Neptune Flood Research Group – Issue 4
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Transitioning NFIP Policies to the Private Market: A Path to a More Efficient Flood Insurance Landscape

Executive Summary

The flood insurance market in the United States is currently distorted by two structural issues: (1) heavy government subsidization of flood risk through the National Flood Insurance Program (NFIP) and (2) extensive development in high-risk areas, particularly properties that have suffered repeated flooding. These factors have created an inefficient system where risk is improperly priced, and taxpayer money sustains a financially unstable program.

The NFIP's financial structure is unsustainable:

- **$27 billion in subsidies** between 2022 and 2037
- **$22.5 billion in debt**, with $2 billion added already in 2025
- **$129 billion paid in claims** (in 2024 dollars) since 1978
- **2.5% of policies account for nearly 50% of all payouts**, highlighting the burden of repetitive loss properties

Despite its financial instability, the NFIP's dominance and subsidies have prevented private insurers from competing fairly. However, with advancements in catastrophe modeling and risk assessment, **the private market now has the capability to absorb up to 95% of NFIP policies**, provided that government-driven market inefficiencies are removed.

This report evaluates:

- The inefficiencies of the NFIP and its financial challenges
- The readiness of private insurers to take on flood risk
- A data-driven analysis of how many NFIP policies could transition to the private market
- Policy recommendations for an efficient transition that reduces taxpayer burden while maintaining affordability for homeowners

Key Findings

- 95% of NFIP policies meet private market underwriting standards.
- **1M-1.4M NFIP policies (35-45%) could pay lower rates in the private market relative to their current premiums**.
- **1.4M-1.9M NFIP policies (50-60%) could pay lower rates in the private market relative to their unsubsidized rates**, representing 50-70% of the NFIP's premium base.

Key Recommendations

1. **Remove Federal Subsidization** – Eliminate broad government subsidies to allow market-driven pricing.
2. **Create a Takeout Program** – Facilitate policy transfers from the NFIP to private insurers, as practiced by state-level programs including Florida's Citizens Property Insurance.
3. **Targeted Subsidies or Federal Tax Credits** – Implement either state-managed, means-tested subsidies that apply to both NFIP and private policies, or federal tax credits.

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Introduction

The National Flood Insurance Program (NFIP) was created in 1968 after private insurers withdrew from the flood insurance market, unable to accurately assess and price flood risk. Without a viable private alternative, the federal government stepped in to provide coverage. However, more than 50 years later, the landscape has changed. Advances in data science, catastrophe modeling, and risk assessment have equipped private insurers with the tools to underwrite flood risk far more precisely than the NFIP. Yet, despite this progress, the NFIP continues to dominate the market, operating under an outdated framework that distorts risk pricing and inhibits private sector competition.

Over time, the NFIP has accumulated massive financial losses and remains burdened by unsustainable government subsidies. Political constraints have prevented the program from charging actuarially sound premiums, resulting in a $22.525 billion debt and ongoing subsidies. Between 2022 and 2037 alone, the NFIP is expected to provide $27 billion in subsidies, with artificially low premiums making it nearly impossible for private insurers to compete on a level playing field.

These distortions not only stifle private market growth but also encourage risky development in flood-prone areas. Many NFIP policyholders pay far below the true cost of their risk, incentivizing rebuilding in high-exposure zones. A disproportionate share of claims comes from repetitive loss properties - structures that flood repeatedly, driving up overall costs. Despite clear inefficiencies, the NFIP remains the primary source of flood insurance due to federal intervention preventing the natural evolution of a competitive marketplace.

This research report examines how the private market can absorb a significant portion of the NFIP portfolio, transitioning policies in a way that reduces government financial exposure and ensures that flood insurance pricing reflects true risk. Through a data-driven approach, we analyze how many policies could move to private insurers at competitive rates. With demand from global insurers and reinsurers growing, the transition to a private flood insurance market is not only feasible but necessary for a more sustainable and efficient system.

The Evolution and Current Challenges of the NFIP

The National Flood Insurance Program (NFIP) was initially established in response to the private market's inability to provide widespread flood coverage due to the complexity of assessing and pricing flood risk. When it was launched in 1968, the NFIP aimed to fill a critical gap, offering federally backed insurance to homeowners who had no other viable option. However, over the decades, the program has evolved into a financially unstable entity that distorts the natural development of a competitive private market.

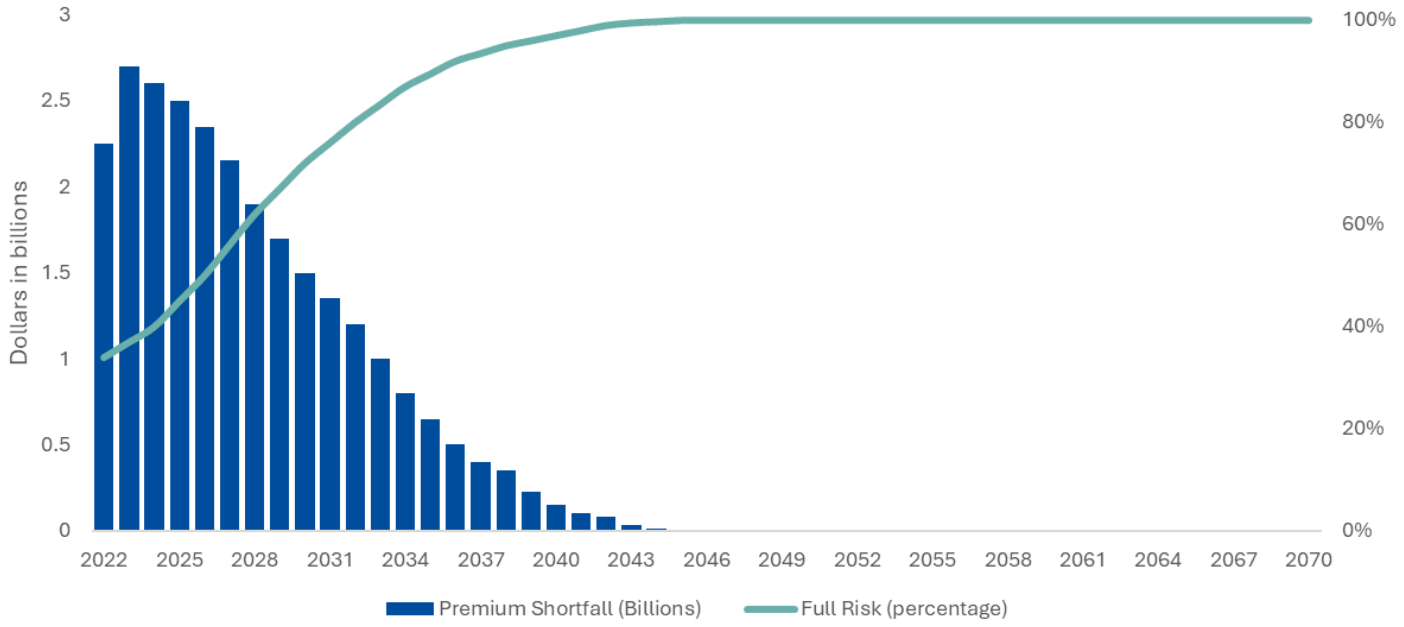
One of the NFIP's most significant challenges is its unsustainable financial structure. Since 1978, **the program has paid out over $129 billion in claims** (in 2024 dollars), due in a significant way to antiquated pricing methodologies and subsidization. In 2021, the NFIP released Risk Rating 2.0 (RR2.0), a new pricing methodology aimed at removing government subsidization and achieving actuarily accurate rates. However, rate increases are capped at 18% annually by Congress for the majority of NFIP policies, resulting in sustained artificially low rates that do not align with true flood risk.

Due to the cap on rate increases, an estimated **$27 billion in subsidies is projected between 2022 and 2037**, according to the Government Accountability Office[1]. Additionally, the NFIP is burdened by $22.525 billion in outstanding debt, with no clear

[1] Flood Insurance: FEMA's New Rate-Setting Methodology Improves Actuarial Soundness but Highlights Need for Broader Program Reform | U.S. GAO

repayment strategy, forcing it to rely on additional borrowing to cover catastrophic losses. For instance, in 2024, **Hurricanes Helene and Milton resulted in projected losses of over $10 billion, necessitating an emergency $2 billion loan from the U.S. Treasury to sustain the program**[2]. These recurring financial struggles highlight the NFIP's dependence on federal support and its failure to operate as a self-sustaining insurance program.

Estimated Premium Shortfall and Percentage of National Flood Insurance Program Policies at Full-Risk Premiums, by Calendar Year



Source: GAO analysis of Federal Emergency Management Agency data. | GAO-23-105977

Another major issue is the disproportionate impact of repetitive loss properties. Although only **2.5% of NFIP policies account for nearly 50% of all payouts**, these properties continue to receive coverage at subsidized rates, creating a financial burden on taxpayers. Instead of incentivizing mitigation efforts, the program enables continual rebuilding in flood-prone areas, exacerbating long-term exposure to climate-related disasters.

The presence of government-backed insurance at below-market rates has also hindered the growth of the private flood insurance market. Political constraints prevent the NFIP from charging actuarially sound premiums, making it difficult for private insurers to compete on a level playing field. Despite significant advancements in catastrophe modeling, private insurers struggle to gain traction because NFIP policies remain underpriced relative to actual risk. **If the free market were allowed to operate without interference, pricing inefficiencies would correct themselves, risk mitigation efforts would be encouraged, and taxpayers would no longer bear the financial consequences of underwriting flood risk**.

As flood risks become more severe, it is increasingly clear that the NFIP cannot continue in its current form. Transitioning policies to the private sector presents a viable solution for alleviating the NFIP's financial burden, promoting sustainable pricing structures, and fostering a competitive market that accurately reflects risk exposure. The next sections of this report analyze how the private market is prepared to absorb NFIP policies and what strategies can facilitate a smooth transition toward a more efficient flood insurance system.

[2] FEMA Exercises Borrowing Authority for National Flood Insurance Program | FEMA.gov

The Readiness of the Private Flood Insurance Market

The private flood insurance market has made significant strides in recent years, driven by advancements in catastrophe modeling, data analytics, and risk assessment. Unlike when the NFIP was created, private insurers now have access to highly sophisticated tools that enable them to accurately evaluate flood risk at a granular level. These tools include machine learning algorithms, satellite imagery, and hydrological modeling, all of which contribute to improved underwriting precision.

A major turning point for the private flood insurance market came with the passage of the **Biggert-Waters Flood Insurance Reform Act of 2012**. This legislation mandated that federally regulated banks and mortgage lenders accept private flood insurance policies as an alternative to the NFIP, removing a major barrier to private sector competition. By allowing private insurers to compete on a more level playing field, the Act enabled a proliferation of private flood insurance options, giving homeowners more choice and increasing market competitiveness.

Private insurers also offer more comprehensive coverage options compared to the NFIP. Many private policies provide higher coverage limits, allowing homeowners to insure their properties beyond the NFIP's $250,000 cap. Additionally, private insurers often include optional coverages such as loss of use, which reimburses policyholders for temporary housing if their home becomes uninhabitable, and replacement cost coverage for personal property, which covers the full cost of replacing damaged items without depreciation. Shorter waiting periods and more flexible terms make private flood insurance a more attractive alternative for many homeowners.

Moreover, the increasing participation of global reinsurers has provided the private market with greater financial stability and capacity to underwrite flood risk more effectively. Reinsurers, utilizing extensive risk modeling capabilities, can distribute risk across a diversified portfolio, further enhancing the ability of private insurers to sustain catastrophic events. This participation strengthens the argument that a competitive private flood insurance market can exist and thrive without the inefficiencies of government intervention.

As consumer awareness of private flood insurance options grows, insurers are also refining their products to better align with policyholder needs. With advancements in flood resilience measures and tailored premium pricing, private insurers are well-positioned to take on a significant share of NFIP policies.

A Data-Driven Analysis of the NFIP's Portfolio

A comprehensive analysis of the NFIP's portfolio is essential to understanding the feasibility of transitioning policies to the private market. This section evaluates the current structure of the NFIP's policy base, the potential for risk-based pricing, and the extent to which private insurers can absorb existing policies under different pricing scenarios.

Methodology

To conduct this analysis, Neptune's Data Science team utilized a stratified sampling approach to develop a representative model of the NFIP portfolio. The methodology incorporated data from FEMA's publicly available NFIP policy records, Risk Rating 2.0 methodology, and private underwriting models. The study was structured as follows:

1. Stratified Sample Selection: A statistically significant sample dataset of NFIP policies was randomly selected, ensuring proportional representation of key variables, including geographic distribution, flood zone classification, building age, and structural characteristics.
2. Premium Comparisons: The sample was analyzed under two pricing scenarios: (a) Current NFIP premiums, which include subsidies, and (b) premiums under FEMA's Risk Rating 2.0 framework.
3. Private Market Viability Assessment: Neptune's proprietary AI underwriting system, Triton, was applied to the sampled policies to determine eligibility for private market adoption and private market pricing.
4. Scaling Analysis: Findings from the sample were extrapolated to the full NFIP portfolio to estimate the total number of policies and premium volume that could transition under each scenario.

This rigorous methodology ensures that the projections presented in this section are statistically sound and reflective of broader market conditions.

Private Market Absorption Potential

Neptune's analysis indicates that 95% of NFIP policies could transition to the private market, with 60% receiving reduced rates relative to unsubsidized NFIP "full-risk" premiums. 35% of policies would receive price increases relative to the NFIP full-risk premium, driven mainly by differing views of risk between the private market and the government. The feasibility of transitioning policies depends on multiple factors, including private market risk selection criteria, and current, and future NFIP pricing methodologies.

Eligibility Analysis

Underwriting analysis indicates that Neptune's Triton model would find around 5% of current NFIP policies ineligible for coverage, meaning around 95% of the portfolio would meet Neptune's underwriting criteria. Properties in the "ineligible" cohort are at the highest vulnerability and exposure to flooding and often have suffered multiple flood losses. This substantial size of the eligible cohort indicates the ability of the private market to absorb a significant proportion of the government's flood risk exposure.

Pricing Analysis

A detailed examination of the NFIP's premium structures reveals a strong misalignment between subsidized pricing and RR2.0 rates. Our study found:

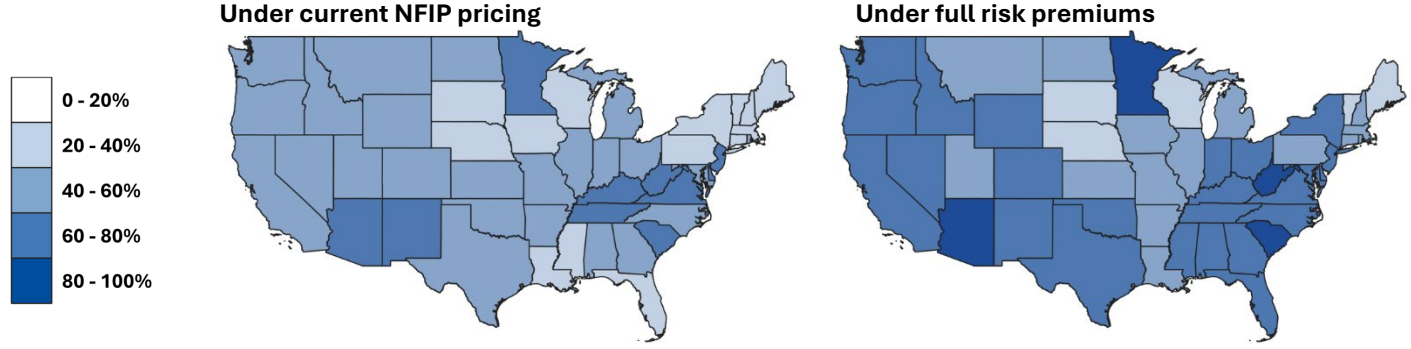
- 35-45% of NFIP policies **(1.0M - 1.4M)** would receive equal or lower insurance premiums by transitioning to the private market immediately.
    - These policies represent **$1.1B to $1.5B in premiums**.
    - **Within this cohort, policies in Florida and Texas** are the most prevalent, with **450,000 to 650,000 policies**. Due to their large policy base and concentration of high-risk properties, these states represent a pivotal market for private insurers.
- 50-60% of NFIP policies **(1.4M - 1.9M)** would receive equal or lower insurance premiums by transitioning to the private market once subsidies are removed from the government pricing methodology.
    - These policies represent **$3.2B to $3.6B in premiums**.

- The huge subsidizations in place in many states are highlighted by this analysis. For example, **policies in Florida and Texas that would receive lower rates in the private market increase to 700,000 to 900,000,** representing $1.9B-$2.1B of premium.
- Of the 35% of NFIP policies that would receive a price increase in the private market, around 1/3 would receive increases of less than 30%, while 2/3 would see more significant increases. This highlights differences between the NFIP's RR2.0 methodology and prices offered in the private market.

Table 1. How much NFIP Premium could transition due to lower prices in the private market?

State	At Current Premium	%	At Full Risk Premium	%
FL	$250M-$300M	15-25%	$1,500M-$1,600M	55-65%
TX	$250M-$300M	45-55%	$400-$450M	55-65%
LA	$100M-$150M	30-40%	$230M-$260M	45-55%
CA	$70M-$90M	50-60%	$130M-$160M	65-75%
NJ	$90M-$110M	60-70%	$170M-$190M	75-85%
NC	$55M-$65M	50-60%	$90M-$100M	60-70%
NY	$60M-$65M	35-45%	$120M-$140M	55-65%
SC	$35M-$45M	65-75%	$70M-$80M	75-85%
VA	$35M-$40M	55-65%	$40M-$50M	60-70%
GA	$30M-$40M	50-60%	$65M-$75M	70-80%
MA	$10M-$20M	25-35%	$12M-$20M	40-50%
Others	$200M-$300M	45-55%	$450M-$500M	55-65%
Totals	**$1,100M-$1,500M**	**35-45%**	**$3,200-$3,600M**	**55-65%**

Existing NFIP policies that would receive lower rates in the private market, by premium



Higher-Risk Policy Analysis

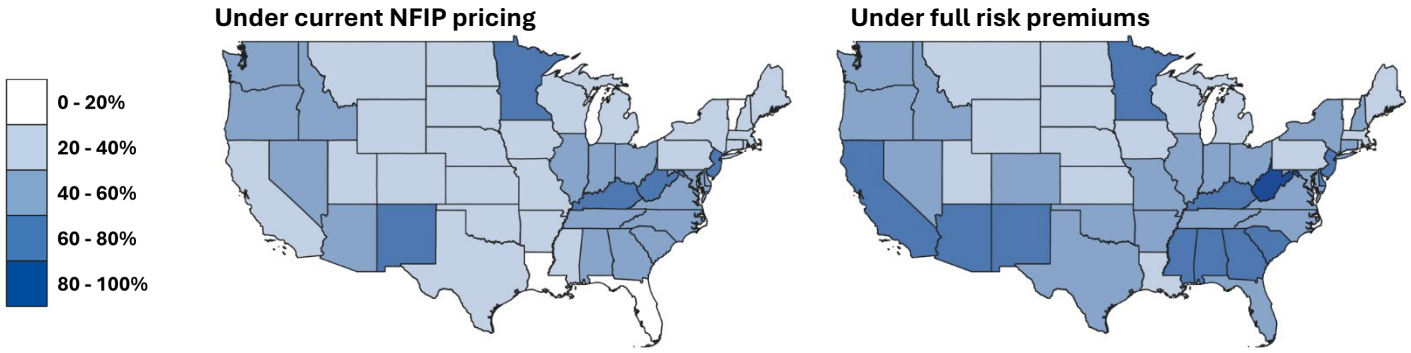
Analysis shows that it is not simply low-risk property owners who would benefit from a transition to the private market. The NFIP currently insures around 1.6M single-family homes in Special Flood Hazard Areas (SFHAs). Our analysis indicates that **275,000–425,000 SFHA policies** (20-30%) would receive better rates in the private market even under current subsidized premiums, while **625,000–775,000 policies** (40-50%) would at full-risk premiums. This shift underscores the potential for private insurers to play a critical role in providing coverage for high-risk areas.

Florida's Unique Situation: Florida demonstrates the complexities of transitioning from heavily subsidized NFIP rates to private market pricing. SFHA policies in Florida that would receive lower rates in the private market today represent just **$75M–$100M** of premium, however, under full risk premiums this will rise to **$800M–$1,000M**, reflecting a substantial gap between subsidized premiums and true flood risk.

Table 2. How much SFHA NFIP Premium could transition due to lower prices in the private market?

State	At Current Premium	%	At Full Risk Premium	%
FL	$75M-$100M	5-15%	$800M-$1,000M	50-60%
NJ	$75M-$100M	60-70%	$150M-$170M	75-85%
TX	$35M-$45M	10-20%	$125M-$150M	35-45%
CA	$35M-$45M	30-40%	$75M-$90M	60-70%
LA	$25M-$35M	10-20%	$65M-$80M	30-40%
NY	$25M-$35M	25-35%	$80M-$100M	55-65%
NC	$25M-$35M	35-45%	$55M-$65M	55-65%
GA	15M-$20M	40-50%	$30M-$40M	65-75%
SC	$5M-$10M	40-50%	$20M-$30M	75-85%
Others	$125M-$175M	35-45%	$200M-$325M	45-55%
Totals	**$450M-$600M**	**20-30%**	**$1,600M-$2,000M**	**50-60%**

Existing SFHA NFIP policies that would receive lower rates in the private market, by premium



Implications of Transitioning to a Private Market

Economic Benefits

Transitioning from the NFIP to a competitive private flood insurance market presents significant economic advantages. One of the most immediate benefits is the reduction in taxpayer burden. The NFIP has accumulated billions in debt due to subsidized premiums that do not reflect true flood risk, requiring federal intervention to remain solvent.

Market-driven pricing and risk-based decision-making will ensure that flood insurance premiums align more accurately with actual exposure levels. Unlike the NFIP, which historically underpriced high-risk properties and overcharged low-risk ones, private insurers utilize advanced catastrophe modeling and data-driven underwriting to provide more precise pricing

structures. This promotes fairness by allowing policyholders to pay premiums that reflect their true risk profile, discouraging risky development in flood-prone areas and incentivizing resilience measures.

A transition to private flood insurance will also foster competition, encouraging innovation in product offerings and customer service. Private insurers are more adaptable to technological advancements and can provide flexible coverage options, such as higher limits, additional protections for temporary living expenses, and faster claims processing. Over time, this competition will lead to better service and policyholder benefits, creating a more dynamic and responsive flood insurance ecosystem.

Challenges and Risks

Despite the economic benefits, transitioning from the NFIP to a private market presents several challenges that must be carefully addressed to ensure a smooth and equitable shift. One of the most pressing concerns is affordability, particularly for high-risk property owners who have long benefitted from NFIP subsidies. Without thoughtful intervention, some homeowners may face significant premium increases that could make flood insurance unaffordable. To mitigate this risk, a flexible subsidy framework should be established, allowing federal or state governments to provide targeted assistance for policyholders who need financial support, regardless of whether they remain with the NFIP or transition to private coverage.

Ensuring continuous coverage availability during the transition is another critical challenge. A rapid shift away from the NFIP without adequate preparation could leave some policyholders, especially those in high-risk zones, without viable insurance options. Policymakers should implement phased transition strategies, allowing private insurers to gradually expand their market presence while ensuring that homeowners retain uninterrupted coverage.

Long-Term Market Stability

A well-structured transition will lay the foundation for a sustainable, competitive private flood insurance market. The key to long-term stability lies in balancing risk-based pricing with affordability measures to ensure broad coverage availability.

One of the primary mechanisms for maintaining long-term stability is continued investment in flood mitigation and resilience initiatives. By incentivizing property owners to elevate homes, improve drainage systems, and implement flood-resistant designs, homeowners can reduce risk. Public-private partnerships will play a crucial role in promoting and funding such efforts, ensuring that communities become more resilient to flood risks.

Consumer education and transparency will also be essential in fostering confidence in the private flood insurance market. Homeowners must be equipped with the knowledge to compare coverage options, understand premium structures, and take advantage of mitigation incentives.

Conclusion and Recommendations

Summary of Key Findings

The analysis presented in this report underscores the financial unsustainability of the NFIP and the readiness of private insurers to absorb a substantial portion of the flood insurance market. Over decades, the NFIP has accumulated billions in debt while continuing to subsidize policies at below-market rates, preventing the natural development of a competitive private sector. With advancements in catastrophe modeling, risk-based pricing, and increased interest from global reinsurers, the private market is now positioned to offer more actuarially sound and comprehensive flood insurance options. However, a full-scale transition must be carefully managed to ensure affordability, minimize market disruptions, and provide ongoing coverage.

Transitioning to a private market is not just feasible but necessary for long-term sustainability. The NFIP, while once essential in filling a void left by the private sector, has evolved into a financially unsustainable program that distorts risk pricing and prevents the growth of a competitive insurance market. By allowing subsidies to be used in both public and private insurance markets and enabling states to decide how they want to support policyholders, flood insurance can become more stable, efficient, and reflective of actual flood risk.

A future where flood insurance is driven by risk-based pricing will create an environment in which mitigation is incentivized, premiums are set according to exposure levels, and taxpayers are no longer required to subsidize repetitive loss properties. While certain challenges remain, particularly regarding affordability for high-risk homeowners, a carefully managed transition ensures a more resilient and financially stable flood insurance market for years to come.

Policy Recommendations

- **Remove Federal Subsidization** – Eliminate broad government subsidies to allow market-driven pricing.
  - The NFIP's reliance on subsidies has created artificial price distortions that prevent private insurers from competing effectively. Removing broad federal subsidies will enable flood insurance rates to align with actual risk, encouraging homeowners and businesses to make more informed decisions about their coverage needs.
  - Market-driven pricing will promote investment in flood resilience measures, as property owners will have a financial incentive to mitigate risk. Additionally, reducing reliance on taxpayer-funded subsidies will help alleviate the NFIP's mounting debt burden, ensuring that flood insurance remains financially sustainable in the long term.
- **Create a Takeout Program** – Facilitate policy transfers from the NFIP to private insurers, as practiced by state-level programs including Florida's Citizens Property Insurance.
  - A structured takeout program can provide a pathway for transitioning NFIP policyholders to private insurers, similar to the depopulation efforts undertaken by Florida Citizens Property Insurance Corporation. This program would allow private insurers to selectively assume policies that meet underwriting criteria, gradually reducing the NFIP's policy count while ensuring that homeowners maintain continuous coverage.
  - To ensure a smooth transition, policyholders should be given clear guidance on available private market options, and insurers should be encouraged to offer comparable or superior coverage.
- **Targeted Subsidies or Federal Tax Credits** – Implement either state-managed, means-tested subsidies that apply to both NFIP and private policies, or federal tax credits.
  - Rather than maintaining the NFIP's broad subsidy structure, targeted subsidies should be introduced to assist policyholders who truly need financial support. States should have the flexibility to administer these subsidies based on local risk assessments and economic conditions, ensuring that assistance is allocated efficiently and equitably.
  - An alternative approach is to provide federal tax credits for flood insurance policyholders, which would allow homeowners to offset premium costs while still promoting risk-based pricing. Such a proposal was made by Senator Rick Scott in Senate Bill 4143[3]. By using tax incentives instead of direct subsidies, the government can encourage responsible flood insurance purchasing behavior without distorting market competition.

[3] https://www.congress.gov/bill/118th-congress/senate-bill/4143/text