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United States Government Accountability Office  
Washington, DC 20548

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February 27, 2009

The Honorable Barney Frank  
Chairman  
Committee on Financial Services  
House of Representatives

Subject: *Information on Proposed Changes to the National Flood Insurance Program*

Dear Mr. Chairman:

The National Flood Insurance Program (NFIP) was created in 1968 and currently has more than 5.6 million policyholders that are insured for about \$1.1 trillion. The program collects about \$2.9 billion in annual premiums. As of January 2009, NFIP owed approximately \$19.2 billion to the U.S. Treasury, primarily as a result of loans that the program received to pay claims from the 2005 hurricane season.<sup>1</sup> According to the Federal Emergency Management Agency (FEMA) of the Department of Homeland Security (DHS), which administers the program, this debt is greater than the sum of all previous losses since the program's inception in 1968. While FEMA officials told us that interest payments are estimated to be lower in 2010, as of October 2008, NFIP owed interest payments of \$730 million a year to Treasury and has had to borrow more from the Treasury to make these payments. As a result, it is unlikely that NFIP will ever be able to repay the entire debt.

Because of NFIP's financial situation, in 2006 GAO placed the program on the high-risk list. In 2008, GAO issued three reports covering issues directly related to NFIP:

- *Analysis of a Combined Federal Flood and Wind Insurance Program*, GAO-08-504 (Washington D.C.: Apr. 25, 2008);
- *FEMA's Rate-Setting Process Warrants Attention*, GAO-09-12 (Washington, D.C.: Oct. 31, 2008); and
- *Options for Addressing the Financial Impact of Subsidized Premium Rates on the National Flood Insurance Program*, GAO-09-20 (Washington D.C.: Nov. 14, 2008).

NFIP is subject to periodic reauthorization and its current authorization has been extended until March 2009. As Congress considers reauthorization of NFIP and potential reforms to the program, we have been asked us to provide a briefing on (1) the

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<sup>1</sup>The full losses from 2008 are not available.

percentage and geographic distribution of policyholders that purchase the maximum NFIP coverage, (2) the availability of private commercial and residential flood insurance, (3) the potential effect of adding business interruption coverage to commercial flood insurance, particularly for small and medium-sized businesses, and (4) the challenges and issues surrounding the potential creation of an NFIP loss fund.

On January 28, 2009, we briefed your office on the results of this work. This letter summarizes the briefing, and the enclosure contains the full briefing slides. In response to questions asked during the briefing, we have added clarifying information to the briefing slides.

We conducted our work from November 2008 through February 2009 in accordance with all sections of GAO's Quality Assurance Framework that are relevant to our objectives. The framework requires that we plan and perform the engagement to obtain sufficient and appropriate evidence to meet our stated objectives and to discuss any limitations in our work. We believe that the information and data obtained, and the analysis conducted, provide a reasonable basis for any findings and conclusions.

## **Background**

Congress created NFIP in 1968 so that property owners in participating communities could purchase insurance against the loss of flooding. Since its inception, Congress has several times enacted legislation to strengthen certain aspects of the program:

- The 1973 Flood Disaster Protection Act made flood insurance mandatory for owners of properties in vulnerable areas who had mortgages from federally regulated lenders. The act also provided additional incentives for communities to join the program.
- The National Flood Insurance Reform Act of 1994 strengthened the mandatory purchase requirement for federally backed mortgages of properties located in the special flood hazard areas (SFHA).
- Finally, the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004 established a pilot program to mitigate properties that continually suffered from repeated flood losses. Owners of these "repetitive loss" properties who do not mitigate face higher premiums.

In 2007, both the U.S. Senate and House of Representatives introduced legislation aimed at reforming certain aspects of NFIP. While these bills differ in several particulars including providing for required mapping of the 500 year floodplain to creating a catastrophic loss fund, both bills generally are aimed at improving the viability of the program.

As we found in our previous reports, NFIP's debt has resulted in part from the program's inability to charge premiums that are sufficient to build the capital that most private insurers have to offset losses or purchase private reinsurance. Under its authorizing legislation, NFIP must offer subsidized flood insurance premiums along with its full-risk premiums. The subsidized premiums, which represent only about 35 to 40 percent of the cost of covering the full risk of flood damage to the properties, account for about 23 percent of all active residential NFIP policies. In addition, NFIP's full-risk rates are

currently based on outdated information and processes, so even these rates may not accurately reflect the full risk of flooding.

## Summary

Approximately 36 percent of NFIP policyholders nationwide buy the maximum amount of insurance that NFIP offers. The percentages vary across states but are highest in southern and coastal states and in areas with high median home values, which are often coastal areas. (The sole exception is the District of Columbia, which has the highest percentage of maximum-coverage policies.) The state with the lowest percentage of maximum-coverage policies is West Virginia, with 4 percent. As well as the District of Columbia, states with a high percentage of these policies include Hawaii (55 percent) and South Carolina (56 percent). The percentage of policies sold at maximum coverage limits appears to be related not to flood losses in a particular state but to property values. For example, in Louisiana and Texas, where cumulative NFIP flood losses have been higher than in most other states but property values are lower, the percentage of policies sold at the maximum coverage limits has remained below the national average.

Aggregate information is not available on the precise size of the private flood insurance markets for residential and commercial properties, but according to industry experts these markets are considered relatively small. According to a 2007 study commissioned by FEMA, an estimated 180,000 to 260,000 primary and excess coverage flood insurance policies were in effect.<sup>2</sup> A small number of insurance companies provide private policies, which are generally marketed to wealthy homeowners. Private flood insurance can be significantly more expensive than NFIP insurance for similar levels of coverage. For example, one insurer told us that the cost for a specified level of residential coverage could be as low as \$500 from NFIP and as high as \$900 from a private insurer. For contents insurance, the cost averages around \$350 from NFIP but around \$600 in the private market. Private insurers generally market to clients with homes worth at least \$1 million—far above NFIP policy limits—and generally sell “excess coverage” above NFIP policy limits. Large companies are the primary purchasers of private commercial flood insurance, and several insurers and industry officials we spoke with said that private flood insurance for small to medium-sized businesses was prohibitively expensive, although no data on the costs were available. According to one insurer, up to 80 percent of private policies provide excess coverage above the NFIP maximum and are purchased together with NFIP policies, and the remaining 20 percent is considered first dollar coverage. Generally, the NFIP policy covers the deductible on the private policy—commercial policies often set the deductible at NFIP policy limits—and some private insurers told us that they would raise their deductible amounts if NFIP raised the coverage limits. Insurers also told us that they generally determined their premium rates using NFIP rates, data, and flood maps as a starting point and adjusting rates upward according to their own risk analysis.

Private business interruption coverage for flood damage is expensive and is generally purchased by only large companies. According to industry officials, coverage for small and medium-size businesses is also generally prohibitively expensive. Further, business

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<sup>2</sup>Dixon, L.; Clancy, N.; Bender B.; and Ehler, P. “The Lender-Placed Flood Insurance Market for Residential Properties.” Prepared for the Mitigation Division of the Federal Emergency Management Agency, by the Rand Corporation, Santa Monica, Calif. 2007)

interruption coverage for flood losses is generally available only if the purchaser also has a property-casualty policy that includes flood coverage. Insurers told us that underwriting this type of coverage was complex and that properly pricing the risk required an extensive evaluation of a company's business model and cash flow to determine the kinds of losses that a business interruption might cause. Adjusting business interruption claims is also complex and often contentious, because the extent of business losses depends on the nature of the business and the circumstances surrounding the loss. Adding business interruption insurance to NFIP could help small businesses obtain coverage that they could not obtain in the private market. However, in general NFIP currently lacks resources and expertise in this area, and adding business interruption insurance could be difficult, adding to NFIP's existing debt and potentially to its ongoing management and financial challenges. As they do with private flood insurance, large companies would likely use NFIP business interruption coverage to cover deductibles on private policies.

A catastrophic loss fund would create a cash surplus that NFIP could use to pay larger-than-average annual losses without borrowing, as private insurers do, through premium rate increases; creating such a fund would be challenging, for several reasons. First, unless NFIP's current debt were forgiven, even with significant premium increases NFIP probably could not collect enough to pay the \$766 million in annual interest and also contribute to a loss fund. Second, a catastrophic loss fund might not eliminate NFIP's need to borrow funds for larger-than-expected losses that occurred before the fund had been built up. Further borrowing would require either a longer period to rebuild the loss fund or more debt forgiveness from Congress. Third, even if NFIP's debt were forgiven, building a catastrophic loss fund could require significant premium rate increases. Higher rates could reduce participation in the NFIP, but without them it could take at least 10 years to fully fund a catastrophic loss fund equal to 1 percent of NFIP's total loss exposure. We calculated three loss fund scenarios (with and without catastrophic losses and with an earlier date for full funding) using a number of assumptions—stable policy levels, debt forgiveness, a 4 percent annual return on investments, no catastrophic losses before the fund was fully established, and full funding by 2020. Under the first two scenarios (with no catastrophic losses and with them), premium costs approximately tripled by 2020; in the third (full funding by 2016), subsidized rates tripled by 2016, and full-risk rates increased nearly fourfold.

### **Objectives, Scope, and Methodology**

To analyze the number of policies sold with maximum coverage limits and trends in those policies, we analyzed data on NFIP policies and Census data on 2007 median property values. We assessed the reliability of the NFIP data and determined that they were sufficiently reliable for the purposes of this report.

To obtain information on the cost and complexity of obtaining private flood and business interruption insurance and the types of coverage provided, we interviewed property owners, underwriters, and insurance brokers. To gather information on the overall market for private flood and business interruption insurance, we interviewed insurance industry officials, including those from the Insurance Information Institute, American Insurance Association, and National Lenders Insurance Council. We also analyzed publicly available studies on NFIP and the private flood insurance market to

gather information on the size and extent of the private market and the range of coverage that private flood insurers provide.

To understand the implications of creating a catastrophic loss fund within NFIP, we developed potential scenarios using NFIP premium and loss data, reviewed analyses by the Congressional Budget Office and interviewed insurance company and other industry officials.<sup>3</sup> For each scenario, we estimated future claims and operating costs to determine the premium revenues and premium rates that would be needed to both cover costs and produce surpluses necessary to fully fund an \$18 billion catastrophic loss fund. We assumed that the number of NFIP policies in force would remain constant over the funding period. We estimated future claims and operating costs by identifying trends in NFIP's inflation-adjusted historical data from 1978 through 2007. As part of these analyses, we developed two estimates of future claims costs—one that incorporated the catastrophic claim losses from the 2005 hurricanes and the other that excluded those losses.

### Agency Comments

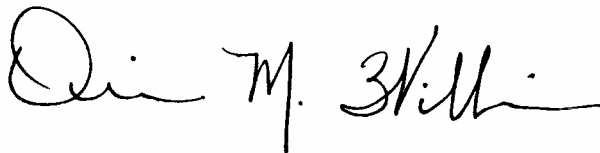
We provided a draft of this letter and the attached briefing to FEMA for a technical review. FEMA provided technical comments, which we incorporated as appropriate.

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As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution of this report until 30 days from the report date. At that time, we will provide copies to the Secretary of Homeland Security and other interested parties. In addition, the report will be available at no charge on our Web site at <http://www.gao.gov>.

If you or your staffs have any questions about this report, please contact me at (202) 512-8678, or [williams@ga.gov](mailto:williams@ga.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Key contributors to this report were Patrick Ward, Assistant Director; Nima Patel Edwards; Melvin Thomas; Richard LaMore; and Thomas Taydus.

Sincerely,



Orice M. Williams  
Director, Financial Markets  
and Community Investment

Enclosure

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<sup>3</sup>CBO Cost Estimate, Flood Insurance Reform and Modernization Act of 2007, as ordered, reported by the *Senate Committee on Banking, Housing, and Urban Affairs* (Washington, D.C.: Oct. 17, 2007).

Enclosure



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**Information on Proposed Changes to the  
National Flood Insurance Program**

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**Briefing to the House Committee  
on Financial Services  
January 28, 2009**

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## Overview

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- Introduction
  - Objectives
  - Summary of Findings
  - Background
  - Scope and Methodology
  - Discussion of Findings
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## Introduction

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- The National Flood Insurance Program (NFIP) was created in 1968 and currently has over 5.5 million policyholders that are insured for about \$1.1 trillion. It collects about \$2.9 billion in annual premiums.
  - Extensive losses have raised questions about the financial viability of the program.
    - NFIP owes around \$19.2 billion to the U.S. Treasury Department, primarily because of losses from the 2005 hurricane season.
    - In general, the program was not designed to collect sufficient premium income to cover flood losses.
  - In the 110<sup>th</sup> Congress, both the House and the Senate have proposed separate bills containing a number of changes to the program that are aimed at improving its viability, including a Senate provision potentially forgiving NFIP's debt.
  - In September 2008, Congress extended the program's authorization until March 2009.
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## Introduction

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- In 2008, GAO issued three reports covering issues directly related to NFIP:
  - *Analysis of a Combined Federal Flood and Wind Insurance Program* (GAO-08-504),
  - *FEMA's Rate-Setting Process Warrants Attention* (GAO-09-12),
  - *Options for Addressing the Financial Impact of Subsidized Premium Rates on the National Flood Insurance Program* (GAO-09-20).
- In addition, two reviews are currently in process, one examining the Federal Emergency Management Agency's (FEMA) oversight of WYO insurers and the costs of using those insurers, the other examining the adequacy of financial reporting and internal controls during the 2005 hurricane season.

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## Objectives

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1. Identify the percentage and geographic distribution of policyholders that purchase the maximum coverage that NFIP offers;
  2. Analyze the availability of commercial and residential private flood insurance;
  3. Identify the potential effects of adding business interruption coverage to commercial flood insurance, particularly for small and medium-size businesses; and
  4. Identify and analyze challenges and issues surrounding the potential creation of an NFIP loss fund.
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## Summary of Findings

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- Approximately 36 percent of NFIP policies have the maximum coverage limits, with higher percentages in areas with higher median home values, such as coastal areas.
  - The private market for residential flood insurance is small and focuses on homes with values over \$1 million. The private commercial market is also relatively small, focusing on larger companies that use NFIP coverage to pay the deductible on private policies. Little information is available on the size of either market.
  - Adding business interruption coverage would further strain FEMA's resources and expertise.
    - NFIP lacks the resources and expertise to undertake the complex underwriting normally associated with business interruption coverage, and unless it is underwritten and priced properly, such coverage could increase NFIP's loss exposure.
    - Private business interruption coverage for flooding is expensive, and generally only large companies can afford it. An NFIP policy could be the only way for smaller businesses to obtain such coverage.
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## Summary of Findings (Cont'd)

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- Creating a catastrophic loss fund would involve several challenges including
  - forgiving NFIP's current \$19 billion debt to the Treasury;
  - significantly increasing premium rates, a change that could negatively impact participation rates and necessitate further rate adjustments; and
  - reaching the target funding level despite the possibility of larger-than-average expected losses, such as those that have occurred in 2 of the past 4 years.

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## Background

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- Congress created the NFIP in 1968 so property owners in participating communities could purchase insurance against losses from flooding.
  - Under the Flood Disaster Protection Act of 1973, owners of properties lying within vulnerable areas who have mortgages from federally regulated lenders must buy flood insurance. The act also provided additional incentives for communities to join the program.
  - The National Flood Insurance Reform Act of 1994 strengthened the mandatory purchase requirement for federally backed mortgages of properties located in special flood hazard areas (SFHA).
  - The Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004 established a pilot program to mitigate properties that continually suffered from repeated flood losses. Owners of these “repetitive loss” properties who do not mitigate may face higher premiums.
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## Background (Cont'd)

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- NFIP is not authorized to charge premiums that are sufficient to build the capital that most private insurers have to offset losses or purchase reinsurance in the private global market. The program was enacted to encourage property owners in vulnerable areas to join the program and maximize the number of participants.
- NFIP offers two types of flood insurance premiums: subsidized and full risk. Congress authorized the use of subsidized premiums to encourage homeowners and communities to join the program.
- Subsidized properties account for about 23 percent of all active residential NFIP policies. The subsidized rates are not based on flood risk and, according to FEMA, represent only about 35 to 40 percent of that risk.
- Property owners who are required to purchase an NFIP policy but do not may be automatically put in to “force placed” insurance, primarily through private flood insurance but also through the NFIP’s Mortgage Portfolio Protection Program (MPPP). It is used only as a last resort and only on mortgages whose owners have failed to purchase flood insurance.
  - Policyholders in this program usually pay more for flood coverage.

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## Methodology

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- To determine the number of NFIP policies sold with maximum coverage limits, we analyzed data on NFIP policies and on median property values by state.
  - To analyze the private markets for flood and business interruption insurance, we:
    - Analyzed publicly available studies on NFIP and the private flood insurance market;
    - Interviewed officials from insurance companies that sell private flood insurance, including American International Group, the Chubb Company, and Lloyds of London;
    - Interviewed property owners, underwriters, and insurance brokers; and
    - Interviewed insurance industry officials, including those from the Insurance Information Institute, American Insurance Association, and National Lenders Insurance Council.
  - To understand the implications of creating a catastrophic loss fund within NFIP, we developed potential scenarios using NFIP premium and loss data to roughly estimate future revenues, expenses, and potential loss fund contributions. These estimates required us to make a number of assumptions, which are detailed later in this briefing. We also reviewed analyses by the Congressional Budget Office (CBO), and interviewed insurance company and other industry officials.
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## Objective 1: Coverage Limits and Geographic Distribution

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- The percentage of NFIP policies at coverage limits varies across states but is highest in southern and coastal regions.
- Nationally, about 36 percent of NFIP policies, on average are sold at the maximum coverage limits (see table 1). The percentages range from a low of less than 4 percent in West Virginia to a high of almost 63 percent in the District of Columbia.
- Coverage amounts are generally related to median home values (i.e., the higher the median home value, the higher the percentage of policies at the maximum coverage level.)
- In coastal states, where home values are generally higher, a greater percentage of NFIP policies were sold at the maximum coverage limits as compared with noncoastal states. For example, with the exception of the District of Columbia, the states with the greatest percentage of policies with maximum coverage were the coastal states
- The percentage of policies sold at maximum coverage limits did not appear to be related to the NFIP losses experienced by a particular state.
  - For example, in Louisiana and Texas, where cumulative NFIP flood losses were higher than in most other states, the percentage of policies sold at the maximum coverage limits was below the national average.



**Table 1. Median Home Values, Percentage of NFIP Residential Policies at Maximum Coverage, Median NFIP Residential Coverage, and Cumulative NFIP Losses for Selected States**

Source: GAO analysis of FEMA and state census data.

	State	Region of country	2007 median home value	2007 percentage of NFIP policies at maximum coverage limit	2007 median coverage for NFIP residential policies	Cumulative NFIP losses from 1978 through April 2008
1	District of Columbia	Northeast	\$450,900	66.0%	\$250,000	\$1,464,954
2	South Carolina	Southeast	133,900	56.3	250,000	426,503,587
3	Hawaii	West	555,400	56.2	250,000	64,361,397
4	New York	Northeast	311,000	54.6	250,000	591,624,352
5	Delaware	Northeast	239,700	54.2	250,000	50,307,086
6	California	West	532,000	52.8	250,000	478,381,093
7	Connecticut	Northeast	309,200	51.7	250,000	129,127,513
8	New Jersey	Northeast	372,300	49.2	243,000	846,602,284
9	Maryland	Northeast	347,000	46.6	221,200	235,070,005
10	Rhode Island	Northeast	292,800	46.2	220,000	34,218,508
...	...	...	...	...	...	...
13	Florida	Gulf Coast	230,400	41.5	203,500	3,455,637,659
23	Texas	Gulf Coast	120,900	29.4	150,000	2,972,450,276
27	Alabama	Gulf Coast	115,600	25.5	137,800	921,030,437
31	Louisiana	Gulf Coast	126,800	22.0	133,100	15,460,316,885
32	Mississippi	Gulf Coast	96,000	20.4	125,000	2,796,352,288
...	...	...	...	...	...	...
42	South Dakota	North	118,700	10.4	97,900	16,327,652
43	Ohio	Midwest	137,800	10.2	91,300	229,348,581
44	Nebraska	Midwest	122,200	9.9	99,000	21,604,709
45	Kansas	Midwest	121,200	8.3	75,000	73,166,027
46	Missouri	Midwest	138,600	8	76,000	454,726,075
47	Indiana	Midwest	122,900	7.9	96,000	100,878,929
48	Arkansas	South	101,000	7.4	66,000	42,320,712
49	Kentucky	Midwest	114,300	6.8	77,600	204,835,788
50	Iowa	Midwest	117,900	4.8	75,000	65,914,642
51	West Virginia	Midwest	96,000	3.8	56,000	259,776,598

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## Objective 2: Private Flood Insurance

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- While aggregate information is not available on the precise size of the private flood insurance market, it is considered relatively small.
    - A 2007 Rand study commissioned by FEMA estimated that between 180,000 to 260,000 insurance policies for both primary and gap coverage were in effect.
  - Four large insurance companies provide almost all of the private flood insurance
    - American International Group,
    - Chubb,
    - Fireman's Fund, and
    - Lloyds of London.
  - Private flood insurance policies are generally purchased in conjunction with NFIP policies, with the NFIP policy covering the deductible on the private policy. Private insurers told us that they would raise the deductible amounts if NFIP raised its coverage limit.
  - Private insurers we spoke to told us that NFIP premiums are generally less expensive than premiums for private flood insurance for similar coverage.
    - One insurer told us that for a specified amount of coverage for flood damage to a structure, an NFIP policy might be as low as \$500, and a private policy as high as \$900. Similar coverage for flood damage to contents might be \$350 for an NFIP policy but around \$600 for a private policy.
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## Objective 2: Private Flood Insurance (cont'd)

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### The Residential Market

- Private insurers generally market to clients with a high net worth and insure homes valued at least \$1 million.
  - Coverage can be provided alone or as part of a homeowners policy that covers multiple perils.
  - Policies are generally written to provide coverage above NFIP policy limits (excess coverage).
    - According to one insurer, around 80 percent of their company's policies provide coverage above NFIP coverage limits (excess flood coverage), while 20 percent are primary insurance policies.
    - Some insurers will write primary coverage, but it is more expensive than excess insurance because primary coverage exposes the insurer to the first loss position and most flood-related losses are less than the NFIP coverage limits. This means that excess coverage is tapped only for losses above the NFIP coverage limit.
  - Insurers generally determine their premium rates using NFIP rates, information and flood maps as a starting point and then adjusting these rates using their own risk analyses. As noted previously, the rates are usually adjusted upward.
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## Objective 2: Private Flood Insurance (cont'd)

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### The Commercial Market

- Private commercial flood insurance is generally purchased by large companies as excess coverage above NFIP policy limits.
  - Many companies purchase NFIP policies to cover the deductible on their private flood policy, which is usually set at the NFIP policy limit.
- Private insurance can be purchased alone or included as part of a multiperil property-casualty policy.
- While no aggregate data are available, some industry officials we spoke with said that private flood insurance for small and medium-size businesses was generally prohibitively expensive.

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## Objective 3: Business Interruption Coverage

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- Private business interruption insurance for flood damage is expensive and is generally purchased only by large companies. According to insurance officials we spoke with, coverage for small and medium-size businesses is generally prohibitively expensive.
- Business interruption coverage for flood losses is available only if flood coverage is included in the property-casualty policy.
- According to officials, underwriting business interruption is complex and requires extensive evaluation of business models and cash flows to determine probable losses (i.e., the losses that a business would likely incur from an interruption in business.)
- Adjusting business interruption claims is also very complex and often contentious, because the extent of business losses depends on the nature of the business and the circumstances surrounding the loss.

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## Objective 3: Business Interruption Coverage (Cont'd)

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### Adding Business Interruption Coverage to NFIP

- Adding business interruption insurance to the NFIP could help small businesses obtain coverage that would be difficult and expensive to obtain in the private market. As they do with private flood insurance, large companies would likely use NFIP business interruption coverage to cover deductibles on private policies.
- However, business interruption insurance is complex to underwrite, and unless it were sold at a price adequate to cover the expected losses, it could increase the federal government's exposure to flood losses.
- Business interruption insurance can also be difficult to adjust and could lead to disputed claims that NFIP or the WYO insurers that sell and service flood insurance would need to resolve.
  - Due to the complexity of underwriting and adjusting business interruption claims, it is not clear that WYO insurers would want to participate in such a program.
- NFIP generally lacks resources and expertise in this area, and adding a new program could be difficult, given ongoing management and financial challenges.

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## Objective 4: Catastrophic Loss Fund

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- The purpose of a catastrophic loss fund would be to create a surplus of funds that would enable NFIP to pay larger-than-average losses, especially catastrophic losses, without borrowing.
  - Insurance companies generally use reinsurance to ensure that they are able to pay such losses and include the cost of reinsurance in premium rates.
- Creating a catastrophic loss fund would involve several challenges.

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## Objective 4: Catastrophic Loss Fund (Cont'd)

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### Challenge 1

- Creating a catastrophic loss fund would likely require forgiving NFIP's current debt but the fund still might not be sufficient.
  - Practically, it might not be feasible to create a catastrophic loss fund without forgiving NFIP's current \$19.2 billion debt to the Treasury because, unless NFIP immediately increased premium rates by a significant amount, premiums collected would likely be insufficient to pay the \$730 million in annual interest payments and contribute to the loss fund.
  - Even if this debt was forgiven, a catastrophic loss still might occur that is beyond the amount in the loss fund, even if it was fully funded.



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## Objective 4: Catastrophic Loss Fund (Cont'd)

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### Challenge 2

- A catastrophic loss fund might not eliminate NFIP's need to borrow funds to pay losses.
  - NFIP could experience losses that are both larger than and smaller than expected average losses. While a loss fund could enable NFIP to pay the larger-than-average losses without borrowing from the Treasury, it could do so only if those losses occurred after the fund had been built up.
  - Catastrophic losses could also occur over several years, allowing insufficient time for NFIP to rebuild the fund.
  - If the fund were not adequate to pay losses, NFIP would need to borrow more funds from the Treasury. Repaying those borrowed funds would lengthen the time required to rebuild the loss fund. Alternatively, Congress would have to forgive this future NFIP debt.

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## Objective 4: Catastrophic Loss Fund (Cont'd)

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### Challenge 3

- Building a catastrophic loss fund could require NFIP to significantly increase premium rates.
  - Current rates might not be sufficient to cover expected losses and contribute to the fund. Therefore, higher NFIP premium rates could be required. One way to address this would be to increase subsidized premium rates to more fully reflect the underlying risk of loss
  - However, increased premium rates could decrease policyholder participation, which could require further premium rate adjustments to build the reserve.
  - When rates were aggressively increased in 1982, participation fell and did not recover until 1986.

### Challenge 4

- Without immediate, significant premium rate increases, it would likely take at least 10 years to fully fund a catastrophic loss fund equal to 1 percent of NFIP's total loss exposure.
    - If larger-than-expected average losses occurred, the period of time required to reach the target funding level would be further extended.
    - Such a scenario would also require forgiving NFIP's current debt.
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## Objective 4: Catastrophic Loss Fund (Cont'd)

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- A (CBO) analysis estimated that NFIP's total loss exposure would reach about \$1.8 trillion by 2017.
  - The total exposure was estimated at approximately \$1.2 trillion at the end of 2008.
  - The CBO estimate assumes that increases in the number of NFIP policies would continue, but also that increased premium rates would cause some policyholders to discontinue coverage.
  - CBO's estimate does not include potential increases in NFIP policy limits.
- A loss fund equal to 1 percent of total NFIP exposure would require approximately \$18 billion in funding.
  - Total NFIP flood losses in 2005, including Hurricanes Katrina and Rita, were about \$17.6 billion. The 2008 full year flood losses are not yet available but are expected to be above average.

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## Objective 4: Catastrophic Loss Fund (Cont'd)

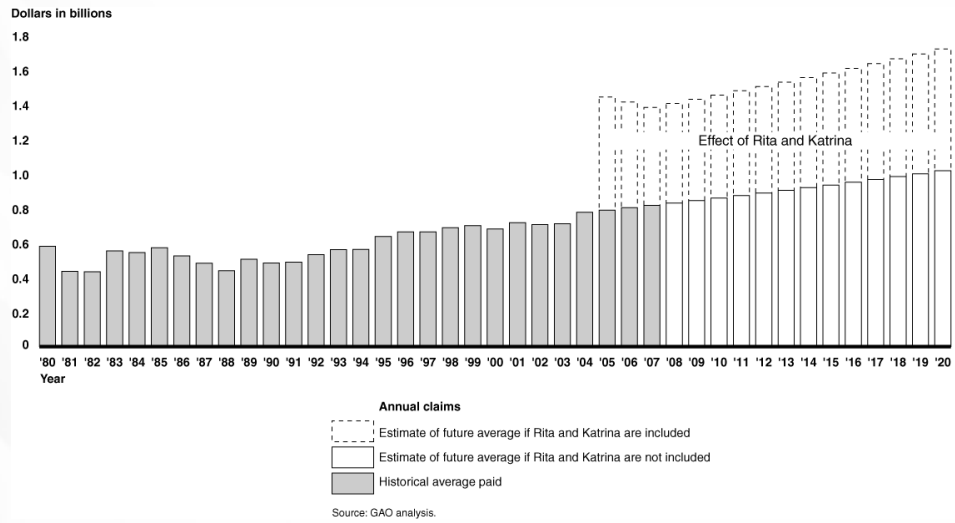
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### Analyzing Loss Funding Scenarios

- Analyzing any loss funding scenario requires estimating future losses, and the potential for catastrophic losses makes estimating losses complex and difficult.
  - It also requires making a number of assumptions. For our analysis we assumed that:
    - The number of NFIP policies would remain at 2007 levels,
    - Congress would forgive the current \$19 billion in debt,
    - NFIP would earn a 4 percent annual investment yield on contributions,
    - No catastrophic losses would occur before the fund was fully funded,
    - The target would be a catastrophic loss fund of \$18 billion no earlier than 2020.
  - Because no commonly agreed upon methodology exists for incorporating losses from the 2005 Hurricanes into estimates of future losses, we analyzed two scenarios; one in which losses are not incorporated and one in which they are incorporated. We also analyzed a scenario where the goal was to fully fund a catastrophic loss fund more quickly.
  - In each case, we estimated future revenues, expenses, and potential contributions to the building of a catastrophic loss fund.
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## Figure 2. Rough Estimate of Expected Average Annual NFIP Losses, with and without Incorporating 2005 Losses

Source: GAO Analysis of NFIP Data



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## Objective 4: Catastrophic Loss Fund (Cont'd)

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### Results under scenario 1: losses from 2005 hurricanes not included

- From 2009 to 2020, the average subsidized premium would increase from \$840 to more than \$2,116, while average full-risk premium would rise from \$358 to around \$902.
- The fund could reach the target of approximately \$18 billion in 2020 by increasing premium rates by, on average, about 8 percent annually, assuming no larger than average expected losses.
- NFIP could begin making limited contributions to the fund in 2009, but premiums would not be high enough for at least several years to make the proposed annual 7.5 percent contribution and pay expected losses.

### Results under scenario 2: losses from 2005 hurricanes included

- From 2009 to 2020, the average subsidized premium would increase from around \$840 to \$2,696, and the average full-risk premium would rise from around \$358 to \$1,149.
  - The fund could reach the target of approximately \$18 billion in 2020 by increasing premium rates by, on average, about 15 percent in the first 3 years, 14 percent in year 4, and 8 percent thereafter, assuming no larger than average expected losses.
  - As with scenario 1, NFIP could begin making limited contributions to the fund in 2011, but premiums would not be high enough for at least several years to make the proposed annual 7.5 percent contribution and pay expected losses.
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## Objective 4: Catastrophic Loss Fund (Cont'd)

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**Results under scenario 3: catastrophic loss fund fully funded by 2016, losses from 2005 hurricanes included:**

- Subsidized premiums would increase 25 percent annually until reaching full-risk rates, and full-risk rates would increase by 15 percent a year (the maximum allowable rate under proposed legislation).
- It would take approximately 7 years to reach the loss fund total in 2016.
- From 2009 to 2016, subsidized and full-risk rates would increase from \$840 to \$3,577 and \$358 to \$953 in 2016 respectively.

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