

# Could private flood insurance be cheaper than the NFIP?

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With the National Flood Insurance Program (NFIP) \$24 billion dollars in debt and the deadline to renew the program fast approaching, policymakers in Washington are debating flood insurance reform through a number of bills in the Senate. Proposed legislation contains language that would ease regulations on flood insurers in order to encourage the growth of a private market.

Milliman has recently collaborated with KatRisk, a risk modeling firm, to develop tools that can be licensed by insurers and reinsurers to quickly assess the feasibility of offering private flood insurance. Using our flood insurance datasets, we conducted market feasibility studies in three states - Florida, Texas, and Louisiana – which combined account for 56% of NFIP insurance policies in-force nationwide. Our study represented all single-family homes, not only those who are currently purchasing flood insurance from the NFIP, because the NFIP does not release detailed data on policy locations. We compared our modeled private flood insurance premiums to those of the NFIP. This paper provides a brief overview of those findings.

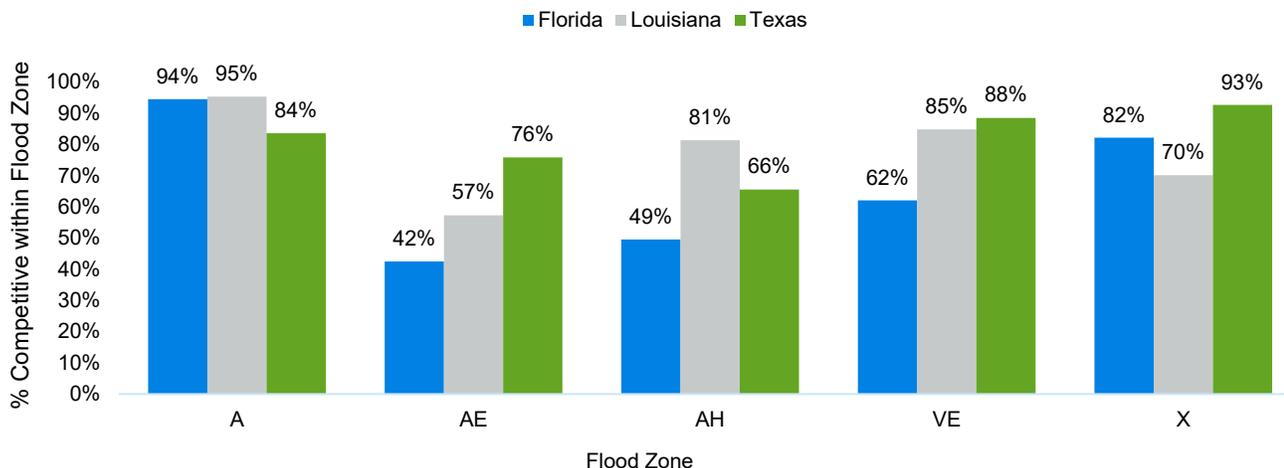
## Market Feasibility Study Results

Overall, across the three states we found that a majority of single-family homes could see cheaper premiums with private insurance than with the NFIP. Based on our estimates, this would hold for 77% of all single-family homes in Florida, 69% in Louisiana, and 92% in Texas.

STATE	SINGLE FAMILY NFIP POLICIES	ESTIMATED SINGLE FAMILY DWELLINGS	% OF RISKS W/ TARGET PREMIUM < NFIP PREMIUM
FLORIDA	958,764	4,300,000	77%
LOUISIANA	410,216	1,200,000	69%
TEXAS	527,249	6,100,000	92%

Furthermore, of the homes modeled, 44% in Florida could see premiums that are less than one-fifth that of the NFIP, while the same holds true for 42% of homes in Louisiana and 70% of homes in Texas. Conversely, using our model, private insurance would cost over twice the NFIP premiums for 14% of single-family homes in Florida, 21% in Louisiana and 5% in Texas. Therefore, although we expect that more refined risk-based rating from private insurers would provide lower premiums for many homeowners, the NFIP's current premiums would be a more cost-effective option for some. We expect that, even if private insurance takes hold, there will be some property owners who would likely continue to need some type of government support due to affordability issues.

Across flood zones, we found that if private insurance were widely available in the highest-risk areas, a surprisingly large percentage of homes could see premiums below those of the NFIP. The chart below lays out the comparison by zone and state. Zones A, AE, AH, and VE are designated as Special Flood Hazard Areas (SFHA) requiring mandatory flood insurance coverage for homes with a federally backed mortgage.



Our findings show that for all SFHA zones combined, private insurance could offer cheaper premiums than the NFIP for 49% of single-family homes in Florida, 65% in Louisiana, and 77% in Texas.

Within the “V” Zone, which is considered the most hazardous of the SFHAs and requires mandatory flood insurance, 62% of Florida homes in a VE Zone, 85% of Louisiana homes in a VE Zone, and 88% of Texas homes in a VE Zone could see lower premiums under a private market. “A” zones are the next most volatile and similarly require mandatory flood insurance. Across A, AE, and AH zones, between 42% and 95% of risks across the three states could be covered at a lower premium compared to the NFIP.

## Critical Assumptions

A number of critical assumptions were used to arrive at the numbers above. Milliman developed proprietary market baskets representing 10% of single-family homes in each state based on parcel data and other third-party sources. Our losses were derived from catastrophe models generated by KatRisk, which

include inland flood and storm surge risk, but exclude non-modeled flood risk. The market feasibility studies also assumed a \$250,000 maximum flood limit, which is consistent with the NFIP, and a 35% target loss ratio. The NFIP premiums are current as of April 2017 and include fees but do not consider the effect of grandfathering. The findings reflect one set of reasonable assumptions for all single-family homes across the three states, but the use of different data sources, catastrophe models, and target expense assumptions would produce different results.

A 2016 poll by the Insurance Information Institute found that 12% of American homeowners had a flood insurance policy, leaving the remaining 88% unprotected against this widespread and potentially catastrophic risk. Numerous instances such as the 2016 rainstorms in Louisiana, which affected over 55,000 homes and cost over \$8 billion, show the devastating financial effect of flood on communities that are outside mandatory purchase areas and yet at risk of significant flood events. The NFIP has provided a valuable service to U.S. property owners for close to 50 years and there are numerous legislative proposals being considered that will help the program to continue doing so in the future. Alongside the NFIP, a thriving private insurance market would provide wider and in many cases less expensive options that could protect more U.S. consumers, expand the awareness of the need for flood insurance, and spread the risk beyond the NFIP.



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