REPORT, *supra* note 59, at 10.

154. See Trebilcock & Daniels, *supra* note 33, at 104 (asserting that “ex post disaster relief . . . has all kinds of perverse incentive effects, severely exacerbating problems of adverse selection . . . in locational decisions by enabling residents of disaster-prone areas to externalize a large fraction of the cost of their locational decisions onto other[s] . . .”); ERWIN O. MICHEL-KERJAN, HAVE WE ENTERED AN EVER-GROWING CYCLE ON GOVERNMENT DISASTER RELIEF? (2013), available at http://opim.wharton.upenn.edu/risk/library/US-Senate-Small-Business-Cte_2013Mar14_MichelKerjan.pdf.

155. See, e.g., Raymond Burby, *Flood Insurance and Floodplain Management: The U.S. Experience*, 3 ENVTL. HAZARDS 111 (2001); Blake Hudson, *Reconstituting Land-Use Federalism to Address Transitory and Perpetual Disasters: The Bimodal Federalism Framework*, 2011 BYU L. REV. 1991, 2003–04 (2011); Marc Poirier, *A Very Clear Blue Line: Behavioral Economics, Public Choice, Public Art, and Sea Level Rise*, 16 S.E. ENVTL. L.J. 83, 92 (2007); Dan Tarlock, *U.S. Flood Control Policy*, 23 DUKE ENVTL. L. & POL'Y F. 151 n.198 (2012); Trebilcock & Daniels, *supra* note 33, at 104.

156. See, e.g., KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 122 (finding that most homeowners in hurricane-prone areas do not expect to get federal assistance following a disaster).

aimed at controlling moral hazard because they try to decrease the costs of flood loss and compel people to exercise more care when rebuilding, for example, by requiring that new structures be elevated.¹⁵⁷ However, these codes are often under-enforced in high-hazard areas.¹⁵⁸

Government actions such as levee construction and defining areas as floodplains may encourage people to think that they live in safe areas and therefore to not buy flood insurance or invest in protective measures, even if they can afford them.¹⁵⁹ Many floods happen outside high-risk flood zones, and the designation of such zones may suggest to people who live outside the zones that their homes will be safe from floods, even if they are close to water.¹⁶⁰

d. Information and Mapping

Information about precise flood risk is difficult and expensive to develop. FEMA has prepared flood maps for the United States, but many are outdated.¹⁶¹ Mapping technology has rapidly advanced, however, so that it may no longer be quite so difficult to develop adequate maps.¹⁶² Because risk analysis has become much more sophisticated, FEMA should be able to develop very finely tuned risk analyses, given sufficient resources.¹⁶³ Accurate maps would allow private companies to make informed decisions about risk and only offer insurance if the risk analysis makes sense.¹⁶⁴ But given the current outdated and inaccurate maps, private companies are unlikely to rush to take on flood risk.¹⁶⁵

157. Luke & Abramovsky, *supra* note 3, at 30.

158. KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 17.

159. See DIXON ET AL., *supra* note 99, at xvi (noting that the market penetration rate of the NFIP outside of specified flood hazard zones is 1%); NAT'L ACAD. SCIS., *Levee Report*, *supra* note 30 (observing that areas behind levees are not risk free). Detailed discussion of issues involving levee construction and maintenance are beyond the scope of this article.

160. FEMA notes that people who live outside of flood zones file nearly 25% of NFIP claims and receive one third of disaster assistance for flooding. *Resources: Flood Facts*, FLOODSMART.GOV, https://www.floodsmart.gov/floodsmart/pages/flood_facts.jsp (last visited Feb. 16, 2014).

161. Hornstein, *supra* note 3, at 33–34; GAO, 2010 CONTINUED ACTIONS REPORT, *supra* note 59, at 8–9.

162. See Owen, *supra* note 30.

163. NAT'L ACAD. SCIS., *Levee Report*, *supra* note 30. This finely grained analysis may allow ever more specific flood zones, thus reducing the degree of risk-sharing across policyholders, an important point that deserves future consideration. O'NEILL & O'NEILL, *supra* note 5, at 8.

164. ILL S D PRIVATE SECTOR INVOLVEMENT REPORT, *supra* note 4, at 10–11 (2014).

165. *Id.*

All these factors—correlated and ambiguous risk, adverse selection, moral hazard, and information—affect the supply of flood insurance, help explain why it is such a difficult risk to insure, and contribute to understanding the challenge the United States has set for itself.

2. Demand Side: Cognitive Biases and Disaster Relief

Flood insurance is not a product that people eagerly buy. As discussed above, flood insurance is heavily subsidized—by more than 50 percent for the riskiest properties—and it is therefore an excellent bargain.¹⁶⁶ Yet, homeowners, even in flood-prone areas, tend not to purchase it voluntarily and tend to let their policies lapse after a few years.¹⁶⁷ Homeowners outside flood zones are even less likely to buy it.¹⁶⁸ State insurance commissioners' and FEMA's repeated messages to homeowners urging them to buy flood insurance go unheeded.¹⁶⁹ Enforcement of the lenders' mandate has been limited at best.¹⁷⁰

The tepid demand has been behind many of the changes in the NFIP.¹⁷¹ To its credit, the NFIP in recent years has increased the number of policies substantially.¹⁷² However, the still low demand contributes to the risk of insolvency for the program because there are too few

166. See *supra* Parts I.A.4, II.B.2; Luke & Abramovsky, *supra* note 3, at 32–42.

167. INSURANCE AND BEHAVIORAL ECONOMICS, *supra* note 29, at 41, 48; DIXON ET AL., *supra* note 99, at 25 (stating that within flood zones, approximately 20% of properties that are not covered by the mandatory purchase requirement—i.e., properties without mortgages—have flood insurance).

168. DIXON ET AL., *supra* note 99, at xvi (noting that market penetration of flood insurance outside flood zones is 1%).

169. See, e.g., Press Release, Md. Ins. Admin., Prepare for Hurricane Season Now (May 22, 2013), available at www.mdinsurance.state.md.us/sa/news-center/prepare-for-hurricane-season-now.html; Brochure, FEMA, Why You Need Flood Insurance (Feb. 1, 2014), available at <http://www.fema.gov/media-library/assets/documents/4304>.

170. INS. INFO. INST., *Flood Insurance*, *supra* note 13 (noting that enforcement of this requirement is weak because the first mortgage on property is often sold to another bank). Given that banks usually sell mortgages and that homeowners do generally maintain property insurance on their homes, it is not clear why the fact that mortgages are sold would have particular impact in this context. However, institutions are as subject to the biases discussed here as individuals. Scales, *supra* note 3, at 18.

171. According to a 2006 Rand Corporation Study:

The reluctance of homeowners to purchase flood insurance has been an ongoing problem for the NFIP and was the primary reason for adoption of the mandatory purchase requirement. The low rate among homes that are not subject to the mandatory purchase requirement suggests that little has changed over the years and points to the importance of the mandatory purchase requirement in maintaining the market penetration rates that are observed today.

DIXON ET AL., *supra* note 99, at xxi.

172. GAO, 2010 CONTINUED ACTIONS NEEDED REPORT, *supra* note 59, at 8.

policyholders to contribute premiums so the policies can pay for losses.¹⁷³

Various factors contribute to low demand for flood insurance. One such factor is various cognitive biases behavioral economists have studied in recent years. For example, it is widely known that “individuals routinely underestimate the magnitude of low-probability, high-loss events”¹⁷⁴ and so under-prepare for them. Many people consider flooding a remote risk that is not worth insuring. At the same time, many overpay for events that seem more familiar and salient, such as warranties for appliances.¹⁷⁵ The failure to plan for risks that seem remote is not limited to individuals but applies to governments as well.¹⁷⁶

Often, people have an optimism bias, so that even if they understand the flood risk, they convince themselves that the negative event will not occur.¹⁷⁷ When people have a flood policy for a few years and have not made a claim under it, they often let it lapse, sometimes viewing the policy as a “poor investment”¹⁷⁸ and assuming that because nothing bad has happened, nothing bad will happen. Procrastination is also a potential contributor. No one wants to think about a potential disaster, and it is often easier to postpone costs for such a low-probability, catastrophic event than to incur them.¹⁷⁹

Another bias affecting the choice to purchase flood insurance is the availability bias, or the tendency to plan for the future based on the recent past or to make a decision based on the most easily accessible information. While shortly after disasters like Hurricane Katrina, the risk

173. As the GAO noted in adding the NFIP to its high-risk program, “[t]he extent of participation in the program may also contribute to its financial insolvency. Specifically, the level of noncompliance with current mandatory purchase requirement by affected property owners is unknown and voluntary participation in the program is limited.” GAO, 2006 FLOOD INSURANCE HIGH-RISK REPORT, *supra* note 7, at 9.

174. Scales, *supra* note 3, at 9; *see* INSURANCE AND BEHAVIORAL ECONOMICS, *supra* note 29, at 71–72, 113–115; KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 16.

175. INSURANCE AND BEHAVIORAL ECONOMICS, *supra* note 29, at 130–132.

176. Scales, *supra* note 3, at 12. *See generally* KUNREUTHER & MICHEL-KERJAN, *supra* note 3 (suggesting ways for governments to be more proactive).

177. Robert J. Meyer, *Why We Under-Prepare for Hazards*, in ON RISK AND DISASTER, *supra* note 3, at 160.

178. INSURANCE AND BEHAVIORAL ECONOMICS, *supra* note 29, at 103.

179. Robert Meyer writes that “[d]ecisions to invest in protection against low-probability events are particularly susceptible to procrastination.” Meyer, *supra* note 177, at 164. The decision to pay for insurance gets pushed into the future until at some point it really is too late. Flood insurance has a 30-day waiting period before it becomes effective so that it will not be effective if purchased right before a storm. *Resources: Frequently Asked Questions*, FLOODSMART.GOV, <https://www.floodsmart.gov/floodsmart/pages/faqs/will-there-be-a-waiting-period-for-my-policy-to-take-effect.jsp> (last visited Oct., 15, 2014).

of floods seems salient and people buy flood insurance, in a few years, memories fade and demand goes down.¹⁸⁰ Also, people often misunderstand terms like “100-year flood” which refers to a one percent annual probability of a flood occurring in a particular area at a particular height.¹⁸¹ But when an area has flooded, people tend to think they are safe for the next 100 years.¹⁸²

An additional possible reason people do not buy flood insurance is that they think the federal government’s disaster relief will cover their losses.¹⁸³ In recent years, the expectation of disaster aid has affected individuals’ decisions to purchase insurance.¹⁸⁴ FEMA’s website shows overlap between private insurance and disaster relief and specifies that private insurance must be used first, which might influence some people to not buy flood insurance.¹⁸⁵ FEMA has tried to encourage people to buy flood insurance by preparing videos that feature people who benefited from flood insurance in recent hurricanes and writing information sheets contrasting insurance with disaster aid.¹⁸⁶ Insurance is immediate and puts you more in control after a disaster, FEMA says.¹⁸⁷ It is not clear how persuasive these efforts have been.

Some people have not taken advantage of the “bargain,” perhaps because they have not realized that the insurance is subsidized.¹⁸⁸

180. Scales, *supra* note 3, at 10; Meyer, *supra* note 177, at 159.

181. Scales, *supra* note 3, at 9; NAT’L ACAD. SCIS., *Levee Report*, *supra* note 30; Howard Kunreuther, *Has the Time Come for Comprehensive Natural Disaster Insurance?*, in ON RISK AND DISASTER, *supra* note 3, at 199.

182. Scales, *supra* note 3, at 9. This commonly recognized phenomenon is known as the “gambler’s fallacy.” *Id.*

183. INSURANCE AND BEHAVIORAL ECONOMICS, *supra* note 29, at 114; *see supra* Part I.B.8 (describing disaster relief and overlap between disaster relief and private insurance); *infra* Part I.I.E.

184. MICHEL-KERJAN, *supra* note 154, at 3; INSURANCE AND BEHAVIORAL ECONOMICS, *supra* note 29, at 114–15.

185. *See supra* Part I.B.8; *infra* Part I.I.E (discussing disaster relief and the overlap between FEMA aid and flood insurance).

186. *See, e.g., Mary’s Story: “I Was Able to Rebuild My Home”*, FLOODSMART.GOV, www.floodsmart.gov/floodsmart/pages/videos/video_index.jsp (last visited Sept. 16, 2014); Brochure, FEMA, *The Benefits of Flood Insurance Versus Disaster Assistance* (Nov. 1, 2012), *available at* www.fema.gov/media-library-data/20130726-1643-20490-9801/f_217_benefits_30nov2012_web.pdf [hereinafter FEMA, Comparison Information Brochure].

187. *See* FEMA, Comparison Information Brochure, *supra* note 186 (“You are in control. Flood insurance claims are paid even if a disaster is not declared by the President.”).

188. The premium rate sheet includes a summary that indicates whether the policy receives a subsidy, but homeowners may not focus on this information. *See* Mary Ellen Klas, *Homeowners Should Do Their Homework When Reviewing Flood Insurance Rates*, MIAMI HERALD BLOG (Oct. 5, 2013, 9:29 AM),

Similarly, some might think that the seemingly isolated and limited risk of “flood” is just not worth spending money on, whereas if “flood” was bundled with other risks, it might seem worthwhile to spend money on it.¹⁸⁹ Together with the other factors summarized above, it may not seem like a bargain at all.¹⁹⁰ Moreover, the increased risk of floods associated with climate change may collide in some people’s minds with the denial of climate change; thus, the increased risk of floods is denied along with climate change.¹⁹¹

C. *Unintended Consequences: Development in Flood-Prone Areas and Incentives to Not Renovate Older Homes*

While one goal of the NFIP was to limit development in floodplains, there is widespread agreement that the NFIP has contributed to development in flood-prone areas and has created incentives for not replacing older buildings in these areas.¹⁹² Rather than guiding

<http://miamiherald.typepad.com/nakedpolitics/2013/10/homeowners-should-do-their-homework-when-reviewing-flood-insurance-rates.html>.

189. INS. INFO. INST., *Flood Insurance*, *supra* note 13 (describing bundling approach). See generally Kunreuther, *supra* note 181; U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-08-7, NATURAL DISASTERS: PUBLIC POLICY OPTIONS FOR CHANGING THE FEDERAL ROLE IN NATURAL CATASTROPHE INSURANCE (2007) [hereinafter GAO, 2007 NATURAL CATASTROPHE INSURANCE REPORT].

190. Yet another contributor to the low demand may be the way flood insurance is sold. Private companies sell most of it, although it can be obtained directly from the NFIP. See INS. INFO. INST., *Flood Insurance*, *supra* note 13. As noted above, the federal government retains all the underwriting risk. *Id.* (describing this approach as “unique”). Private insurance companies receive a fixed commission for each policy sold and a portion of the claims costs. Scales, *supra* note 3, at 14–15; KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 85–86. The idea behind this marketing structure was that private insurance companies are much better at selling insurance than the government, thus, having companies sell flood policies would increase participation in the program. Scales, *supra* note 3, at 14–15. Because private companies were not selling flood coverage anyway, this would not create conflicts for private companies. However, this has not increased participation as much as was predicted for reasons that are not altogether clear. KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 85–86. The Rand study on market penetration notes that one of the most predictive factors for whether flood policies are sold is whether there are a lot of other flood policies sold in a particular area. DIXON, ET AL., *supra* note 99, at 38. This suggests that insurance agents and companies sell flood insurance only if they are familiar with it from other policies.

191. See generally Connie Roser-Renouf et al., *Engaging Diverse Audiences with Climate Change: Message Strategies For Global Warming’s Six Americas*, in ROUTLEDGE HANDBOOK OF ENVIRONMENT AND COMMUNICATION (Ander Hansen & Robert Cox eds., forthcoming Mar. 2015) [hereinafter *Engaging Diverse Audiences with Climate Change*].

192. FRENCH WETMORE ET AL., *supra* note 105, at x, 9, 12–14 (estimating that \$1 billion of damage from floods is prevented every year by the flood program, but that the NFIP had not guided development away from floodplains and had created incentives for building and not replacing older buildings in flood-prone areas); Scales, *supra* note 3, at

development away from flood-prone areas, the NFIP has encouraged development in these areas and tried to make construction there safer.¹⁹³

The federalist structure of the U.S. government contributes to this result. Land-use planning is primarily a local and state issue.¹⁹⁴ So, although the NFIP offered subsidized insurance to communities that passed acceptable floodplain regulations,¹⁹⁵ it did not provide a way for the federal government to make sure that communities enforced those regulations.¹⁹⁶ Building codes are often poorly enforced in flood-prone areas.¹⁹⁷ Local land-use regulators sometimes respond to pressure to favor development to support economic growth.¹⁹⁸ The threat of takings litigation in opposition to land-use regulation has not subsided in recent years.¹⁹⁹ Emblematic of this structural issue, the number of properties suffering repetitive flood losses has continued to increase.²⁰⁰

New construction in high-risk areas must conform to elevation requirements as mentioned earlier,²⁰¹ and most new buildings constructed in flood zones meet these standards.²⁰² Existing buildings, by contrast,

13; Houck, *supra* note 97, at 73, 160; William J. Siffin, *Bureaucracy, Entrepreneurship, and Natural Resources: Witless Policy and the Barrier Islands*, 1 CATO J. 293, 296 (1981) (describing how federal insurance encouraged building on Padre island in Texas). One report finds that the NFIP has not stimulated development or increased flood losses since its new construction rules require mitigation which reduces flood losses. SARMIENTO & MILLER, *supra* note 118, at x. The report also finds that the subsidized rates for older homes in flood-prone areas inflates their value and “essentially [provides] an incentive against redevelopment.” *Id.*; *see supra* Part I.B.7.

193. FRENCH WETMORE ET AL., *supra* note 105, at xii, 12–16.

194. Scales, *supra* note 3, at 12; Luke & Abramovsky, *supra* note 3, at 8–11.

195. Scales, *supra* note 3, at 8. The 1973 amendments required that federal assistance for construction projects in floodplain areas had to be backed by flood insurance. 42 U.S.C. § 4012(a) (2012). This was added when the 1968 Act was not resulting in communities joining the program. Houck, *supra* note 97, at 71.

196. *See supra* Part I.A.4; Luke & Abramovsky, *supra* note 3, at 9; *see, e.g.*, United States v. Parish of St. Bernard, 756 F.2d 1116, 1127 (5th Cir. 1985) (limiting remedies of the United States against Louisiana public and private defendants for violating their obligations to adopt and enforce flood control measures thus leading to massive flood damage).

197. *See, e.g.*, KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 17; Klein & Zellmer, *supra* note 66, at 1496–1498.

198. KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 17.

199. *See, e.g.*, J. Peter Byrne, *The Cathedral Engulfed: Sea-Level Rise, Property Rights, and Time*, 73 LA. L. REV. 69, 105–06 (2012); Klein & Zellmer, *supra* note 66, at 1513; Justin Pidot, *Fees, Expenditures, and the Takings Clause*, 41 ECOLOGY L. Q. 131, 140–41; THE NATION’S RESPONSES, *supra* note 16, at 85; Kildow & Scorse, *supra* note 22.

200. GAO, 2011 PUBLIC POLICY GOALS REPORT, *supra* note 26, at 6 (reporting that the number of repetitive loss properties rose from 76,202 in 1997 to 132,100 in March 2011).

201. INS. INFO. INST., *Flood Insurance*, *supra* note 13.

202. FRENCH WETMORE ET AL., *supra* note 105, at xi, 16.

do not need to meet elevation or other requirements unless reconstruction or repair work worth more than 50 percent of the market value is being done on the property.²⁰³ This creates incentives to forego expensive renovations so property owners are not required to rebuild to code.²⁰⁴ Because below-cost insurance is available for older homes relative to their risk, many times insurance payouts supply funds for owners to continue to occupy the same risky buildings.²⁰⁵ U.S. flood insurance has created negative incentives to pay for flood mitigation upgrades.²⁰⁶ Furthermore, the subsidy to older homes has artificially inflated their value and contributed to them not being replaced by newer, more flood-resistant structures.²⁰⁷ When Congress created the NFIP in 1968, it expected that old, flood-prone buildings would disappear from floodplains within 25 years, but this not what has happened.²⁰⁸ Approximately 3.5 million older properties remain, with an extremely low turnover rate.²⁰⁹ Moreover, federal programs have created levees and taken other measures to make areas “safe” to build.²¹⁰

Despite the legislative goal of guiding development away from floodplains, the opposite has happened: development on floodplains has been fostered and has flourished in part due to the NFIP and related programs. Some of this development is more flood-resistant than it would be without the NFIP, but local building codes are often lightly enforced, leading to newly-constructed, at-risk property. This development has resulted in increasing amounts of property at risk, higher costs for the NFIP, and higher disaster relief costs. In short, although certainly not the only factor at work, the program has contributed to more development in flood-prone areas and to the retention, rather than the replacement, of older homes. As a consequence, more property is at risk of floods.

D. Problematic Mapping and a Confusing Structure

Technical issues have endured throughout the history of the NFIP. In 1985, Oliver Houck observed that Congress had not wholeheartedly committed to the NFIP and claimed that, for it to work well, it needed

203. See 44 C.F.R. §§ 59.1, 60.3(c)(2) (2014).

204. FRENCH WETMORE ET AL., *supra* note 105, at 23.

205. *Id.*

206. *Id.*

207. SARMIENTO & MILLER, *supra* note 118, at x.

208. FRENCH WETMORE ET AL., *supra* note 105, at 22.

209. *Id.* at 23.

210. See, e.g., Luke & Abramovsky, *supra* note 3, at 10–12; FRENCH WETMORE ET AL., *supra* note 105, at 25–26; *supra* Parts I.A.4, I.B.7.

sufficient resources for mapping, rate-setting, and enforcement.²¹¹ Mapping has been a chronic issue, as maps are often outdated and inaccurate.²¹² According to the GAO, more attention to rate-setting continues to be needed.²¹³ Local pushback to map changes has often been intense, sometimes resulting in map revisions.²¹⁴ In addition, FEMA has not kept track of grandfathered properties or other important data.²¹⁵

Moreover, the NFIP's structure is far from intuitive or self-explanatory. Because the insurance is sold by private companies, it probably is not clear to many policyholders that the federal government actually is insuring them. Public understanding of basic insurance principles is often lacking.²¹⁶ Further, it likely is not apparent to many potential buyers why the federal government is the insurer in this context; namely, that the basic coverage has not been available on the private market.²¹⁷ Because the insurance is provided by the federal government, consumer-friendly state insurance law doctrines do not apply.²¹⁸

E. *The Situation in 2012*

The effects of federal disaster relief on insurance purchase decisions and other actions have not been fully explored.²¹⁹ Given the publicity around federal disaster relief and the overlap between federal disaster housing assistance and benefits provided by flood insurance, it would not be surprising if some homeowners in flood-prone areas decided not to buy flood insurance, or let their policies lapse, because they assumed federal disaster assistance would pay for their losses.²²⁰ Of those who did purchase policies prior to 2012, over one million flood insurance

211. Houck, *supra* note 97, at 159–163.

212. GAO, 2010 CONTINUED ACTIONS NEEDED REPORT, *supra* note 59, at 7; KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 16; Hornstein, *supra* note 3, at 34.

213. GAO, 2008 FEMA'S RATE-SETTING PROCESS REPORT, *supra* note 65, at 30.

214. *Id.* at 16–17; Hornstein, *supra* note 3, at 25–26; Luke & Abramovsky, *supra* note 3, at 9–10.

215. GAO, 2008 FEMA'S RATE-SETTING PROCESS REPORT, *supra* note 65, at 20; GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 31–32.

216. *See Americans Believe They're Savvy About Insurance, but NAIC Insurance IQ Tells Different Story*, NAT'L ASS'N INS. COMMISSIONER'S (May 10, 2009), http://www.naic.org/Releases/2009_docs/insurance_iq.htm (providing data indicating that majority of respondents expressed confidence about their insurance knowledge, but most received a failing score of 40% on a basic ten-question insurance IQ test).

217. *See supra* Part II.B.

218. Scales, *supra* note 3, at 33, 38.

219. *See supra* Part I.B.8.

220. *See supra* Part I.B.8.

policies were heavily subsidized, and the other four million were priced at rates that did not reflect flood risk, under the NFIP's solidaristic goal of providing flood insurance to those who could not otherwise acquire it.

But the NFIP, unsurprisingly, had not met the conflicting actuarial goal of saving the federal government money. Rather than guiding development away from floodplains, it had encouraged development there and discouraged the replacement or renovation of older buildings. Localities and states often did not enforce building codes that might lessen flood damage, and the NFIP could do little about it. Thousands of properties had been mitigated with FEMA funds, reducing flood damages by an estimated \$1 billion a year. But disaster relief costs, rather than decreasing, had increased dramatically.

Expensive subsidies on high-risk properties and storms had led to large deficits. Although deficits were anticipated when the program started, the idea that the program should be self-supporting had long ago taken hold as part of an increasingly popular market approach to government.²²¹ The NFIP had been on the GAO's high-risk list since 2006. Flood risk mapping, the basis for determination of rates, was inadequate.

The federal government in 1968 chose to insure a risk that is extremely difficult to insure by offering a product that people have to be forced to buy even when it is offered at a steep discount. Federal disaster relief overlapped with flood insurance benefits. The overall assessment of the NFIP was mixed at best, particularly given that more frequent and destructive storms were predicted.

III. THE 2012 AND 2014 REFORMS

A. *The Biggert-Waters Flood Insurance Reform Act of 2012*

The Biggert-Waters Flood Insurance Reform Act ("BW-12"), the most significant revision to the NFIP in at least 20 years, was passed with bipartisan support by a wide margin and signed by President Obama in July 2012.²²² It reflected an actuarial approach to flood insurance and

221. See MICHAEL J. SANDEL, WHAT MONEY CAN'T BUY: THE MORAL LIMITS OF MARKETS 6–8, 11 (2012).

222. Hornstein, *supra* note 3, at 30; Andrew G. Simpson, *Agents, Insurers Cheer Congress OK of Flood Insurance Reform Bill*, INS. J. (June 29, 2012), <http://www.insurancejournal.com/news/nahona/2012/06/29/253845.htm>. BW-12 was part of a large transportation bill and was uncontroversial at the time of passage. Bruce Alpert, *How Controversial Biggert-Waters Flood Insurance Bill Became Law*, TIMES-PICAYUNE (Aug. 13, 2013, 5:14 PM), http://www.nola.com/politics/index.ssf/2013/08/how_controversial_biggert-wate.html.

was aimed at making the NFIP fiscally stable and self-supporting.²²³ It gradually eliminated all subsidies and called for the creation of a reserve fund so that, ideally, taxpayers would not be called on to periodically bail out the NFIP.²²⁴ It expanded mapping funds and authorized funding of the NFIP for the next five years.²²⁵ An alliance between environmentalists concerned about climate change, insurance companies, and market-oriented reformers who want a smaller federal government contributed to the 2012 revisions.²²⁶

The 2012 flood insurance revisions arose from years of deliberation. The GAO had raised concerns about the fiscal stability of the NFIP almost from the beginning.²²⁷ Researchers studying the NFIP had long been calling for the removal of subsidies so that landowners in flood-prone areas would bear the costs of the risks they encountered and so that a private market for flood insurance could develop.²²⁸ The law's orientation towards risk-based rates and market participation was part of the broad move towards markets in public policy over the past few decades.²²⁹ Various GAO reports contain many of the recommendations that became part of BW-12; furthermore, legislation similar to BW-12 had been introduced and even passed the House earlier.²³⁰ This section outlines the most important aspects of BW-12.

223. *FEMA 2012 Overview*, *supra* note 7.

224. *NAIC Overview*, *supra* note 7.

225. *Id.*

226. Eli Lehrer, *Strange Bedfellows: Smartersafer.org and the Biggert-Waters Act of 2012*, 23 DUKE ENVTL. L. & POL'Y F. 351, 352 (2013) (describing coalition).

227. See GAO, 2006 FLOOD INSURANCE HIGH-RISK REPORT, *supra* note 7, at 5–6 (stating that GAO has raised concerns for 15 years).

228. See, e.g., Kunreuther, *supra* note 181, at 184, 191, 198; KUNREUTHER & MICHELKERJAN, *supra* note 3, at 193–203. For years there has been some private insurance available for floods above the NFIP limits. *Id.* at 371 n.21, 373 n.26; see *infra* Part IV.B.3.

229. See, e.g., SANDEL, *supra* note 221, at 7–8, 11.

230. See generally, e.g., GAO, 2011 ACTION NEEDED REPORT, *supra* note 68; GAO 2010 CONTINUED ACTIONS NEEDED REPORT, *supra* note 59; GAO, 2008 FEMA'S RATE-SETTING PROCESS REPORT, *supra* note 65. Prior bills included Flood Insurance Reform and Modernization Act of 2006, H.R. 4973, 109th Cong. (as passed by House, June 27, 2006); Flood Insurance Reform and Modernization Act of 2006, S. 3589, 109th Cong. (as introduced by Sen. Richard Shelby, June 28, 2006).

1. Highlights of the 2012 Reforms
 - a. Eventual Subsidy Elimination, Risk-Based Rates, and an Actuarial Approach

The 2012 reforms required that all subsidies eventually would be phased out. As noted above, there were about one million subsidized policies when these reforms passed.²³¹ The most immediate subsidy phase-outs were those for second homes, businesses, and severe repetitive loss properties.²³² The 2012 reforms phased out those subsidies starting January 1, 2013, with rates rising 25 percent a year until they reflected full-risk pricing.²³³ Subsidized rates for older homes (pre-FIRM properties) that were primary residences would stay in effect until the property was sold.²³⁴ A “sale trigger” provision required that risk-based rates would be applied to these older homes once they were sold.²³⁵ BW-12 also would have eventually eliminated subsidies for houses that received subsidies based on mapping changes, known as grandfathered properties.²³⁶

231. GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 1.

232. *FEMA 2012 Overview*, *supra* note 7. Policy holders who had subsidized policies for non-primary residences, businesses, and severe repetitive loss properties (a total of 5% of flood policyholders) received 25% premium increases starting January 1, 2013. *Id.* BW-12 eliminated subsidies for 438,000 policyholders, for second homes, businesses, and severe repetitive loss properties as of January 1, 2013. GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 12. But 715,000 subsidized properties remained. *Id.* “Severe repetitive loss” properties are defined as single family residences which have suffered flood damage for which four or more claims have been made, each greater than \$5000 or at least two claims have been made with the total amount exceeding the value of the property. 42 U.S.C. § 4014(h)(1)(B) (2012).

233. *FEMA 2012 Overview*, *supra* note 7; *see supra* note 232.

234. The subsidy would stay in effect until the property was sold, unless it was a severe repetitive loss property, in which case the subsidy would begin to phase out in 2013. *FEMA 2012 Overview*, *supra* note 7; *see supra* note 232.

235. 42 U.S.C. § 4014 (g)(2) (2012) (repealed 2014); *FEMA 2012 Overview*, *supra* note 7. FEMA had to consider catastrophic loss years in the calculation of the average historical loss year. *NAIC Overview*, *supra* note 7. Another area of the legislation concerned deductibles: until FEMA developed updated ratemaps, deductibles would be between \$1500 and \$2000. Hornstein, *supra* note 3, at 33; *see* Biggert-Waters Flood Insurance Reform Act of 2012, Pub. L. No. 112-141, § 100210(b)(1)(A)–(B), 126 Stat. 405, 921 (codified at 42 U.S.C. § 4019 (2012)). After the FEMA maps were updated, the deductibles were to be revised. Hornstein, *supra* note 3, at 33. Some subsidized policyholders are not required to supply data on their flood risk so FEMA is asking them to supply information voluntarily. GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 4; *see* § 100205, 126 Stat. at 917–19 (codified at 42 U.S.C. §§ 4014–4015).

236. *FEMA 2012 Overview*, *supra* note 7. These provisions were not implemented because the 2014 reforms eviscerated them. *See* Homeowner Flood Insurance Affordability Act of 2014, P.L. No. 113-89, § 4, 128 Stat. 1020, 1022 (to be codified at 42 U.S.C. § 4015); *infra* Part III.B.1.

The basic idea was that flood risk maps would be revised and premiums would ultimately reflect the property location's current risk of flooding, to take effect on the effective date of any revised or updated maps.²³⁷ New properties insured under the NFIP were to be charged "actuarial rates," which means they would be charged rates that reflected the actual risk. Risk-based rates would apply to new policies and situations where a policy had lapsed because of the policyholder's "deliberate choice."²³⁸ For subsidized homes currently insured under the NFIP, rates could rise 20 to 30 percent over five years until those rates also reflected actuarial risk.²³⁹ The 2012 reforms aimed to create a reserve fund, and all policies were to be increased to begin raising money for that reserve fund.²⁴⁰

b. "Affordability" Study

BW-12 required eventual removal of all subsidies and for rates to be based only on flood risk.²⁴¹ However, Congress included a provision in tension with the market-based framework of the reforms. It required a study to be done by the National Academy of Sciences of methods to encourage and maintain participation in the NFIP, to educate consumers about the NFIP and flood risk, and to develop an "affordability framework" through "targeted assistance rather than generally subsidized rates including means-tested vouchers."²⁴² The 2012 reforms required that the study would include a cost-benefit analysis of a flood insurance program with full risk-based premiums and means-tested assistance for

237. The statute provided that "any property located in an area that is participating in the national flood insurance program shall have the risk premium rate charged for flood insurance on such property adjusted to accurately reflect the current risk of flood to such property, subject to any other provision of this Act." 42 U.S.C. § 4015(h) (2012) (repealed 2014).

238. 42 U.S.C. § 4014(g)(3) (2012) (repealed 2014).

239. 42 U.S.C. § 4015(h) (2012) (repealed 2014).

Any increase in the risk premium charged for flood insurance on any property that is covered by a flood insurance policy on the effective date of such an update that is a result of such updating shall be phased in over a 5-year period, at the rate of 20 percent for each year following such effective date.

Id.

240. *FEMA 2012 Overview*, *supra* note 7.

241. GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 11–12.

242. Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12), Pub. L. 112-141, § 100236, 126 Stat. 405, 957. The GAO issued two reports in 2013 indicating that more information was needed on different types of properties and subsidies. *See generally* U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-13-858T, NATIONAL FLOOD INSURANCE PROGRAM: CONTINUED ATTENTION NEEDED TO ADDRESS CHALLENGES (2013) [hereinafter GAO, 2013 ATTENTION NEEDED TO ADDRESS CHALLENGES REPORT]; GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 6.

those who cannot afford insurance, as compared to the existing system of subsidized flood insurance and “federal disaster relief for people without coverage.”²⁴³ The law specified that the study was supposed to be completed in 270 days.²⁴⁴

The incomes and assets of those who currently benefit from the subsidies are difficult to ascertain. A large majority of the remaining subsidies are in counties with high home values. The GAO notes that “78.8% of subsidized policies are in counties that rank in the top 30% of home values while 1.03% are in counties that rank in the bottom 30%.”²⁴⁵ Even in counties that rank high in overall home values, however, there are homes that are not as highly valued and these may be in the less desirable areas which may be the more flood-prone areas. Very specific data about owners’ incomes are not available, and the GAO states that “full-risk rates may be overly burdensome for some owners and not for others.”²⁴⁶

c. Improving Mapping and Grounding Maps in Science

The 2012 reforms authorized \$400 million annually to the national flood-mapping program.²⁴⁷ Congress directed FEMA to use the “most accurate . . . data” in developing maps, and areas within the 100-year and 500-year floodplains, as well as “residual risk” areas, had to be

243. § 100236(b), 126 Stat. at 957. It is striking that Congress is here acknowledging that disaster relief and flood insurance cover the same territory.

244. *Id.* § 100236(c).

245. GAO, 2013 ATTENTION NEEDED TO ADDRESS CHALLENGES REPORT, *supra* note 3, at 21 tbl.4. These figures pertain to the 715,000 subsidized policies that remain after the second home, business, and severe repetitive loss properties have been removed.

246. *Id.* at 36. Proponents of continuing the subsidies have argued that they do not benefit the wealthy to the extent claimed by their opponents. *See generally, e.g.*, Jeff Harrington, Op-ed, *Political Rhetoric That Subsidized Flood Insurance Rates Help Rich Doesn't Mesh with Reality*, TAMPA BAY TIMES (Dec. 13, 2013, 5:15 PM), <http://www.tampabay.com/news/business/banking/political-rhetoric-that-subsidized-flood-insurance-rates-help-rich-doesnt/2157000>. Proponents of eliminating the subsidies have argued to the contrary. *See generally, e.g.*, R.J. Lehmann, Letter to the Editor, *Sifting Flood Program Data*, TAMPA BAY TIMES (Dec. 20, 2013, 2:19 PM), <http://www.tampabay.com/opinion/letters/saturdays-letters-work-to-rid-the-world-of-nuclear-weapons/2157987>; Carolyn Kousky & Howard Kunreuther, *Addressing Affordability in the National Flood Insurance Program*, 1 J. EXTREME EVENTS 1 (2014); R.J. Lehmann, *About Those 'Huge' Flood Insurance Rate Increases*, R STREET (Nov. 4, 2013), <http://www.rstreet.org/2013/11/04/about-those-huge-flood-insurance-rate-increases/> (arguing rate increases are not as extreme or widespread as opponents claim, and that if a risk-based rate is extremely high, this suggests the risk is extremely high and the price signal should be heeded).

247. § 100216(f), 126 Stat. at 930 (codified at 42 U.S.C. § 4101b(f) (2012)) (granting authority to allocate \$400 million annually between 2013 and 2017); Hornstein, *supra* note 3, at 33.

mapped.²⁴⁸ Appeals of mapping decisions were to be based only on their technical and scientific validity.²⁴⁹ The Act also created a Scientific Resolution Panel to address any mapping-related concerns raised by those who are dissatisfied with any appeal to FEMA.²⁵⁰ The aim of these provisions was to ensure that maps and rates are based on science and not subject to political pressure.

d. Other BW-12 Reforms

The NFIP has long required that lenders in flood-prone areas make sure that borrowers have flood insurance because homeowners tend not to buy flood insurance voluntarily.²⁵¹ As lenders have often failed to make sure homeowners have and keep flood insurance, the 2012 reforms increased civil penalties on lenders that fail to ensure borrowers have insurance and removed the time limit on annual penalties.²⁵² The 2012 reforms also consolidated the three FEMA mitigation programs and streamlined the process for release of mitigation grants.²⁵³

BW-12 paid explicit attention to privatization in addition to the implicit aim of fostering the private market by removing subsidized rates. First, it clarified that private flood insurance met the flood insurance purchase requirement that went along with mortgages.²⁵⁴ It also required FEMA and the GAO to conduct studies and report to Congress within 18 months with an assessment of the private insurance market's capacity to assume a portion of the NFIP risk.²⁵⁵ BW-12 also

248. § 100216(b)(1)(A)(iii), (b)(1)(C), 126 Stat. at 927 (codified at 42 U.S.C. § 4101b(b)(1)(A)(iii), (b)(1)(C)); Hornstein, *supra* note 3 at 33. Also relating to mapping issues, the Act mandates that FEMA contract with the National Academy of Public Administration to Conduct a study of coordination between FEMA and both federal and state agencies concerning the mapping program and requires the Office of Management and Budget to submit a report to Congress that specifically highlights budget issues involving mapping when proposing FEMA's annual budget. § 100220(a)(2), 126 Stat. at 933 (codified at 42 U.S.C. § 4101c(a)(2)).

249. § 100218(a), 126 Stat. at 930–31 (codified at 42 U.S.C. § 4104-1(a)(2)(A)); Hornstein, *supra* note 3, at 34.

250. § 100218(a), 126 Stat. at 930 (codified at 42 U.S.C. § 4104-1(a)(1)).

251. *See supra* Part I.B.4.

252. FRENCH WETMORE ET AL., *supra* note 105, at 23–24; *NAIC Overview*, *supra* note 7.

253. *FEMA 2012 Overview*, *supra* note 7.

254. *NAIC Overview*, *supra* note 7. It required the Federal Office of Insurance to report to Congress on the state of the private market for natural catastrophe insurance. *Id.*

255. These studies have been done. *See generally* GAO, 2014 PRIVATE SECTOR INVOLVEMENT REPORT, *supra* note 4; U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-14-179, HOMEOWNERS INSURANCE: MULTIPLE CHALLENGES MAKE EXPANDING PRIVATE COVERAGE DIFFICULT (2014).

made clear that the NFIP had the authority to buy reinsurance to cover catastrophic losses, which it had not done in the past.²⁵⁶

BW-12 also called for various studies, including a study of flood risk determinations behind levees, a study of the private market for natural catastrophe insurance, and a GAO study of subsidized properties.²⁵⁷

2. Summary of the 2012 Reforms

In BW-12 Congress moved from a solidaristic system of homeowners' flood insurance towards an actuarial approach with risk-based rates to be phased in over time.²⁵⁸ It specifically rejected the past practice of having generally subsidized rates but indicated it was concerned with flood insurance costs by requiring a study of methods to develop an affordability framework.²⁵⁹ It shifted from an approach to mapping that was vulnerable to political pressure to one that would be based only on scientific principles. Congress strengthened provisions to ensure demand, added a reserve fund plan, and took steps to encourage private insurance. The gradual shift to risk-based pricing was seen as a positive move which would lead to market rates and private competition, both seen as good things. Market rates based on risk would more accurately reflect the costs of the risks faced by living in flood-prone areas, and this too was widely seen as a beneficial change.

B. *The Menendez-Grimm Homeowner Flood Insurance Affordability Act of 2014*

Less than two years after the 2012 reforms, Congress did a partial about-face, departing from the actuarial approach it had so recently adopted, by passing the Menendez-Grimm Homeowners Flood Insurance Affordability Act of 2014 ("MG-14"). MG-14 accepted some of the subsidy rollbacks, such as the second home subsidy rollbacks, and retrenched others such as the subsidy for old homes that were primary

256. *NAIC Overview*, *supra* note 7; GAO, 2011 ACTION NEEDED REPORT, *supra* note 68, at 6.

257. Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12), Pub. L. No. 112-141, § 100231(a)(3), (c), (e)(1)(A), 126 Stat. 405, 949-50, 951, 952. The levee study, subsidized property study, and private market study have been completed. NAT'L ACAD. SCIS., *Levee Report*, *supra* note 30; GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 1, 9; GAO, 2014 PRIVATE SECTOR INVOLVEMENT REPORT, *supra* note 4.

258. *See supra* Part II.A-E.

259. *See supra* Part II.C.

residences.²⁶⁰ It also did not change the 2017 reauthorization date of the program put in place by Congress during the 2012 reforms.²⁶¹

1. Highlights of the 2014 Reforms
 - a. “Striving” to Limit Premium Prices

MG-14 requires that FEMA must “strive to minimize the number of policies [that have premiums which] exceed one percent of the total coverage provided by the policy.”²⁶² In other words, FEMA must strive to make sure a policy with \$250,000 of coverage does not have premiums of more than \$2500 per year, regardless of the flood risk of the property.

- b. Subsidies: Reinstatement of Some and Continuing Gradual Elimination of Others
 - i. *Some Subsidies Are Reinstated and a Surcharge is Added to All Policies.*

MG-14 restores the subsidies on older homes (pre-FIRM subsidies) and the grandfathering subsidies.²⁶³ It requires refunds to homeowners who paid higher rates as a result of the 2012 law for homes that are primary residences and are not severe repetitive loss properties.²⁶⁴ These

260. Homeowner Flood Insurance Affordability Act of 2014, Pub. L. No. 113-89, § 1(a), 128 Stat. 1020, 1020 (to be codified at 42 U.S.C. § 4001 note).

261. § 100203(a), 126 Stat. at 916 (codified at 42 U.S.C. § 4016(a) (2012)); *National Flood Insurance Program (NFIP)*, NAT’L ASS’N INS. COMMISSIONERS, http://www.naic.org/cipr_topics/topic_nfip.htm (last updated Nov. 13, 2014); see Dan Farber, *Sea Level Rises, Premiums Not so Much*, LEGAL PLANET BLOG (Mar. 24, 2014), <http://legal-planet.org/2014/03/24/sea-level-rises-premiums-not-so-much>.

262. § 7(j), 128 Stat. at 1023 (to be codified at 42 U.S.C. § 4015). FEMA must report to Congress when it fails to meet this goal. *Id.*

263. *Id.* § 4 (to be codified at 42 U.S.C. § 4015) (“Restoration of Grandfathered Rates”). This provision repealed § 1308 of the National Flood Insurance Act of 1968 (codified at 42 U.S.C. § 4015(h)), which required premium adjustments to reflect the current risk of flood based on updated maps, and stated that premiums could rise 20% per year following new flood maps. *Id.*; National Flood Insurance Act of 1968, 42 U.S.C. § 4015(h) (2012) (repealed 2014).

264. The new law provided that some policyholders receive refunds of higher premiums paid under the 2012 reforms. *Homeowner Flood Insurance Affordability Act: Overview*, FEMA.GOV 2 (Apr. 3, 2014), http://www.fema.gov/media-library-data/1396551935597-4048b68f6d695a6eb6e6e7118d3ce464/HFIAA_Overview_FINAL_03282014.pdf

[hereinafter *FEMA 2014 Overview*].

subsidies cover 715,000 subsidized properties and by definition include many of the highest risk properties.²⁶⁵

When Congress passed the 2012 reforms requiring that rates should be based on risk, FEMA did not have the information needed to determine full risk rates for policies that no longer qualified for subsidies.²⁶⁶ Subsidized rates were about 35–45 percent of what actuarially sound rates would have been.²⁶⁷ FEMA therefore used a working assumption that subsidized rates were about half of what full-risk rates would be.²⁶⁸ FEMA tried to raise rates gradually and develop maps at the same time.²⁶⁹

The 2012 reforms required that premiums be adjusted to reflect the current risk of flood based on updated maps and stated that premiums could rise 20–30 percent per year following new flood maps.²⁷⁰ But MG-14 stopped those increases for homes that are primary residences. Under MG-14, rates still can increase for subsidized properties by five percent a year, and, with limited exceptions, rates cannot increase more than 18 percent per year.²⁷¹ The 2014 law added a surcharge to all policies to offset the cost of the subsidized policies.²⁷²

ii. *Subsidies Remain when Subsidized Properties Are Sold and when Subsidized Policies Have Lapsed.*

Congress, in order to reduce the number of subsidized properties, passed a “sale trigger” provision in 2012, so that, when a property that benefited from a subsidized flood insurance policy was sold, the rates would shift to market rates for the new owner.²⁷³ The real estate industry objected strenuously once this provision went into effect.²⁷⁴ MG-14

265. GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 12.

266. GAO, 2011 ACTION NEEDED REPORT, *supra* note 68, at 52; GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 30–32.

267. *See supra* note 68; Part I.A.4.

268. GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 30–32 (2013); *FEMA 2012 Overview*, *supra* note 7.

269. *FEMA 2012 Overview*, *supra* note 7.

270. *Id.*

271. *FEMA 2014 Overview*, *supra* note 264, at 2.

272. Homeowner Flood Insurance Affordability Act of 2014, Pub. L. No. 113-89, § 8, 128 Stat. 1020, 1023–24 (to be codified at 42 U.S.C. § 4015a, 4017a). \$25 was added to each primary residence and \$250 to all other policies. *Id.* § 8(a) (to be codified at 42 U.S.C. § 4015a(b)(1)–(2)); *FEMA 2014 Overview*, *supra* note 264, at 3.

273. *See supra* note 232 and accompanying text.

274. Robert R. M. Verchick & Lynsey R. Johnson, *When Retreat Is the Best Option: Flood Insurance after Biggert-Waters and other Climate Change Puzzles*, 47 J. Marshall L. Rev. (forthcoming 2014) (manuscript at 18, 23), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2418089; *see infra* Part III.C.2.a.

repealed the sale trigger provision so that new owners of primary residences in flood-prone areas will receive the existing subsidies.²⁷⁵

Changes in the rules about when a subsidized policy lapses were also significant. The 2012 reforms had stated that if a homeowner deliberately let his subsidized policy lapse, the subsidy would be gone and a new policy on the property would have to be based on risk.²⁷⁶ The 2014 reforms were much more forgiving about situations when a policy lapsed. They provided that if a policy had lapsed because the homeowner had been told she was no longer required to purchase flood insurance, the subsidy would continue.²⁷⁷

iii. *Gradual Subsidy Elimination for Second Homes, Businesses, and Severe Repetitive Loss Properties Will Continue.*

MG-14 leaves in place the gradual elimination of subsidies for second homes, businesses, and severe repetitive loss properties that was passed in 2012²⁷⁸ and provides that rates for those properties can rise by 25 percent a year.²⁷⁹ Thus, if a person owns a second home that had been protected by an old house subsidy, that second home will gradually be charged actuarial, risk-based rates. Similarly, if a person owns a severe repetitive loss property or a business that has a subsidized policy, that policy's price gradually will rise to reflect flood risk. A total of 438,000 subsidized policies will gradually be shifted to risk-based rates.²⁸⁰

275. § 3(a)(1)(A), 128 Stat. at 1021 (to be codified at 42 U.S.C. § 4014(g)).

276. See *supra* Part III.A.1.a.

277. § 3(a)(1)(B), 128 Stat. at 1021 (to be codified at 42 U.S.C. § 4014(g)(1)). The new lapse provision states that rates will not rise to market rates if the policy lapsed because the policyholder was told she was no longer required to have coverage. *Id.* This shift is telling. Remember we are talking about homeowners in high-risk areas who had deeply subsidized flood policies which lapsed, and considering whether they should be able to get new subsidized policies or sell their property to someone else with it being protected by a subsidized policy. The 2012 version left the owner with some responsibility—if she deliberately let her subsidized policy lapse, she could not get it back. By contrast, the 2014 version left the owner with much less responsibility—if she let the policy lapse because it was no longer required, she could get it back. The owner had no independent responsibility to consider her own risk and buy insurance accordingly. From an insurance perspective, this is not sensible. If a policyholder of, say, a life insurance policy let it lapse, a market-based insurance company would assess the current risk when issuing a new policy and would not have to issue a policy based on rates from earlier.

278. See *supra* Part III.A.1.a. For definition of severe repetitive loss properties, see *supra* note 232.

279. *FEMA 2014 Overview*, *supra* note 264, at 2.

280. *Id.*; GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 13 (finding that subsidies for second homes, businesses, and severe repetitive loss properties total 438,000).

c. “Affordability” Study Expanded

MG-14 significantly expands the provisions about affordability that were in the 2012 law. The 2012 reforms specified that the National Academy of Sciences would conduct a study of methods for establishing an affordability framework “through targeted assistance rather than general subsidies.”²⁸¹ The report was not finished by the time FEMA began raising rates, which became a rallying cry for opponents who argued that rate increases should be postponed until the study was done.²⁸² The Administrator of FEMA, Craig Fugate, testified without contradiction in September 2013 that it might take two years for the study to be completed and that he had no discretion to halt rate increases in the meantime.²⁸³

The 2014 reforms added more money for the study and increased the requirements attached to it. Now, the FEMA administrator must develop a draft framework to address “the issues of affordability of flood insurance sold under the National Flood Insurance Program, including

281. Biggert-Waters Flood Insurance Reform Act of 2012, Pub. L. No. 112-141, § 100236(a), 126 Stat. 405, 957.

282. See, e.g., Bruce Alpert, *GNO Report Says FEMA Should Delay Flood Insurance Premium Hikes Pending Affordability Study*, TIMES-PICAYUNE (Sept. 11, 2013, 11:23 AM), http://www.nola.com/politics/index.ssf/2013/09/gno_report_says_fema_should_de.html; Romano, *supra* note 133. The lawsuit filed by the Mississippi Insurance Commissioner against FEMA in September 2013 argues that this failure should halt all insurance rate increases. Complaint at 29, *Miss. Ins. Dep’t v. U.S. Dep’t of Homeland Security*, No. 13-CV-379 (S.D. Miss. Sept. 26, 2013); Bibeka Shrestha, *Miss. Regulator Sues US Over Flood Insurance Rate Hikes*, LAW360 (Sept. 27, 2013, 3:29 PM), <http://www.law360.com/articles/476231/miss-regulator-sues-us-over-flood-insurance-rate-hikes>.

283. FEMA Administrator 2013 Written Testimony, *supra* note 81; Andrew G. Simpson, *FEMA Chief Disappoints Senators, Says He Can’t Delay Flood Insurance Rates*, INS. J. (Sept. 23, 2013), <http://www.insurancejournal.com/news/national/2013/09/23/305915.htm>. Phase One of the study, to be undertaken by an ad hoc committee under the auspices of the National Academy of Sciences, began on January 30, 2014. *Project Information*, NAT’L ACADS., <http://www8.nationalacademies.org/cp/projectview.aspx?key=49584> (last visited Oct. 16, 2014) (“Project title: Affordability of NFIP Premiums”). The legislation does not require any particular outcome for the study, and the study itself at first glance seems that it will be unwieldy and challenging. The focus area of the study, for example, is listed as follows: “Behavioral and Social Sciences; Computers and Information Technology; Earth Sciences; Engineering and Technology; Environment and Environmental Studies; Math, Chemistry and Physics.” *Id.* An ad hoc committee will prepare two reports for FEMA. The first will focus on definitions and assumptions related to an affordability framework, while the second will propose alternative approaches for evaluating options for affordability programs. *Id.* It will then be up to FEMA and Congress to decide what course to take on affordability issues.

issues identified in the affordability study.”²⁸⁴ The new statute lists a number of criteria that the Administrator must consider in preparing an affordability framework, including the effect of rate increases on participation.²⁸⁵

d. More Congressional Oversight Added for Mapping

The 2012 reforms were clear that mapping should be only based on scientific evidence. The new law has added provisions that seem to be in tension with this principle. For example, in developing the “affordability framework,” the FEMA administrator is required to consider “the impact flood insurance rate map updates have on the affordability of flood insurance.”²⁸⁶ Congress will review implementation of the mapping program,²⁸⁷ and new provisions have been added so that each member of Congress with constituents affected by map changes will have more information about the progress of the mapping process.²⁸⁸ Lastly, FEMA must pay for the costs of successful map appeals by homeowners.²⁸⁹

e. New Flood Insurance Advocate Position Created

The 2014 reforms require FEMA to designate a Flood Insurance Advocate for the first time. That person’s overall job is “to advocate for the fair treatment of policyholders under the National Flood Insurance Program and property owners in the mapping of flood hazards, the identification of risks from flood, and the implementation of measures to minimize the risk of flood.”²⁹⁰ The statute does not define “fair treatment.”

284. Homeowner Flood Insurance Affordability Act of 2014, Pub. L. No. 113-89, § 9(a), 128 Stat. 1020, 1024.

285. *Id.* § 9(b).

286. *Id.* § 9(b)(5).

287. *Id.* § 17.

288. *Id.*

289. § 18, 128 Stat. at 1027 (to be codified at 42 U.S.C. § 4017(a), 4104(f)).

290. *Id.* § 24. The duties of the advocate will include educating policyholders and property holders on flood and flood insurance related matters, assisting policyholders in understanding the program and understanding how to appeal preliminary rate maps, assisting in developing regional capacity to respond to individual concerns about flood insurance, coordinate outreach and education with local officials and community leaders in areas affected by proposed map changes, and aid policyholders in obtaining accurate information about rates. *Id.*

f. Variety in Policies and Clear Communication Encouraged

MG-14 allows for more variety in policies by several means, responding to criticisms of the standard flood policy as one-size-fits-all.²⁹¹ It encourages high-deductible policies, which presumably would be cheaper than low-deductible policies.²⁹² Second, it requires that an owner's flood mitigation activities, which are not part of the structure itself, be taken into account in determining rates.²⁹³ Third, it does not require that detached structures be insured for flood.²⁹⁴ The NFIP is required to clearly communicate flood risk information to policyholders even if they have subsidized policies under the new law.²⁹⁵

2. Summary of 2014 Reforms

In MG-14, Congress retreated from eventual elimination of all subsidies as called for in 2012 but did continue with the gradual elimination of 438,000 subsidized policies, namely those for second homes, businesses, and severe repetitive loss properties. 715,000 subsidies were reinstated, specifically those for older homes and grandfathered homes that are primary residences. These subsidies were for old houses built without flood risk in mind and for properties where flood risk had increased but the properties had received lower rates in the past. While Congress had called for a study of affordability and participation in 2012, the 2014 reforms expanded both the funding for and the requirements of the study. Congress instructed the NFIP to "strive" to limit premium prices to one percent of the coverage, even if that was far below what a risk-based premium would be. The mapping provisions of the 2012 law, which called for scientific principles to determine mapping decisions, were not repealed, but several provisions of the law require more congressional oversight of the mapping process. The new law requires clear communication of flood risk to all

291. This criticism was made by Kevin Boyle, Managing Editor of the Rockaway Wave newspaper, at a panel at Columbia University Center for Climate Change on December 4, 2013. Kevin Boyle, *Soaring Flood Insurance Rates: Should Congress Step In?*, COLUM. L. SCH., <http://web.law.columbia.edu/climate-change/conferences-and-events> (last visited Feb. 15, 2014).

292. § 12, 128 Stat. at 1025 (to be codified at 42 U.S.C. § 4013(d)) (amending 42 U.S.C. § 4013 to provide that the Administrator shall make available policies with deductibles of up to and including \$10,000).

293. *Id.* § 14 (to be codified at 42 U.S.C. § 4014(a)(1)(A)) (amending 42 U.S.C. § 4014(a)(1)(A), titled "Accounting for Flood Mitigation Activities in Estimates of Premium Rates").

294. *Id.* § 13(a) (to be codified at 42 U.S.C. § 4012a).

295. *Id.* § 28 (to be codified at 42 U.S.C. § 4015(l)).

policyholders and called for a new “Flood Insurance Advocate” to communicate with and advocate for policyholders. With its reinstatement of most subsidies and focus on affordability, Congress retreated from its actuarial approach of 2012 and returned to its former broad solidaristic approach.

C. *Lessons of Failed Reforms*

This section discusses first why the 2012 reforms were passed and why many of those reforms were repealed in 2014. It is important to remember that while there are no easy solutions to the dilemmas presented by floods and climate change, nonetheless the NFIP and federal flood policy could be much improved, as discussed in Part IV.²⁹⁶

1. Why the 2012 Reforms Passed

BW-12 passed with a large bipartisan majority and was signed by the President on July 6, 2012, three months before Superstorm Sandy hit the New York City metropolitan area.²⁹⁷ Congress seemed to have taken sensible steps gradually to move away from its much-criticized and expensive taxpayer subsidization of flood risk. Four main reasons account for the changes. First, the reforms were based on decades of criticism of the NFIP’s finances, and its actuarial, market-based approach chimed with a popular market-based approach to government. Second, a broad coalition of groups with diverse concerns supported the reforms. Third, the groups that could be affected by risk-based rates were not paying attention to the legislation when it was pending. Fourth, no hurricanes had caused massive floods recently.

a. Direct Response to Criticism and Reflection of Popular Market-Based Approach

The 2012 reforms were not surprising; they directly responded to decades of GAO reports and other criticism of the NFIP and its finances.²⁹⁸ The House had passed a version of these reforms in 2006; a similar bill was introduced in the Senate that same year.²⁹⁹ The reforms

296. The issues are hard for a host of reasons, including these: (1) the type of risk is one that is hard to predict and that people tend to discount; (2) the damages caused if the risk comes to fruition are astronomical; (3) the federal government has carrots but no good sticks; (4) and it is very hard for a democratically-elected government to take away benefits once granted to people who vote.

297. Verchick & Johnson, *supra* note 274 (manuscript at 21).

298. *See supra* Part III.A.

299. *See supra* notes 224–27 and accompanying text.

can be seen as part of an actuarial approach to government which has been gaining ground over the past few decades; under this approach, market reforms are seen as a positive, efficient development.³⁰⁰ The subsidy elimination would, for the most part, have been very gradual and grounded in scientifically sound maps, so the law did not seem like an extreme measure.³⁰¹ The law had a provision about the need for an affordability study, which reflected solidaristic concerns, but this was not a prominent part of the law at the time; it seemed clear that the general subsidies which had endured for decades eventually would be a thing of the past.³⁰²

b. Effective Advocacy by a Diverse Coalition of Groups

An interesting coalition of environmental groups, insurance groups, and free market reformers, *smarter safer.org*, worked hard on getting the reforms passed. The gradual move to risk-based rates, which would encourage the private market to insure for floods, appealed to all three groups.³⁰³ The final draft did not mention climate change, but with rates slated to eventually be determined based on risk, it seemed that Congress recognized the potential increased flood risk from climate change.³⁰⁴ All taxpayers eventually would benefit by a small amount since they no longer would be bailing out the NFIP, and eventually disaster relief costs might be reduced or their growth slowed.

c. Inattentiveness of Potentially Affected Parties

Another reason the 2012 reforms passed is that they did not receive much attention at the time. The flood insurance reforms were included in a lengthy transportation bill, and there was not a separate hearing on these provisions in 2012.³⁰⁵ Flood insurance reform was not even mentioned in President Obama's signing statement.³⁰⁶ Senator Mary Landrieu of Louisiana noted at the time that the flood insurance law

300. See, e.g., SANDEL, *supra* note 221, at 7–8, 11.

301. See *supra* Part III.A.1.a.

302. Biggert-Waters Flood Insurance Reform Act of 2012, Pub. L. No. 112-141, § 100236, 126 Stat. 405, 957; see *supra* Part III.A.1.b.

303. Lehrer, *supra* note 226, at 352 (describing the coalition, *SmarterSafer.org*).

304. See, e.g., Byrne, *supra* note 199, at 84.

305. Moving Ahead for Progress in the 21st Century Act, Pub. L. No. 112-141, 126 Stat. 405. The Biggert-Waters Flood Insurance Reform Act of 2012 was Title II of Division F in the Moving Ahead for Progress in the 21st Century Act. *Id.*

306. See *President Obama Signs Bill to Create Jobs, Restore America's Transportation System*, WHITE HOUSE (July 9, 2012, 2:29 PM), <http://www.whitehouse.gov/blog/2012/07/09/president-obama-signs-bill-create-jobs-restore-americas-transportation-system>.

would need to be “fixed,” stated she regretted it did not have affordability provisions, and said that it would be impossible to vote against the bill in which it was included.³⁰⁷ Apart from Senator Landrieu’s statement, there were few objections from Congress. Other representatives of coastal areas, constituents, and the real estate industry all seemed to be inattentive.

Perhaps those who would be affected by the bill assumed it would not pass; the risk of its passage may have seemed like a low probability, high impact event—the kind of risk that behavioral economics tells us people routinely discount. After the many years that Congress had been urged to reform the NFIP and did not do anything significant, observers may have thought that Congress would not actually pass consequential reforms in 2012.

d. Lack of Major Recent Storms or Floods

A fourth factor contributing to the 2012 reforms is the lack of major hurricanes immediately prior to their passage. Although Hurricane Irene in fall 2011 had been significant, there were no huge hurricanes or floods immediately prior to the passage of BW-12. It seems safe to say that if Superstorm Sandy had struck in June 2012 rather than October 2012, the 2012 reforms would not have passed.³⁰⁸ Sandy, with its devastating flood damage, focused attention on the hardships of floods to the individuals suffering them, rather than the more diffuse costs of the NFIP on which Congress focused when it passed the 2012 reforms.

e. The Popularity of Fiscal Stability as a Goal

Some might argue that Congress, in requiring the gradual move towards risk-based rates, departed from the Flood Act’s goal of providing flood insurance “on reasonable terms and conditions”³⁰⁹ without much public debate. But on the other hand, the goal of providing flood insurance on “reasonable terms and conditions” could also mean providing insurance based on the actual risk of flood loss as the 2012 reforms required. Such insurance might well be both reasonable, because it is based on actual risk, and unaffordable, because the flood risk may be high. Congress seemed to recognize the possible contradiction between requiring actuarial rates and the original goals of the Flood Act by calling for the much-invoked “affordability study,”

307. Alpert, *supra* note 222.

308. Verchick & Johnson, *supra* note 274 (manuscript at 21).

309. 42 U.S.C. § 4001(a) (2012).

which seems to be based on solidaristic ideas rather than actuarial ones.³¹⁰ Still, the dominant idea of the 2012 reforms was returning the NFIP to fiscal stability, a popular and seemingly modest goal at the time.

2. Why the 2012 Reforms Were Reformed in 2014

In 2014, many of the reforms were modified, though as noted above some of the subsidy rollbacks have been maintained. This section explores why many of the 2012 reforms were rescinded in 2014. Four main reasons account for the changes: (1) intense lobbying and pressure from affected people and industry, particularly in the wake of Hurricane Sandy; (2) individual narratives conveyed by superficial press attention that could not be countered by the pro-reform side; (3) common human responses to flood risk and climate change risk as predicted by behavioral economics; and (4) FEMA's difficult situation and weak communications.

a. Intense Lobbying and Pressure from the Real Estate Industry and Affected People and Groups

Superstorm Sandy in October 2012 struck densely populated and politically powerful areas of New York and New Jersey three months after the 2012 reforms were signed.³¹¹ Many coastal high-flood-risk areas flooded, causing untold hardship, some loss of life, and billions of dollars of losses. Many homes in these high-risk areas were older homes that had been receiving subsidized rates for almost 50 years and were scheduled to gradually move to risk-based rates when maps were revised.³¹² FEMA began releasing its draft maps and risk-based rates around that time.³¹³ Some people in older homes in flood zones that had long been receiving subsidies learned that much higher rates were in store.³¹⁴ Others found that newer homes in areas that were newly mapped as flood-prone areas also eventually would face much higher rates.³¹⁵ Those affected organized grassroots opposition, starting with a Facebook page, to "stop FEMA now."³¹⁶ The New York and New Jersey

310. Biggert-Waters Flood Insurance Reform Act of 2012, Pub. L. No. 112-141, § 100236, 126 Stat. 405, 957.

311. Verchick & Johnson, *supra* note 274 (manuscript at 21).

312. *Id.* (manuscript at 22).

313. *Id.* (manuscript at 21).

314. *Id.* (manuscript at 22).

315. *Id.*

316. *Stop FEMA Now*, FACEBOOK, <https://www.facebook.com/StopFemaNow> (last visited Oct. 17, 2014); STOP FEMA NOW, <http://www.stopfemanow.com> (last visited Oct. 17, 2014).

opponents of rate increases joined forces with the Gulf Coast opponents, leading to a powerful opposition movement.³¹⁷ Groups including the National Association of Homebuilders, the National League of Cities, and local and state governments all worked to overturn the 2012 reforms.³¹⁸

The “sale trigger” provision became a target. When a house that had been receiving a subsidy was sold, the premium rate for the new owner would be risk-based, per the 2012 reforms.³¹⁹ In fall 2013, the real estate industry began to claim this was destroying the nascent real estate recovery and industry lobbyists deluged Washington with complaints.³²⁰

The financial beneficiaries of the 2012 reforms were taxpayers in general, who would cease bailing out the NFIP if its rates are based on risk. Yet, although the group Taxpayers for Common Sense and other members of the coalition that supported the reforms worked hard to keep the reforms in place, their voices were faint compared with the scores of organized coastal residents and the real estate industry.³²¹

The arguments for subsidy continuation were rarely on the merits of why the subsidies should continue into their fifth decade when flood risks were increasing. Instead, they focused only on how unaffordable the rate increases were and how they were allegedly hurting the housing

317. Verchick & Johnson, *supra* note 274 (manuscript at 22).

318. *Id.* (manuscript at 23).

319. Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12), Pub. L. No. 112-141, § 100205(a)(1)(B), 126 Stat. 405, 917 (codified at 42 U.S.C. § 4014(g)(2) (2012)) (repealed 2014); see Part III.A.1.a (describing sale trigger provision).

320. See, e.g., Drew Harwell, *Flood-Insurance Hikes Ravage Tampa Bay Neighborhood Home Sales*, TAMPA BAY TIMES (Dec. 29, 2013, 8:46 PM), <http://www.tampabay.com/news/business/realestate/flood-insurance-hikes-ravage-tampa-bay-neighborhood-home-sales/2158922>; Opinion, *Flooding Capitol Hill: Republicans Cave to the Realtors on Taxpayer Flood Insurance*, WALL ST. J. (Feb. 26, 2014, 7:20 PM), <http://online.wsj.com/news/articles/SB10001424052702304610404579403361900877906?KEYWORDS=Flooding+Capitol+Hill+Republicans+cave+to+the+Realtors+on+taxpayer+flood+insurance&mg=reno64-wsj&url=http%3A%2Fonline.wsj.com%2Farticle%2F%2F%2F10001424052702304610404579403361900877906.html%3FKEYWORDS%3DFlooding%2BCapitol%2BHill%2BRepublicans%2Bcave%2Bto%2Bthe%2BRealtors%2Bon%2Btaxpayer%2Bflood%2Binsurance>.

321. See, e.g., Steve Ellis, *Steve Ellis: Resist the Urge to Roll Back Flood Insurance Reforms*, SUN HERALD, Oct. 7, 2013, at 11; *Don't Gut Flood Insurance Reform by Extending Subsidies!*, R STREET (Nov. 7, 2013), <http://www.rstreet.org/outreach/dont-gut-flood-insurance-reform-by-extending-subsidies-2/>; *SmarterSafer.org: Flood Insurance Reforms Should be Modified – Not Abandoned*, SMARTERSAFER.ORG (Jan. 30, 2014), <http://www.smartersafer.org/flood-reform/smartersafer-org-flood-insurance-reforms-should-be-modified-not-abandoned/>; Lehmann, *supra* note 246.

market.³²² One of the original sponsors of the law, Representative Maxine Waters, puzzlingly framed the rate increases as “unintended consequences,” when rates based on risk, which in some cases would be much higher than subsidized rates, were exactly what the law required.³²³

The result, keeping in place most of the subsidies, is not surprising under basic interest-group theory. As Professor Amy Sinden notes, “[B]asic and well-accepted principles of interest-group theory predict that a group whose interests are diffuse and have less marginal impact on each individual member will have far more difficulty organizing into an effective pressure group than a smaller group in which each member suffers substantial economic harm.”³²⁴ Further, those affected brought a powerful “intensity of preference” to the process, presenting accounts of grievance and injustice.³²⁵ Under this theory, it is predictable that the more diffuse group of individuals and organizations who would benefit from the legislation were unable to mobilize the power to maintain the subsidy rollbacks. This does not explain why Congress kept in place the gradual subsidy rollbacks for second homes, businesses, and severe repetitive loss properties, and interest-group theory does not of course explain every outcome.³²⁶ The next subsections may assist with that explanation.

b. Powerful Individual Narratives and Superficial Press Attention

The debate about rolling back the 2012 reforms was often framed in the media and by politicians as a story of the middle class or working class homeowner being unable to pay for or sell her house because of the

322. See, e.g., Harwell, *supra* note 320; Tracie Mauriello, *Rising Cost of Flood Insurance Inspires Bill*, PITTSBURGH POST GAZETTE (Jan. 11, 2014, 10:29 PM), <http://www.post-gazette.com/news/nation/2014/01/12/Rising-cost-of-flood-insurance-inspires-bill/stories/201401120157>; Warren Kulo, *Palazzo Debunks Myths Surrounding Flood Insurance and Homeowners (Video)*, GULFLIVE.COM (Jan. 9, 2014, 1:55 PM), http://blog.gulflive.com/mississippi-press-news/2014/01/palazzo_debunks_myths_surround.html (quoting Rep. Steven Palazzo of Mississippi) (“I’m hearing from teachers, veterans, people who work at the shipyards in support of our Navy. These are everyday Americans.”).

323. See Daniel Newhauser & Emma Dumain, *Flood Insurance Bill Goes Back to Rewrite*, ROLL CALL (Feb. 26, 2014, 10:32 AM), <http://blogs.rollcall.com/218/flood-insurance-bill-postponed/> (quoting Rep. Maxine Waters) (stating that goal of the 2014 revisions was to correct the “unintended consequences” of 2014 reforms).

324. Amy Sinden, *In Defense of Absolutes: Combating the Politics of Power in Environmental Law*, 90 IOWA L. REV. 1405, 1438 (2005).

325. See generally DENNIS C. MUELLER, PUBLIC CHOICE III, 104–07 (2003); Daniel A. Farber, *Public Choice Theory and Legal Institutions* 4–5 (Univ. of Cal. Berkeley Pub. Law, Research Paper No. 2396056 (2014), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2396056).

326. See generally Farber, *supra* note 325, at 4–5.

increased rates imposed without warning or justification by the big bad government.³²⁷ Stories melded the hardships caused by Superstorm Sandy with hardships stemming from flood insurance rate increases.³²⁸ Representative Waters's claim of "unintended consequences" was parroted by reporters,³²⁹ displaying an unfortunate example of how that label tends to stunt analysis of policy in favor of facile conclusions.³³⁰

If homeowners had not purchased flood insurance protecting their homes and possessions from Sandy's damage, this decision often was blamed on the government. One article, for example, was titled "Federal Maps Left New York Unprepared for Sandy—and FEMA Knew It!"³³¹ It showcased a Queens couple with a house very near the ocean who let their flood policy lapse a few months before Sandy because they had not made a claim in 20 years and their house was not in a high-risk zone. It did not mention that insurance outside a high-risk flood zone would have been much cheaper than insurance in a high-risk flood zone, that FEMA had recommended people outside high-risk zones buy flood insurance, or that FEMA had for decades been trying to get more money for its mapping program.³³² It did not present homeowners as responsible for their decisions not to purchase insurance. The story had a victim (middle class, white homeowner) and a villain (the federal government, specifically FEMA).³³³ Nor did media coverage include context such as the nature, length, effects of or original intent of the subsidies.³³⁴ Nor did they refer to how building codes often are lightly enforced in coastal regions, leading to more property at risk.³³⁵ They did not mention the incentive effects of the subsidies, such as promoting building in flood-prone areas or discouraging large renovations or flood mitigation projects.³³⁶ They presented solidaristic notions of how flood insurance

327. See, e.g., Harwell, *supra* note 320; Mauriello, *supra* note 322; Kulo, *supra* note 322.

328. See *infra* notes 329–35 and accompanying text.

329. See, e.g., Coral Davenport, *Popular Flood Insurance Law is Target for Both Parties*, N.Y. TIMES, Jan. 29, 2014, at A14 ("It appears to be another Washington story of unintended consequences.").

330. See generally Martha T. McCluskey, *How the "Unintended Consequences" Story Promotes Unjust Intent and Impact*, 22 BERKELEY LA RAZA L.J. 21 (2012).

331. Christie Thompson et al., *Fed Flood Maps Left NY Unprepared for Sandy – and FEMA Knew It*, WNYC.ORG (Dec. 6, 2013), <http://www.wnyc.org/story/fed-flood-maps-left-ny-unprepared-sandy-and-fema-knew-it>.

332. See, e.g., Houck, *supra* note 97. The Rockaway Wave newspaper kept up a steady drumbeat of information and advocacy against flood insurance rate increases. Boyle, *supra* note 291.

333. Stories generally did not feature minority or poor homeowners.

334. See *supra* Part II.C.

335. See *supra* Parts I.A.4, II.C.

336. See *supra* Part II.C.

should be priced (not too high) but did not present a reason for that conclusion.

Press stories from Florida and elsewhere featured claims from real estate organizations and brokers that the new flood insurance law was ravaging the just recovering real estate market.³³⁷ Press articles did not question whether these claims were accurate. The R Street Institute, one of the members of the *smartersafer.org* coalition, questioned whether this actually was true,³³⁸ but to no avail. Once the claim was made and supported with a few individual stories, it was repeated as if true.

On the other side, in favor of moving towards market rates, were advocates trying to frame the issue as part of a different narrative. Taxpayers for Common Sense portrayed the NFIP as an example of government waste,³³⁹ and the R Street Institute highlighted the hypocrisy of fiscal conservatives who supported the subsidies but opposed other government giveaways.³⁴⁰ The *smartersafer.org* coalition included these groups as well as environmental groups such as the Sierra Club and National Wildlife Federation, insurance companies, and others bringing together environmental and fiscal concerns concerning overbuilding, sustainability, and deficits.³⁴¹ The coalition called on Congress to follow through on the reforms and develop a targeted assistance plan for truly needy policyholders.³⁴² But on this side there was no powerful human narrative and no heartrending image. And the effect on the taxpayers who were paying for disaster relief as well as the NFIP subsidies and bailouts was very hard to convey and to see.

Recall that Congress left intact the 2012 subsidy rollbacks for second homes, businesses, and severe repetitive loss properties. The possible narratives that groups affected by removal of those subsidies could present were less viscerally and visually compelling. Although efforts were made to argue that owners of second homes should not be subject to increased rates, these efforts did not gain traction.³⁴³ Even

337. See, e.g., Harwell, *supra* note 320.

338. R.J. Lehmann, *Flood Insurance and the Phantom Real Estate Crash*, R STREET (Jan. 31, 2014), <http://www.rstreet.org/2014/01/31/flood-insurance-and-the-phantom-real-estate-crash>.

339. Ellis, *supra* note 321.

340. Eli Lehrer, *The GOP's Insurance Hypocrisy*, HUFFPOST POL. (Nov. 1, 2013, 5:31 PM), www.huffingtonpost.com/eli-lehrer/gop-insurance-hypocrisy_b_4194784.html.

341. See *Coalition*, SMARTERSAFER.ORG, <http://www.smartersafer.org/coalition> (last visited Oct. 18, 2014) (listing coalition partners).

342. *Congress Must Implement Flood Insurance Reforms as Planned*, SMARTERSAFER.ORG (Sept. 16, 2013), <http://www.smartersafer.org/flood-reform/smartersafer-org-congress-must-implement-flood-insurance-reforms-as-planned>.

343. See, e.g., Sue Belka, *FEMA Unfair to Owners of Second Homes*, PRESS ATLANTIC CITY (Apr. 2014), <http://www.pressofatlanticcity.com/opinion/letters/fema->

though some small businesses were gradually losing subsidies, the policy idea was probably that the cost of risk-based pricing, introduced in phases, would be gradually passed on to customers. Severe repetitive loss properties, which by definition already had received extensive flood insurance benefits, made an even less compelling case for continuing subsidies.³⁴⁴

c. Common Human Response to Floods and Climate Change as Predicted by Behavioral Economics

Part of the shocked, outraged, and ultimately organized response to the rate increases may be due to the perception that the risk of floods and increased damage from climate change are so remote that it does not make sense to spend much money preparing for them.³⁴⁵ Unfortunately, people tend to inadequately prepare for low-probability, high-loss events because they often underestimate the magnitude of these events.³⁴⁶ The ostensible remoteness of the future events makes it seem like an outrage that people would have to pay significant amounts for the risk of living in a particular area. This may be exacerbated when people expect disaster relief³⁴⁷ and is true even when people accept the reality of climate change.³⁴⁸

The challenge of making flood risk salient at times other than right after floods is significant³⁴⁹ and is captured in an exchange between Senator Elizabeth Warren and Craig Fugate, Administrator of FEMA, in a hearing in fall 2013. Senator Warren uses the example of a constituent living near a creek “which has never flooded” in anyone’s memory, whose house is now in a flood zone thanks to new maps, and who wants

unfair-to-owners-of-second-homes/article_b5eb95b6-9ab2-53f0-b711-b57c8c949fed.html?mode=jqm.

344. See *supra* Part III.A.1.a.

345. See *supra* Part II.B.2.

346. Scales, *supra* note 3, at 9–10.

347. See *supra* Parts I.B.8, II.E.

348. Sen. Robert Menendez recognizes climate change and seems not to recognize the contradiction between the higher risks accompanying climate change and affordable flood insurance:

From my own personal view, I think climate change is an important thing
But for this coalition [to roll back the 2012 reforms] we have one singular focus. And that focus is making sure that middle class families do not get priced out of what they have spent a lifetime to achieve, which is their home.

Evan Lehmann, *In Flood Insurance Fight, Some Climate Change Activists Battle Against Quicker Adaptation*, E&E PUBLISHING, LLC (Oct. 30, 2013), <http://www.eenews.net/stories/1059989658> (quoting Sen. Robert Menendez).

349. See *supra* Part II.B.2.

to appeal that determination.³⁵⁰ Administrator Fugate tries to make the point that the fact that the creek “has never flooded” is not very significant because what FEMA is looking at is *risk* of flood, over 100 years. But Senator Warren seems unconvinced.

d. FEMA’s Difficult Situation, Weak Communication, and Response

FEMA’s challenges also contributed to BW-12’s demise. As mentioned earlier, Congress had called for FEMA to contract with the National Academy of Sciences for a study related to a targeted approach to affordability issues, and the study was not finished by the deadline Congress specified.³⁵¹ Examination of the affordability study provision shows that Congress did not make the rate increases contingent on the study being done. Moreover, given the wide breadth of the study, it seems completely unrealistic to think that it ever could have been completed in 270 days. Nonetheless, its incompleteness was vocally used by Senator Schumer and others to halt the gradual elimination of some subsidies.³⁵²

In 2013, as FEMA released flood maps and proposed rates, and the public outcry from a few policyholders ensued, FEMA did not say much in response. When policyholders told the press about high new rates, FEMA could have responded more forcefully with information about the properties, showing their higher risk and that the rate increases were capped by the law at 25 percent per year, but FEMA seemingly did

350. *Hearing on FEMA Flood Maps*, YOUTUBE (Sept. 19, 2013), <https://www.youtube.com/watch?v=-3FfpCtHZQ8>.

351. See *supra* Parts III.A.1.b, III.B.1.c.

352. Long Island News & PRs, *Schumer Announces Vote on Bipartisan Bill That Would Delay Excessive Flood Insurance Rate Increases for Thousands of New Yorkers*, LONGISLAND.COM (Jan. 7, 2014), <http://www.longisland.com/news/01-07-14/schumer-announces-vote-on-bipartisan-bill-that-would-delay-excessive-flood-insurance-rate-increases.html> (quoting Sen. Schumer) (“Residents are still recovering from the destructive force of Superstorm Sandy, and they should not be forced to pay unaffordable premiums as they attempt to rebuild, especially because FEMA has not come close to completing the required affordability study.”); *Bipartisan Deal Reached to Delay Flood Insurance Premium Hikes: Waters*, INS. J., (Oct. 28, 2013), <http://www.insurancejournal.com/news/national/2013/10/28/309383.htm>; Brad Plumer, *Congress Tried to Cut Subsidies for Homes in Flood Zones. It Was Harder than They Thought*, WASH. POST (Oct. 30, 2013), <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/10/30/congress-tried-to-stop-subsidizing-homes-in-flood-zones-it-was-harder-than-they-thought/>.

not.³⁵³ Some in Congress blamed FEMA for implementing the law Congress passed.³⁵⁴

FEMA was in a difficult position because rates needed to go up before maps were completed. The fact that the maps were not completed in itself should not have been too significant since it had long been known that subsidized rates were less than half of the risk-based rates.³⁵⁵ The 2012 reforms required that rates in high-risk zones on subsidized old homes increase 25 percent per year.³⁵⁶ So it made sense for FEMA to start increasing rates and work on maps at the same time. FEMA did not have specific data to show Congress how many (or how few) people were affected by map changes, and Administrator Fugate testified the number was “thousands.”³⁵⁷ But, given the weakness of the mapping program (thanks to Congress’s underfunding), the maps were suspect, which gave fuel to opponents to argue against the rate increases.

e. Summary of Reforms and Retreat

This section has considered how the 2012 reforms happened and how the partial about-face by Congress occurred in 2014. The 2012 reforms were in tune with the market approach to government that has gained prominence in recent years, responded to extensive criticism of the NFIP, and were passed without negatively affected constituencies organizing vocal opposition. When the reforms started to be implemented, several factors came together to undermine their staying power. The combination of Superstorm Sandy and new flood maps in the New Jersey and New York area added to the seeming affront of the rate increases and spurred organized opposition in the Northeast, Gulf Coast, and elsewhere. The intense lobbying and pressure by people affected by the removal of the subsidies, which was not on the merits but rather on the cost of the insurance, was powerful. The real estate lobby played an influential role, arguing that rate increases threatened to scuttle the economic recovery. Local and state governments also were

353. See, e.g., Mauriello, *supra* note 322 (quoting a business-owner whose premiums allegedly would go up tenfold). FEMA’s fact sheet and the law itself said that rate increases were limited to 24% per year. See *Biggert-Waters Flood Insurance Reform Act of 2012: Impact of National Flood Insurance Program (NFIP) Changes*, FEMA.GOV (Apr. 2013), http://www.fema.gov/media-library-data/20130726-1909-25045-0554/bw12_sec_205_207_factsheet4_13_2013.pdf.

354. *Senate Takes First Step on Flood Insurance, Agent Licensing Bill*, INS. J. (Jan. 27, 2014), <http://www.insurancejournal.com/news/national/2014/01/27/318549.htm> (quoting Rep. Maxine Waters blaming FEMA for rate increases).

355. GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 31–32.

356. *FEMA 2012 Overview*, *supra* note 7.

357. *Hearing on FEMA Flood Maps*, *supra* note 350 (quoting Administrator Fugate).

concerned. The large but diffuse group negatively affected by retaining the subsidies did not speak as loudly to their elected representatives. General interest-group theory would anticipate this result. The narrative of the middle-class homeowner facing exorbitant rates was vivid, and claims of negative effects on the real estate market were accepted at face value. The common human response of underestimating the magnitude of flood and climate change risks contributed to the outrage at increased rates. Finally, the difficult position of FEMA, the failure to complete the “affordability study,” and its weak communication also helped make the subsidy rollbacks vulnerable. The merits of continuing or discontinuing the subsidies were rarely mentioned directly in the debates.

IV. ANALYSIS AND RECOMMENDATIONS FOR CONGRESS IN 2017

Congress’s about-face between 2012 and 2014 shows how dynamic flood insurance policy can be. The factors that led to the repeal of the 2014 reforms—lobbying by affected industries and individuals, powerful individual narratives with superficial media attention, avoidance of thinking about risks like floods and climate change, and weak communication from FEMA—all will likely continue in the future and may result in Congress kicking the can down the road even beyond 2017. However, this does not have to be the result. There is now an opportunity for widespread education about the risks and costs of climate change and floods. The public has the opportunity to consider whether and how to take a solidaristic approach to flood risk and federal flood insurance. Congress, the media, and the public now have time to consider and reframe the issues in a deeper way than a panicked response to rate increases. This section builds on the prior analysis and offers recommendations for Congress to consider. Four main recommendations result from this analysis. First, mapping must be protected from political influence. Second, subsidies should gradually be phased out. Third, a targeted affordability plan should be passed. Fourth, a comprehensive strategy should be developed to deal with the long-term effects of floods and climate change.

A. Flood Risk Mapping: Mapping Should Be Protected from Political Influence.

The mapping process needs to be grounded in the most accurate scientific principles. There really is no counterargument to this point, and if the maps are unassailable they will create a strong ground for rate reform. Opponents of rate reform have always been able to point to the

weakness of the mapping program as a way of attacking reform, but excellent maps will make this impossible.³⁵⁸

By 2017, the remapping hopefully will have concluded. For maps to be adopted as final, the community must approve them.³⁵⁹ Map creation, according to the 2012 reforms, is supposed to be nonpolitical and based only on scientific principles.³⁶⁰ Congress will receive a report from FEMA about how the process will work, according to the 2014 reforms.³⁶¹ The mapping process must be above politics and political pressure; sadly, recent press reports and an FBI investigation of remapping suggest that the mapping process may be subject to pressure and manipulation by wealthy landowners.³⁶² For people to have faith in maps, rates, and the process, scientific objectivity is essential.

The 2014 reforms create risks of continuing the politicization of the mapping process in at least two ways. First, they require the FEMA Administrator to consider “the impact flood insurance rate map updates have on the affordability of flood insurance” in his report to Congress on the “Affordability Framework.”³⁶³ This may put pressure on the Administrator to forego map updates that show higher flood risk in politically powerful areas. Second, the required appointment of a “Flood Insurance Advocate” whose job includes arguing for “the fair treatment

358. Even scientifically accurate maps may not help as much as hoped since many Americans have both a distrust of science and of government. *See generally* Marshall, *supra* note 24, at 144–46 (noting American distrust of government); Emily Swanson, *Americans Have Little Faith in Scientists*, *Science Journalists: Poll*, HUFFPOST SCI. (Dec. 21, 2013, 11:23 AM), http://www.huffingtonpost.com/2013/12/21/faith-in-scientists_n_4481487.html; Gordon Gauchat, *Politicization of Science in the Public Sphere: A Study of Public Trust in the United States, 1974 to 2010*, 77 AM. SOC. REV. 167 (2012).

359. Brochure, FEMA, Adoption of Flood Insurance Rate Maps by Participating Communities 5 (Sept. 2012), available at http://www.fema.gov/media-library-data/20130726-1903-25045-4716/fema_495.pdf.

360. *See* Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12), Pub. L. No. 112-141, §§ 100215–100218, 126 Stat. 405, 924–32 (codified at 42 U.S.C. §§ 4101a, 4101b, 4104, 4104–1 (2012)); *supra* Part III.A.1.c. 361. The 2014 reforms require specific communication to Congress that the program will result in “technically credible flood hazard data.” Homeowner Flood Insurance Affordability Act of 2014, Pub. L. No. 113-89, § 17, 128 Stat. 1020, 1027 (to be codified at 42 U.S.C. § 4101d).

362. Richard Rainey, *FBI Investigating FEMA for Coastal Flood Map Boundary Changes*, *NBC Reports*, NEW ORLEANS TIMES-PICAYUNE (April 2, 2014), http://www.nola.com/politics/index.ssf/2014/04/fbi_investigating_fema_for_coa.html.

363. *See supra* Part III.C.2.

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of policy holders . . . in the mapping of flood hazards”³⁶⁴ may put additional political pressure on the mapping. This notion of “fair treatment . . . in the mapping of flood hazards” has the potential for politicizing the mapping process, since it may seem to many homeowners who find their homes at high flood risk that analyses based on scientific risk are not “fair.”³⁶⁵ But hopefully the Advocate will take the position that maps based on valid scientific principles are “fair” even if they show increased flood risk to homeowners. Also, the Advocate may be able to foster better communication between FEMA and the public. FEMA has strong new incentives to make sure maps are accurate because the 2014 reforms let homeowners receive costs of successful appeals.³⁶⁶

In the 2012 and 2014 reforms, Congress created the tools to make it possible for the mapping process to be based on scientific principles, unswayed by political pressure.³⁶⁷ Some Congressmen and women have had a tendency to blame FEMA when their constituents complain about flood insurance.³⁶⁸ If reform is to be successful, Congress instead needs to stand behind FEMA when it makes rate changes based on scientific risk determinations.

B. Subsidies: The Remaining General Subsidies Should Gradually Be Phased Out.

In 2014, Congress restored some, though not all, of the general subsidies. Specifically, as noted above, it restored the “old house” subsidies and the grandfathering subsidies.³⁶⁹ It repealed the sale trigger provision so that if a house with a subsidized policy was sold, the subsidized rate would continue, whereas the 2012 reforms had said that subsidies would end when homes were sold.³⁷⁰ But the 2014 law did

364. § 24(a), 128 Stat. at 1030 (to be codified at 42 U.S.C. § 4033(a)).

365. This brings up the classic debate over what “fairness” means and should mean in insurance: is it actuarial fairness or some other concept of fairness? *See generally* BAKER, *supra* note 5, at ch. 1; ABRAHAM, *supra* note 5; Leah Wortham, *The Economics of Insurance Classification: The Sound of One Invisible Hand Clapping*, 47 OHIO ST. L.J. 83 (1986); Regina Austin, *The Insurance Classification Controversy*, 131 U. PA. L. REV. 517 (1983).

366. § 18, 128 Stat. at 1027 (to be codified at 42 U.S.C. §§ 4017(a), 4104(f)).

367. There is no necessary reason why the mapping must be done by FEMA; this function could perhaps be contracted out at some point and with new technology might become increasingly easy and inexpensive. *See generally* Owen, *supra* note 30.

368. Verchick & Johnson, *supra* note 274; *Senate Takes First Step on Flood Insurance, Agent Licensing Bill*, *supra* note 354 (quoting Rep. Maxine Waters blaming FEMA for rate increases).

369. § 4, 128 Stat. at 1022 (to be codified at 42 U.S.C. § 4015).

370. § 3(b), 128 Stat. at 1021–22 (to be codified at 42 U.S.C. § 4014).

continue the gradual elimination of subsidies for second homes, severe repetitive loss properties, and businesses.³⁷¹ It also added a surcharge on all policies to make up for the cost of the continued subsidies.³⁷²

When Congress revisits the NFIP in 2017, 49 years after starting it, Congress should pass legislation that gradually eliminates the subsidies. After five decades, it is appropriate to ask when subsidies will end and to ask for an explanation from those who want to continue them.

Subsidies should gradually end for at least three reasons. First, they create illogical incentives, particularly given climate change. Second, the justification for subsidies and the solidaristic approach to flood insurance they reflect is weaker than in other contexts where the federal government has been involved in insurance. Third, risk-based rates will likely bring private competition and state insurance regulation, which will likely be overall more efficient and better for consumers than the current system. As discussed in the next section, particularly given that flood insurance is mandatory for mortgage-holders in flood zones, there should be an “affordability” plan, but it should be targeted to the needy.

1. The Incentives Created by the Current Subsidies Make No Sense, Particularly Given Climate Change Risks.

Sea levels are rising and extreme weather events including flooding are becoming more common. The risks of living on the coasts and by certain rivers are increasing. There should be a compelling reason for the government to incentivize citizens to live in flood zones, particularly in older homes, but it has not been offered. A person owning an older house that needs renovation or replacement benefits from not doing extensive renovations on the house that might make it more flood-resistant and is penalized for doing extensive renovations of a house.³⁷³ The NFIP encourages retention of and indeed inflates the value of older homes near the water.³⁷⁴ It encourages building in flood-prone areas, yet the federal government has no way to enforce restrictions on development in floodplains.³⁷⁵ These policies make little sense right now given the risks we face.

On the other side of the issue, there is a massive denial of climate change and resistance to planning for it.³⁷⁶ This Article accepts the

371. See *supra* Part III.B.1.b.iii.

372. § 8, 128 Stat. at 1023–24 (to be codified at 42 U.S.C. §§ 4015a, 4017a).

373. See *supra* Part II.C.

374. See *supra* Part II.C.

375. See *supra* Part II.A, C; Kildow & Scorse, *supra* note 22.

376. See, e.g., *Engaging Diverse Audiences with Climate Change*, *supra* note 191 (manuscript at 16–27).

science supporting climate change and does not consider denial to be a valid counterargument. However, even many who accept the science of climate change nonetheless support the subsidies.³⁷⁷ Supporters of the subsidies, even if they do not say so openly, tend to hold that the discounted insurance is positive and should be continued because it is important to real estate market stability and homeowners who have relied on the subsidies for decades. Federal disaster aid, including rebuilding aid, is essential and simply part of what governments should do.³⁷⁸ Increased costs of insurance are negative because they tamp down and threaten to destroy the real estate market.³⁷⁹ Reflecting its dependence on government subsidies in some regions, the real estate industry vociferously opposed the rate increases called for by the 2012 reforms.³⁸⁰ The reasons that the real estate industry in flood-prone areas should be particularly supported in this way have not been explained. The subsidies and government rebuilding allow homeowners and the real estate industry to not bear the costs of the risks they face. Instead, taxpayers ultimately share those costs, which are bound to go up. Precisely why the real estate industry and homeowners in these areas should receive this largesse indefinitely has not been made clear.

2. The Justification for Subsidies and the Current Solidaristic Approach to Flood Insurance is Weaker Than in Other Contexts Where the Federal Government Has Been Involved in Insurance.

A second reason why the general subsidies should be phased out is that the argument for the federal government to continue with the solidaristic approach, justifying these subsidies, is weaker than in other contexts where the federal government takes a solidaristic approach to insurance. Three examples of federal involvement with insurance in urban areas, reinsurance for riots and crime, unemployment insurance,

377. See *supra* note 348 (discussing the statement of Sen. Menendez).

378. Federal disaster aid in some cases has been used to rebuild roads and properties repeatedly. See, e.g., Justin Gillis & Felicity Barringer, *As Coasts Rebuild and U.S. Pays, Repeatedly, the Critics Ask Why*, N.Y. TIMES (Nov. 18, 2012), http://www.nytimes.com/2012/11/19/science/earth/as-coasts-rebuild-and-us-pays-again-critics-stop-to-ask-why.html?pagewanted=all&_r=0.

379. See, e.g., Jeff Harrington, *Premiums Rising for National Flood Program, Though Florida Pales in Payouts*, TAMPA BAY TIMES (June 15, 2013, 4:30 AM), <http://www.tampabay.com/news/business/banking/premiums-rising-for-national-flood-program-though-florida-pales-in-payouts/2126888>; Mauriello, *supra* note 322; Harwell, *supra* note 320.

380. Opinion, *Flooding Capitol Hill: Republicans Cave to the Realtors on Taxpayer Flood Insurance*, *supra* note 320.

and health insurance, are contexts where the federal government has been involved in insurance that contrast with the federal government's involvement with flood insurance.

a. Federal Reinsurance for Riots: Fair Access to Insurance Requirements Plans

At the same time that Congress passed the Flood Act to deal with a void in the private insurance market for floods, it passed a law to deal with a void in the private insurance market in urban areas. This was the Urban Property Protection and Reinsurance Act of 1968 ("UPPRA").³⁸¹ Both before and after the urban riots in 1966, inner cities faced a crisis in the lack of affordable insurance for homes.³⁸² Congress responded by passing the UPPRA, which authorized states to pass Fair Access to Insurance Requirements ("FAIR") plans and provided federal riot reinsurance to companies who participated in these plans.³⁸³ These FAIR plans primarily were aimed at making affordable property insurance more readily available in urban areas.³⁸⁴ FAIR plans varied by state but had to meet basic federal requirements in order for participating companies to receive federal reinsurance for riots. In 1970, the law was amended to authorize the Secretary of the HUD to offer federal insurance against burglary and theft.³⁸⁵ The arrangements were not perfect, of course, but worked reasonably well.³⁸⁶ Eventually, private reinsurers returned to the market, and Congress terminated the riot reinsurance program in 1985.³⁸⁷ Riots are now covered under standard homeowner policies.³⁸⁸

381. Urban Property Protection and Reinsurance Act of 1968, Pub. L. No. 90-448, 82 Stat. 555 (codified at 12 U.S.C. §§ 1749bbb to 1749bbb-21 (1976)), *amended by* Housing and Community Development Amendments of 1978, Pub. L. No. 95-557, 92 Stat. 2080.

382. Joanne Dwyer, *Fair Plans: History, Holtzman and the Arson-for-Profit Hazard*, 7 FORDHAM URB. L.J. 617, 623, 626 (1978); PRESIDENT'S NAT'L ADVISORY PANEL ON INS. IN RIOT-AFFECTED AREAS, 94TH CONG., MEETING THE INSURANCE CRISIS OF OUR CITIES 32 (1968) [hereinafter ADVISORY PANEL ON INS. REPORT]; Alan S. Kaplinsky, *Insurance in Urban Areas: An Analysis of Recent Statutory Solutions*, 10 B.C. L. REV. 650, 650-653 (1969).

383. Dwyer, *supra* note 382, at 626.

384. § 1103, 82 Stat. at 558 (codified at 12 U.S.C. § 1749bbb-3(b) (1994)).

385. Housing and Urban Development Act of 1970, Pub. L. No. 91-609, § 602(b), (d), 84 Stat. 1770, 1788-89 (codified at 12 U.S.C. § 1749bbb-2(a)(2), -10a(b) (1994)).

386. Dwyer, *supra* note 382, at 632-37.

387. 12 U.S.C. § 1749bbb(b) (1994); BAIRD WEBEL, CONG. RESEARCH SERV., R42716, TERRORISM RISK INSURANCE: ISSUE ANALYSIS AND OVERVIEW OF CURRENT PROGRAM 11 (2014).

388. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-14-179, HOMEOWNERS INSURANCE: MULTIPLE CHALLENGES MAKE EXPANDING PRIVATE COVERAGE DIFFICULT 9 (2014).

The federal reinsurance for riots and federal crime insurance were invented to deal with a national emergency, widespread urban decline that threatened the survival of U.S. cities.³⁸⁹ Incentivizing insurance companies to offer insurance in cities was an action called for by the National Advisory Panel on Insurance in Riot-Affected Areas.³⁹⁰ The case for federal involvement was strong. Insurance companies had been redlining whole areas, refusing to insure them and contributing significantly to their decline.³⁹¹ The cities and states did not have the resources to stabilize the situation. The federal government's involvement was targeted and limited both in scope and in time. The federal government did not take over the underwriting risk. Instead, it created incentives for states to prod insurance companies to shoulder some of the risk because of the importance of the coverage. It also provided a reward in the form of federal reinsurance for companies which took some of the risk.

b. Federal Unemployment Insurance

Federal legislation passed in 1935 encouraged states to adopt their own unemployment insurance laws, and all states have done so.³⁹² This was one of the measures taken by Congress to try to counteract the effects of the Great Depression.³⁹³ It aimed to fill a void in the private market; there was no private unemployment insurance available on the market, apparently because of concern about moral hazard and the challenge of distinguishing between voluntary and involuntary unemployment.³⁹⁴ The structure was that there would be a payroll tax on the vast majority of employees and that those who participated in a satisfactory state unemployment insurance program could deduct the full amount of their state contributions from the federal tax.³⁹⁵ The goals were to help stabilize the economy and lessen individual hardship from

389. See Dwyer, *supra* note 382, at 617–23, 626.

390. Dwyer, *supra* note 382, at 617; ADVISORY PANEL ON INS. REPORT, *supra* note 382, at 32. The National Advisory Commission on Civil Disorders set up the distinct National Advisory Panel on Insurance in Riot-Affected Areas, which later endorsed the report of the Advisory Panel on Insurance. OTTO KERNER ET AL., REPORT OF THE NATIONAL ADVISORY COMMISSION ON CIVIL DISORDERS 15 (1968); Dwyer, *supra* note 382, at 617.

391. Dwyer, *supra* note 382 at 618–21; ADVISORY PANEL ON INS. REPORT, *supra* note 382, at 10.

392. MOSS, *supra* note 16, at 197–98; *Unemployment Insurance 75th Anniversary*, DEP'T LABOR, <http://www.dol.gov/ocia/pdf/75th-Anniversary-Summary-FINAL.pdf> (last visited Oct. 18, 2014) [hereinafter *Fact Sheet, Unemployment Insurance*].

393. It was part of the Social Security Act. MOSS, *supra* note 16, at 180, 197.

394. MOSS, *supra* note 16, at 188–91.

395. *Id.* at 193–94 (discussing the adopted tax-offset scheme).

job loss that was not the individual's fault.³⁹⁶ While largely financed through a payroll tax on employers, when economic downturns continue, the federal government has supplemented payments, at times in the billions of dollars.³⁹⁷ Debates continue to focus on costs and benefits, whether its financing structure makes sense,³⁹⁸ and moral hazard.³⁹⁹ States can and do vary their laws, and the laws have very wide coverage. But the need for stabilizing the economy was (and at times, is) compelling, and federal unemployment insurance plays this role.⁴⁰⁰ States, cities, employers, and the private insurance market do not have the wherewithal to deal with economic consequences of unemployment, and the federal unemployment insurance program helps steady the economy.⁴⁰¹ Further, it spreads a risk that is not in control of individuals and that almost everyone faces.

c. Affordable Care Act

The Affordable Care Act ("ACA") was passed in 2010; at that time, 40 million Americans did not have health insurance, many states had not been able to deal with the problems of uninsured Americans,⁴⁰² and there was a consensus across the political spectrum that reform was needed so

396. *Unemployment Insurance, Fact Sheet*, *supra* note 392.

397. Wesley Lowery, *Advocates Renew Efforts to Urge Congress to Extend Unemployment Benefits*, WASH. POST (June 10, 2014), http://www.washingtonpost.com/politics/advocates-renew-efforts-to-urge-congress-to-extend-unemployment-benefits/2014/06/10/2224da50-eff0-11e3-914c-1fbd0614e2d4_story.html.

398. See Brian D. Galle, *Myopia, Fiscal Federalism, and Unemployment Insurance: Time to Reform UI Financing* 1, 2–3 (Boston Coll. Law Sch. Legal Studies, Research Paper No. 265, 2012), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2031728; Wayne Vroman, *Financing Unemployment Insurance After the Great Recession*, UNEMPLOYMENT & RECOVERY PROJECT (Urban Inst., D.C.), Aug. 2012, at 1, 2, available at <http://www.urban.org/publications/412639.html>; U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-10-440, UNEMPLOYMENT INSURANCE TRUST FUNDS: LONG-STANDING STATE FINANCING POLICIES HAVE INCREASED RISK OF INSOLVENCY (2010).

399. See, e.g., Arthur Delaney, *Conservatives Credit End of Benefits for Declining Unemployment Rate*, HUFFPOST POL. (Jul. 7, 2014, 4:17 PM), http://www.huffingtonpost.com/2014/07/07/unemployment-extension_n_5564019.html.

400. Galle, *supra* note 398, at 2–3.

401. *Id.*

402. Nat'l Fed'n of Indep. Bus. v. Sebelius, 132 S. Ct. 2566, 2612 (2012) (Ginsburg, J., concurring in part, concurring in the judgment in part, and dissenting in part); Brief of Health Care for All, Inc. as Amici Curiae in Support of Petitioners Urging Reversal on the Minimum Coverage Provision Issue at 4, Nat'l Fed'n of Indep. Bus. v. Sebelius, 132 S. Ct. 2566 (2012) (No. 11-398), 2012 WL 160242, at *4.

that more Americans would have health insurance.⁴⁰³ While the Affordable Care Act is a behemoth reflecting myriad policies, it contains a web of complex subsidies, linked with mandates, in service of the idea that health care is important to everyone in our society and that risk sharing through insurance is a way to pay for it.⁴⁰⁴ Although concerns are raised about costs, bureaucracy, and other aspects,⁴⁰⁵ it is a context where government getting involved in insurance markets makes sense. The risk of illness is universally shared although not evenly distributed; public health concerns support wide provision of health care to citizens.⁴⁰⁶

These three contexts, insurance in urban areas, federal unemployment insurance, and the ACA, present more compelling reasons for federal government involvement in insurance than does flood insurance. With urban reinsurance and FAIR plans, swaths of entire cities were at risk, and insurance company conduct wrote off large areas to the detriment of targeted populations and cities as a whole. Helping insure those areas and properties made tremendous sense and did not create moral hazard concerns. This differs radically from federal flood insurance where moral hazard is significant, as well as other problematic incentives created by the NFIP. Federal involvement in urban property insurance, also unlike flood insurance, was limited and temporary. Federal unemployment insurance is mostly paid for by employers' payroll tax deductions; it is only when the economy truly nosedives that the federal government gets involved. This, too, differs from federal flood insurance where the federal government underwrites the entire risk. Finally, under the ACA, securing health care and health insurance to all citizens through market intervention makes sense from a policy and humanitarian perspective. Flood insurance subsidies as presently structured do not have these benefits, and they have negative consequences as outlined above.

403. Kenneth S. Abraham & Daniel Schwarz, *Health Care Supplement to Abraham's Insurance Law & Regulation* 12 (5th ed. 2010).

404. See generally Tom Baker, *Health Insurance, Risk, and Responsibility after the Affordable Care Act*, 159 U. PA. L. REV. 1577 (2011).

405. Recently in lawsuits that challenged the propriety of some of the law's subsidies, one divided federal appeals court held the subsidies unauthorized by the statute, and another federal appeals court held the subsidies authorized by the law. Abby Goodnough, *Ruling on Health Care Subsidies Puts Coverage at Risk*, N.Y. TIMES (Jul. 23, 2014), <http://www.nytimes.com/2014/07/24/us/politics/court-ruling-on-health-care-subsidies-risks-loss-of-coverage.html>.

406. The Affordable Care Act is solidaristic with some actuarial elements, such as allowing specific price differentials for individual policies by four factors: family status, geographic region, age, and tobacco use. 45 C.F.R. § 147.102(a)(1)(i)–(iv) (2013).

3. Accurate Maps and Risk-Based Rates May Bring More Private Competition and State Insurance Regulation Which Overall Will Be Positive.

The general subsidies should gradually be phased out because they hamper the private market's ability to provide basic homeowners flood coverage.⁴⁰⁷ Once the maps are completed and Congress definitively sets a timetable for the subsidies to be gradually eliminated, private insurance will likely expand in the market for basic homeowners coverage. Lloyd's offers some basic private flood insurance in Florida; other insurers are offering similar coverage.⁴⁰⁸ Congress should continue to encourage private sector involvement and offer policies with variety, such as the high-deductible option mentioned in the 2014 reforms.⁴⁰⁹ Private insurers are better at some aspects of risk reduction than federal or state governments.⁴¹⁰ If rates are based on risk, better risk-modeling information will become available, resulting in healthy competition between insurers.⁴¹¹ Private companies' data collection about risk, their nuanced rate-making, and the individual attention that can be provided by producers all mean that they may be able to offer more variety in products and better rates than the standard federal flood policy.⁴¹² Further, while insurance remains regulated by the states, consumer-

407. GAO, 2014 PRIVATE SECTOR INVOLVEMENT REPORT, *supra* note 4, at 25; GAO, 2007 NATURAL CATASTROPHE INSURANCE REPORT, *supra* note 189, at 5–6.

408. See Jeff Harrington, *Battling Flood Insurance Rate Hikes Without Government Help*, TAMPA BAY TIMES (Jan. 12, 2014, 12:49 PM), <http://www.tampabay.com/news/business/banking/battling-flood-insurance-rate-hikes-without-government-help/2160697> (reporting that Lloyd's of London is now offering flood insurance in Florida); Jay MacDonald, *Lower-Cost Flood Options Flow In*, BANKRATE (Apr. 25, 2014, 6:00 AM), <http://www.bankrate.com/financing/insurance/lloyds-offers-viable-flood-option/>; *Private Market Could Grow as Government Flood Insurance Prices Rise*: Fitch, INS. J. (Mar. 6, 2014), <http://www.insurancejournal.com/news/national/2014/03/06/322380.htm>; Leslie Scism, *Private Insurers Start to Offer Flood Coverage*, WALL ST. J. (Feb. 25, 2014, 3:38 PM), <http://online.wsj.com/news/articles/SB10001424052702304834704579405082969457564>.

409. Homeowner Flood Insurance Affordability Act of 2014, Pub. L. No. 113-89, § 12, 128 Stat. 1020, 1025 (to be codified at 42 U.S.C. § 4013(d)) (amending 42 U.S.C. § 4013 to provide that the Administrator shall make available policies with deductibles of up to and including \$10,000).

410. See Omri Ben-Shahar & Kyle D. Logue, *Outsourcing Regulation: How Insurance Reduces Moral Hazard*, 111 MICH. L. REV. 197, 224 n.85 and accompanying text (2012) (providing example of private insurers using hurricane shutters to reduce insurance premiums). As noted earlier, the federal government does not control local or state land use and decisions on the local level are often politicized. See *supra* Part I.A.4.

411. GAO, 2014 PRIVATE SECTOR INVOLVEMENT REPORT, *supra* note 4, at 11–12.

412. See generally *id.*; GAO, 2007 NATURAL CATASTROPHE INSURANCE REPORT, *supra* note 189.

friendly insurance-law doctrines will apply to private flood insurance.⁴¹³ Although flood risk is a difficult risk to insure, there is flood insurance available for some properties above the federal limits as well as commercial insurance.⁴¹⁴ Making it easier for the private market to expand will not be a panacea, and the federal government might still need to play a role, for example, in providing reinsurance, but it would be an improvement over the current system.⁴¹⁵

C. *Affordability: Congress Should Pass an “Affordability” Plan, But It Should Be Limited and Targeted Towards the Needy.*

Flood insurance is both mandated and subsidized in certain geographical areas: federal law mandates it for mortgage holders in flood zones and provides subsidies for many homes in those zones.⁴¹⁶ There are good reasons for the mandate⁴¹⁷ but weak reasons for the general subsidies.⁴¹⁸ For low-income residents of high-risk areas who have mortgages and are thus subject to the mandate, however, the gradual subsidy elimination would be “overly burdensome.”⁴¹⁹ This creates a need for some sort of an affordability plan.

The 2012 reforms called for a study to be done by the National Academy of Sciences to analyze methods of establishing an affordability framework “through targeted assistance rather than generally subsidized rates, including means-tested vouchers.”⁴²⁰ The 2014 reforms expanded the provisions about affordability, requiring the FEMA administrator to prepare a draft framework to address “the issues of affordability of flood insurance sold under the [NFIP], including issues identified in the affordability study.”⁴²¹ The FEMA administrator, in developing his affordability plan, is required to consider several criteria, including “targeted assistance to flood policyholders based on their financial ability to continue to participate in the [NFIP]” and “the impact flood insurance

413. See Scales, *supra* note 3, at 24–25, 33–34.

414. *Private Market Could Grow as Government Flood Insurance Prices Rise: Fitch*, *supra* note 408 (reporting that private market for flood insurance consists largely of commercial flood insurance and insurance over the federal limits).

415. See generally GAO, 2014 PRIVATE SECTOR INVOLVEMENT REPORT, *supra* note 4, at 1.

416. See *supra* Parts I.A.4, I.B.2, I.B.4.

417. See *supra* Parts I.B.4, III.A.1.d (explaining that the mandate was passed because without it demand was too low for program to be viable).

418. See *supra* Part IV.B.

419. GAO, 2013 SUBSIDIZED PROPERTIES REPORT, *supra* note 3, at 36.

420. Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12), Pub. L. 112-141, § 100236(a)(3), 126 Stat. 405, 957.

421. Homeowner Flood Insurance Affordability Act of 2014, Pub. L. No. 113-89, § 9(a), 128 Stat. 1020, 1024; see *supra* Part III.B.1.c.

rate map updates have on the affordability of flood insurance.”⁴²² The 2014 reforms increased the amount of money allotted for the study to \$2.5 million from \$750,000 and required the study be submitted within 18 months.⁴²³ The 2014 law’s provisions about the affordability study are complex and unlikely to result in a clear answer as to what Congress should do about affordability.⁴²⁴ It is a mistake, then, to wait for the “affordability” study without independently considering what should be done.

What are the arguments for an affordability plan for flood insurance, since normally the owner can sell if the costs of owning an asset become too high? There are three arguments, as expert Carolyn Kousky explains, in discussing state natural catastrophe insurance programs.⁴²⁵ One is a political response to subsidize “vocal, high-risk residents.”⁴²⁶ This is essentially what Congress did with the majority of subsidies in 2014. Yet, there is hope for a more reflective response in the future. The second argument, Kousky explains, is “an equity argument: some low-income homeowners reside in high-hazard areas, and it is a government role to help these homeowners afford insurance, just as society subsidizes their food and health care.”⁴²⁷ The third is an economic argument:

[I]nsurance . . . is necessary for development, and some types of development must be in high-risk areas but provide economic spillovers that justify insurance subsidies. The extent to which this is the case is a difficult empirical question that to my knowledge has not been thoroughly addressed but would likely justify only very small and targeted subsidies in any event.⁴²⁸

What we have, of course, are not small and targeted subsidies but large and general subsidies. The only strong argument for subsidies, then, is the equity argument that would extend subsidies to poor people as part of government’s role in subsidizing food, health care, and housing. The existing general federal flood insurance subsidies for older homes and grandfathered homes in flood-prone areas were not targeted at people with low incomes or limited assets. The subsidies covered some

422. § 9(b)(2), (5), 128 Stat. at 1024.

423. See *supra* note 283 (providing specifics about the study).

424. See *supra* Part III.B.1.c; *supra* note 283.

425. Carolyn Kousky, *Managing the Risk of Natural Catastrophes: The Role and Functioning of State Insurance Programs* 14 (Res. for the Future, Discussion Paper No. RFF DP 10-30, 2010), available at <http://www.rff.org/rff/Documents/RFF-DP-10-30.pdf>.

426. *Id.*

427. *Id.*

428. *Id.* at 14–15.

people with low incomes and limited assets. However, these subsidies also covered homeowners who were not poor or middle class.⁴²⁹ Wealthy people with older oceanfront homes have received massive subsidies for almost 50 years; if the home is their primary residence, they will still receive the subsidies. Homeowners' property insurance rates generally vary by degree of risk, including building materials and exposure to catastrophes; by contrast, flood risk, for no good reason, enjoys a most favored risk status.⁴³⁰ The GAO, informed organizations, and academic experts have suggested a way out of the current unacceptable situation. Those organizations and experts argue that Congress should gradually eliminate subsidized rates and charge full rates to everyone but also fund a means-tested subsidy for some policyholders.⁴³¹ The most detailed plan was developed by Professor Howard Kunreuther and his colleagues. They propose a means-tested program coupled with loans for mitigation renovations that would be a large improvement over the status quo.⁴³²

One question that Congress should consider if it decides to institute a means-tested plan is what agency will administer the plan and determine who is eligible? After all, FEMA's programs are not means-tested. The Department of Homeland Security, of which FEMA is a part, does not administer means-tested programs. Thus, the question arises as to whether FEMA or another agency would administer the means test.⁴³³

429. See *supra* Part III.A.1.b, III.B.1.c; see also *supra* text accompanying notes 231–43.

430. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-14-179, HOMEOWNERS INSURANCE: MULTIPLE CHALLENGES MAKE EXPANDING PRIVATE COVERAGE DIFFICULT 5 (2014).

431. See, e.g., GAO, 2014 PRIVATE SECTOR INVOLVEMENT REPORT, *supra* note 4, at 18; GAO, 2011 ACTION NEEDED REPORT, *supra* note 68, at 60 (2011) (suggesting general subsidies be eliminated but Congress provide assistance to needy homeowners to help pay the premiums); Ass'n of State Floodplain Managers, Inc., *Flood Insurance Affordability: ASFPM Recommendations to Address the Impact of NFIP Reform 2012 (BW-12)*, FLOODS.ORG 2 (April 26, 2013), http://www.floods.org/ace-files/documentlibrary/2012_NFIP_Reform/ASFPM_recommendations_on_BW-12_affordability_26April2013.pdf (calling for means-tested program); KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 333 (suggesting voucher program similar to food stamps); Kousky & Kunreuther, *supra* note 246, at 3 (proposing voucher program linked to mitigation measures); Andrew G. Simpson, *Groups Urge Congress to Target Flood Insurance Fix to Help Needy, Not Wealthy*, INS. J., (Jan. 9, 2014), <http://www.insurancejournal.com/news/national/2014/01/09/316502.htm>.

432. Kousky & Kunreuther, *supra* note 246, at 1; KUNREUTHER & MICHEL-KERJAN, *supra* note 3, at 333.

433. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-05-221, MEANS-TESTED PROGRAMS: INFORMATION ON PROGRAM ACCESS CAN BE AN IMPORTANT MANAGEMENT TOOL 6–8 (2005) (providing examples of means-tested programs and agencies that administer them, including Temporary Assistance to Needy Families, Head Start, Medicaid (administered by the Department of Health and Human Services),

The plan by Kunreuther and his colleagues calls for a system where mitigation is encouraged by low-cost loans for mitigation coupled with lower insurance rates.⁴³⁴ This would require on-the-ground involvement by the NFIP, on a property-by-property level all over the country, which would be very expensive at first, but ultimately would improve the program and reduce overall costs.⁴³⁵

Another issue involves setting an appropriate cut-off level. How limited are the means that would entitle a person to a voucher or benefit from the plan?⁴³⁶ Providing means-tested insurance to a limited number of policyholders would have benefits, but it could have drawbacks as well. For example, if the plan provides below-cost insurance, it may lead to unwise development much as in the current system.⁴³⁷

Examples from the federal flood program itself and from state plans offering property insurance for high-risk policyholders who have trouble finding insurance in the regular market all suggest the affordability plan should be small and limited. Regarding the federal flood program itself, there has been very little private homeowners coverage for floods for at least 50 years.⁴³⁸ One of the reasons for this is that flood is a challenging risk to insure. Moreover, the federally subsidized rates have made it difficult for private insurers to compete.⁴³⁹ Better information about risk, for example, through advanced computer modeling, will enable companies to price insurance in line with risk; but if existing subsidies continue, insurers may not bother to expand into the homeowners flood insurance market.⁴⁴⁰

State-subsidized property insurance for high-risk policyholders can easily balloon beyond its original narrow goal. Many states in the 1970s

housing choice vouchers, public housing (administered by the Department of Housing and Urban Development), food stamps and the Women, Infants and Children Program (administered by the Agriculture Department), the Earned Income Tax Credit (administered by the Internal Revenue Service and the Education Department), and the Supplemental Security Income program (administered by the Social Security Administration)).

434. Kousky & Kunreuther, *supra* note 246, at 3 (proposing voucher program linked to mitigation measures).

435. Another question is what would be the means that would be tested? Would income, assets, home value, or a combination of the three be used? Income data are more readily available than asset data through tax returns. Home value data are available from state real estate taxing authority; but home value data would not easily apply to renters. Asset data might be the most difficult to obtain.

436. Kousky, *supra* note 425, at 14–15.

437. Kousky, *supra* note 425, at 15.

438. *See supra* Part I.

439. *See generally* GAO, 2014 PRIVATE SECTOR INVOLVEMENT REPORT, *supra* note 4, at 1.

440. *Id.* at 10–12, 18.

established plans incentivizing insurance companies to cover urban properties they were otherwise unwilling to insure.⁴⁴¹ Since then, many of these plans have been shifted by legislation from insuring urban properties to insuring high-risk coastal areas.⁴⁴² With these coastal insurance plans, rates are often subject to political manipulation and are not based on risk.⁴⁴³ This can lead to private insurers exiting the market, reduced choice for policyholders, unwise development in coastal areas, and costs shared among all taxpayers.⁴⁴⁴ None of the state FAIR plans, or other state natural disaster plans, are targeted toward low-income residents, so no plan presents an adequate model.⁴⁴⁵ This situation, where below-cost insurance offered by the state to fill a market void but expands, crowding out private insurers and resulting in the state becoming the major insurer for that risk, is an example of what Congress should seek to avoid as it develops an affordability plan.⁴⁴⁶

Many strong reasons call for gradually eliminating the existing subsidies, but for low-income policyholders, risk-based rates may be overly burdensome. While Congress may be tempted to wait until the “affordability study” is done before it makes decisions about the subsidies, it should not wait because the study is likely to raise more questions than answers. The only strong argument for an affordability plan is the equitable argument that part of government’s role is to assist low-income people, in flood insurance as in other arenas like food and health care. Therefore a means-tested plan should accompany the elimination of subsidies, as the GAO and experts have said for years. This would be a partially solidaristic approach to flood insurance based on the justification of need, unlike the current approach which does not have such a grounding.⁴⁴⁷ Congress needs to craft the plan carefully so that it does not repeat the problems of the existing program (for example,

441. Dwyer, *supra* note 382, at 617; ROBERT P. HARTWIG & CLAIRE WILKINSON, INS. INFO. INST., RESIDUAL MARKET PROPERTY PLANS: FROM MARKETS OF LAST RESORT TO MARKETS OF FIRST CHOICE 3 (2013), available at <http://www.iii.org/sites/default/files/ResidualMarketWhitePaper-20131.pdf>; see *supra* Part IV.B.2.a (describing FAIR plans).

442. HARTWIG & WILKINSON, *supra* note 441, at 21.

443. *Id.* at 21, 23–24.

444. *Id.* at 25–27.

445. Kousky, *supra* note 425, at 14–15.

446. Similar outcomes have resulted in the auto insurance context where residual market plans aimed at high-risk policyholders have offered such attractive rates that the residual market becomes the largest insurer in the state, resulting in devastating financial consequences. See, e.g., *State Farm Mut. Auto. Ins. Co. v. State*, 590 A.2d 191, 196 (N.J. 1991).

447. O’NEILL & O’NEILL, *supra* note 5, at 6–7 (asserting that solidaristic approaches to government insurance are generally based on a broad justification such as need).

if the cutoff is too high) and could use this opportunity to create a limited plan that would encourage mitigation and perhaps result in lower future losses.

D. Congress Should Pass a Framework to Deal with the Long-Term Effects of Climate Change.

The original flood insurance law called for a comprehensive approach to floodplain management and national flood policy.⁴⁴⁸ That in itself is a very challenging goal even if there was political consensus to reach it. Given many factors such as the multi-faceted structure of our government, geographical diversity, climate change denial, and changing risks, it seems likely to be an elusive goal. However, Congress could at least strongly encourage dissemination of flood risk information so that flood risk becomes and remains more salient and so that more people are willing to buy insurance and take steps to reduce risk. If the climate change risks unfold as predicted, comprehensive, coordinated, and drastic measures will need to be taken.⁴⁴⁹ Floods are not the only relevant risk, but, if Congress can manage to develop a comprehensive yet nuanced plan to respond to floods,⁴⁵⁰ perhaps it could be a step towards facing other climate change challenges.

CONCLUSION

Floods and flood risk present huge dilemmas particularly in light of climate change, which is likely to bring more severe and frequent floods. The federal government has been the underwriter of homeowners' basic flood insurance coverage since 1968. Flood insurance is challenging for many reasons, including the arduousness of determining flood risks, the correlated nature of flood losses, the widespread tendency to discount the magnitude of risks like floods, and the federal government's limited

448. National Flood Insurance Act of 1968, Pub. L. No. 90-448, § 1302(c), 82 Stat. 572, 573 (codified at 42 U.S.C. § 4001(c) (2012)) ("The Congress further finds that . . . (2) the objectives of a flood insurance program should be integrally related to a unified national program for flood plain management . . .").

449. See, e.g., Byrne, *supra* note 199, at 69; Verchick & Johnson, *supra* note 274 (manuscript at 2).

450. Alliances between insurance groups and environmental groups are part of the impetus for change. See, e.g., Josh Saks & Jimi Grande, *Flood Insurance Vote Underscores Need for National Mitigation Strategy | Commentary*, ROLL CALL (Apr. 21, 2014, 5:00 AM), http://www.rollcall.com/news/flood_insurance_vote_underscores_need_for_national_mitigation_strategy-232238-1.html. Josh Saks is legislative director for the National Wildlife Federation, and Jimi Grande is senior vice president of Federal and Political Affairs for the National Association of Mutual Insurance Companies.

enforcement authority over state and local decisions that affect the risk. It has taken on the role of underwriting a risk that is very difficult to insure by offering a product that people have to be compelled to buy even when it is sold at half-price. The NFIP currently owes the Treasury Department \$24 billion. This article has analyzed the NFIP as it developed from its start in 1968 to the 2012 and 2014 reforms. Congress has always had inconsistent goals for the NFIP and has taken a range of approaches to flood insurance. The program's initial solidaristic approach, which featured general subsidies for the oldest and riskiest properties, has been widely criticized. A spectrum of critics found fault with the NFIP's finances, environmental impacts, mapping, and incentives, which encouraged building and discouraged replacement of flood-prone buildings in high-risk areas.

In 2012, Congress, by a wide bipartisan majority, reformed the NFIP, moving it towards an actuarial approach where all rates eventually would be based on flood risk, subsidies would be phased out, and maps would be revised based solely on science. This would encourage private insurers to market basic homeowners flood insurance coverage and result in homeowners bearing the risk of their properties' location. The 2012 reforms seemed modest at the time but were greeted by a huge counterreaction from outraged constituents and the real estate industry. In 2014, Congress changed direction, rescinded many reforms, and added others, returning in significant part to the solidaristic approach of the initial 1968 program. This Article has explained why the 2012 reforms passed and why the 2014 "reforms of the reforms" passed.

The Article offers recommendations for Congress when it reconsiders the NFIP in 2017. Congress must provide leadership and consider the long-term consequences of its actions if the NFIP is going to move beyond its current status as a debtor program with, on balance, unfortunate consequences. First, the mapping must be protected from political influence. Second, the solidaristic approach of the general subsidies is not based on the need of the recipients or any other compelling policy. So the remaining general subsidies, which have lasted decades longer than intended by Congress, need to be phased out. The incentives they create to build and fail to replace or renovate older properties make little sense; they burden all taxpayers regardless of flood risk. The justification for these enduring subsidies are weaker than in other contexts where the federal government has been involved in insurance such as riot reinsurance, unemployment insurance, and health insurance. Third, risk-based rates and accurate maps would probably bring more private insurance and competition, which likely would be better for consumers. Fourth, Congress should pursue a limited

solidaristic approach, particularly since the insurance is mandated for mortgage holders in flood zones. To do this, Congress should pass a limited means-tested affordability plan linked to mitigation. Broadly, Congress should encourage much more wide dissemination of information about flood risk so that it becomes more salient across the population. Finally, ideally, Congress should pass a comprehensive plan to deal with floods and other likely consequences of climate change. Any of these steps would be an improvement.

The 2012 and 2014 federal flood insurance reform boomerang can be seen as a lesson in practical politics where the real estate industry and “vocal, high-risk” constituents⁴⁵¹ affected by long overdue reforms flexed their muscles and got a result that benefits them financially but that costs everyone else and the environment. Going forward, perhaps the increased visibility of the flood insurance issue may prompt a deeper analysis and more widespread understanding of the context and history of the issues. The result should be a system that gradually moves towards an actuarial approach where rates generally reflect risk, while a limited, solidaristic plan assists the truly needy. There are no simple solutions, but Congress could do much better.

451. Kousky, *supra* note 425, at 14.