Tossing Life Preservers into Floodwaters:
Next Steps for the Mortgage and Flood Insurance Markets

By Pete Maloney, Melissa Klimkiewicz, and John Dickson

*Illustration shows an Aon Impact Forecasting modeled flood footprint for Hurricane Harvey on Google.**

As hurricane seasons go, 2017's stands as the most expensive in U.S. history. Yet the winds that hit the Florida Keys and Puerto Rico were not unprecedented. Indeed, given the long break since the Katrina, Rita, and Wilma landfalls of 2004–2005, there was some sense that hurricanes Irma and Maria were overdue. The housing and insurance industry largely took them in stride as significant, but expected, wind events. Hurricane Harvey, however, was different.

As a major flood disaster coming near the expected reauthorization of the National Flood Insurance Program ("NFIP"), Harvey generated much attention to our national and regional flood management frameworks. One of the tougher questions that Hurricane Harvey posed was why only 15 percent of homes in a major city identified as a huge flood risk were protected by flood insurance.[1] While some have posited that the answer can be chalked up to imprudent consumer choice, at its core, the issue is far more complex. The dearth of residential flood insurance for Harvey – as well as any other significant U.S. flood event – arises because of a range of factors including national policy choices, a system of subsidization in some areas but not others, limited consumer education, and an insurance mandate that commands heavy and sometimes painful attention to one side of an imaginary line with limited attention to the other side of that line. These flaws have built up slowly

* *Impact Forecasting (IF), Aon's catastrophe model development center of excellence, is a leading provider of catastrophe modeling solutions to the re/insurance industry. With over 100 probabilistic and scenario loss models spanning 10 perils and over 60 territories, IF empowers re/insurers by providing risk insights to support insurance underwriting, pricing and accumulation management.*

IF first introduced a probabilistic inland flood loss model for the U.S. in 2008. Since this time the model has continued to evolve and now covers both fluvial (riverine) and pluvial (flash flood) risk. Recently updated with the latest observational data from inland flooding caused by Hurricane Harvey, the current model version incorporates over 1.5 million miles of fluvial network as well as over 1 million square miles of pluvial coverage with hydraulically-based hazard calculations.

IF offers a view of flood risk that is independent of FEMA flood maps. While flood maps are widely used to identify rivers' natural floodplains and target properties at risk from river flooding, they offer limited information for insurance risk management and underwriting. IF's probabilistic flood model consists of thousands of possible events and is designed for insurance flood rate making studies, pricing adequacy studies and portfolio growth analyses. Importantly, the model captures risk well beyond 100-year riverine floodplains including extreme flash flood events similar to that caused by 2017's Hurricane Harvey.

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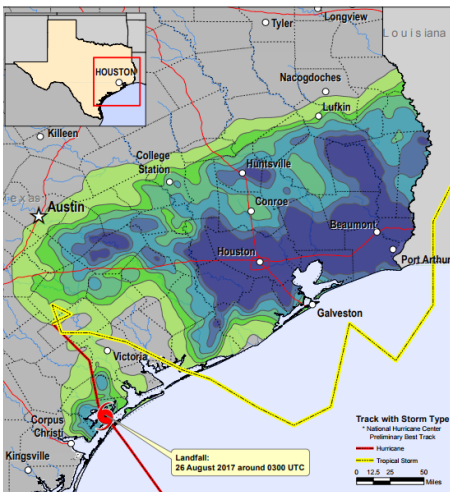
over time, like the over-development that has reshaped and enlarged our country's floodplains. Indeed, insurance is only one part of the flood solution, but it is a glaringly absent one. That gap needs to close, particularly because no one is questioning anymore whether sea levels are rising or whether deluges occur more often. The answer in both cases is clearly "yes," and predictions are that there will be substantial increases in sea and rainwater flood events in the coming years.

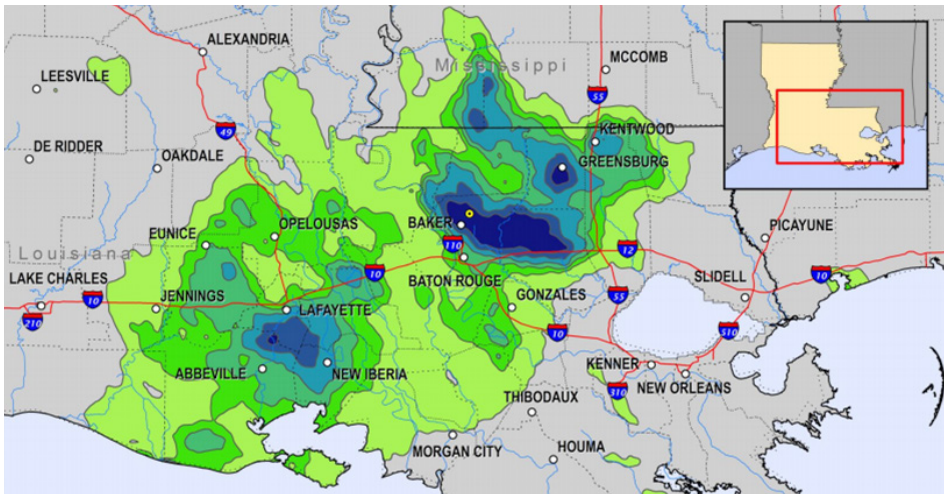
As we enter the 2018 hurricane season, NFIP reauthorization remains in limbo, with an action date of July 31, but a rising consensus in Washington, D.C. that while we will see another program extension, it will be without the needed reform. The 2018 hurricane season will then be entering its peak, and it could make plenty of news and create additional pressure for a long-term reauthorization or, given the randomness of hurricanes, there could be no material landfalls at all, and the pressure for NFIP change could abate along with the headlines. That would be a mistake, of course: non-cyclonic flooding continues to worsen, necessitating focused Congressional attention.

Because mortgage lenders' security interests are acutely affected by these natural phenomena, we can envision mortgage lenders taking an affirmative role in the NFIP's "moonshot" goal of doubling flood insurance penetration in any area with a risk of flooding, to protect both lenders' security interests and their borrowers' homes. Pursuant to the Flood Disaster Protection Act ("FDPA"), the mortgage industry plays the leading role in requiring that homebuyers purchase flood insurance in the areas of highest hazard (the Special Flood Hazard Areas, or "SFHAs") when they take out mortgages in those areas.[2] Mortgage servicers then continuously monitor the maintenance of that insurance and will "force place" flood insurance if mortgagors let it lapse.

Without question, mandating flood insurance in these high hazard areas is an expensive and time-consuming activity. Financial institutions must comply with various flood insurance requirements (depending on the circumstances), including under the FDPA, government insuring/guarantying agency rules, government sponsored enterprise ("GSE") rules, private investor requirements, and other applicable state and federal laws. In order to satisfy these highly technical compliance obligations, financial institutions must expend significant resources building out robust compliance management systems. This may involve inventorying and tracking updates to applicable legal requirements, implementing policies and procedures, monitoring and testing compliance, providing ongoing training, ensuring appropriate corrective actions and self-reporting (as needed), and executing stringent vendor management controls. And, the FDPA's mandatory purchase requirements are a strict liability regime—although institutions are expected to take corrective actions when mistakes are made, such actions are not deemed to "cure" the violation. Non-compliance may result in examination findings, costly and labor-intensive portfolio "look backs," enforcement actions, and civil money penalties for "pattern or practice" violations. While, historically, the industry may have regarded civil money penalties under the FDPA as insignificant, in 2012, the per violation penalty increased to $2,000 and the annual cap on aggregate flood insurance-related civil money penalties was removed.[3] The result is that several banks have been subject to six-figure penalties, and one bank recently received a $1.5 million penalty.[4] In addition, non-compliance can result in litigation and reputational risk. For example, recent cases involving allegedly excessive flood insurance coverage and kickbacks have settled for millions of dollars.[5] Without doubt, industry already suffers its share in addressing flood risk in the SFHAs.

To be clear, this paper does not advocate more regulation or requirements for mortgage lenders. What it suggests is that mortgage lenders, sans new legal





The graphics highlight the Annual Exceedance Probability (AEP) regarding extreme rainfall measured during Hurricane Harvey and the 2016 Louisiana floods. This is more commonly referred to as a Return Period (RP). Rainfall return periods can be determined based on many different time intervals, which can range from 5 minutes to 60 days. Swaths of Texas and Louisiana both recorded rainfall in each event that reached the 1,000-year rainfall return period based on time intervals ranging from a number of hours to days. To put this return period into better context, a 1,000-year event means that there is a 0.1 percent chance (1-in-1,000 probability) of any such event occurring in any given year. It does not mean that it will be another 1,000 years until the next event of similar size will occur in this location. Another important point is that rainfall return periods do not automatically translate to an equally sized flood return period.

requirements or related enforcement, become engaged in the ongoing advocacy regarding federal and private flood insurance options for flood zones outside the SFHAs, in the interest of closing today's considerable coverage gap. Hopefully, early notice to homebuyers that they face real flood risk despite being in areas designated as low to medium risk will generate increased coverage. These often neglected flood zones generate most of today's flood losses. As discussed below, the NFIP has laid out a framework for developing flood awareness and promotion through its Community Rating System ("CRS") and announced a target, which the NFIP has coined its "moonshot," of doubling flood insurance uptake by 2023. As we detail, a very significant amount of that uptake needs to occur in low to medium hazard zones to keep up with floodplain growth and to account for the at-times misleading, all-or-nothing regime that the FDPA mandates. Because mortgage lenders execute these mandates, they are uniquely positioned to explain that just because flood insurance is not required outside the SFHAs does not mean that it is not needed outside the SFHAs. Local and regional banks, in particular, would be well-served to educate their communities on flood-risk, given the impact that community flooding can have on their overall financial health. We note that, although those with nationwide portfolios may have lower risk exposure in connection with any particular flood event (because the properties securing their loans are less concentrated in particular geographic areas), their participation in encouraging greater flood insurance acceptance outside SFHAs would serve the dual purposes of providing significant benefits to borrowers, while improving protection for the bank's security interests.

The Role of Local and Regional Banks in Community Disaster Recovery

A mainstay of community flood resilience is our local banking system. Over the past decade, several studies have measured regional bank performance in, and assistance to, flood-shocked communities. These studies indicate that because a given regional bank's own franchise value is inherently tied to the economic welfare of the region in which it operates (the "community franchise value"), regional banks should balance their own safety and soundness with lending aimed at helping a given community franchise through its rehabilitation cycle. An improvement in consumer flood insurance uptake before disasters strike would be a strategic move in navigating that balancing act.

To begin, the studies tell us that localized disasters typically have material but medium-term impacts on local banks. For example:

- A 2017 study (Noth and Schuwer) found that while disasters decrease z-scores, increase default probabilities, and worsen non-performing asset, foreclosure, asset return and equity ratios, those effects abate in two to three years' time.[6] Not surprisingly, the study found that the worst financial impacts on local banks occurred in two flood events: 1997's Red River flood and 2005's Hurricane Katrina.
- A 2016 German study (Koetter and Noth) examined commercial lending after Elbe River flooding and found that local banks significantly increased non-real estate lending, due in part to familiarity with local small to medium enterprises' business practices, and acted as an effective liquidity mechanism for small and medium-sized businesses that the study termed "recovery lending."[7] The study noted that the lack of significant post-disaster real estate lending was consistent with an earlier study's finding that real estate lending had declined after the 1994 Northridge earthquake. The study therefore suggests a response gap for real estate that can be suitably mitigated with greater flood insurance distribution.
- A 2014 Federal Reserve study found that lending generally increases significantly in the first 6 months following a disaster, but that regional and national banks respond differently due to size and capacity -- national banks are able to reduce lending in non-core markets so that they can continue to meet credit demand within the impacted area, whereas small banks manage their balance sheets by sharply increasing sales into the secondary market and reducing lending by 20-30 percent.[8] In contrast to the Noth and Schuwer study, the Federal Reserve found that disaster effects on banks dissipate within a year rather than two years.
- A 2011 study of Hurricane Katrina's effects on bank capital management (Lambert et al.), found that highly capitalized banks reacted to Katrina by shifting investment out of lending into low return securities whereas banks with lower capitalization did not shift capital but maintained lending levels.[9] The upshot is that, although a given bank's risk appetite may materially reduce recovery lending in a given community, greater flood insurance penetration may mitigate the effects of such conservativism.
- A 2005 FDIC study also found that U.S. banks ably manage disasters while also materially assisting in recovery.[10] As with the other studies noted above, the FDIC study identified multiple negative financial spikes post-disaster that tend to mitigate over a few years. The study concluded: "[i]t is likely that an important factor in bank performance after disasters is that many losses are reimbursed by insurance or government aid."[11]

As an anecdotal point, we see a case study on community franchise value occurring in the response of Hancock Bank of Gulfport, Mississippi to Katrina.[12] Because bank branches and electronic terminals were downed, Hancock Bank employees went into the streets to lend cash in exchange for handwritten IOUs, lending a total of $3.5 million to shore up small businesses and homes at an extremely trying time.[13] The bank's reputation for trust and commitment benefited significantly, with the bank growing by $1.6 billion in the four months following Katrina.[14]

The very local nature of flood risk is apparent in the ways that the NFIP has tried to direct efforts at innovation. One project has revolved around developing a community-based flood insurance option ("CBFI") -- e.g., a master policy purchased by a town or village to protect all properties within it. The rationale is that because individual NFIP policies are available on a community-by-community enrollment basis, subject to meeting certain standards under the NFIP's CRS, the community should be able to "own" its risk as a whole and develop an adequate taxation system to cover the costs of a master policy. The National Academies of Science, Engineering and Medicine reviewed the concept and published a report in 2015 that weighed the feasibility of CBFI and noted some of the underwriting, pricing and premium allocation issues that would arise with such a policy ("CBFI Report").[15] For example, should a homeowner on a hill be responsible for paying a CBFI tax that only benefits his neighbor in the valley? From a mortgage banking perspective, CBFI also raises the knotty issue of how to integrate the individual SFHA flood insurance mandate with a community-wide policy.

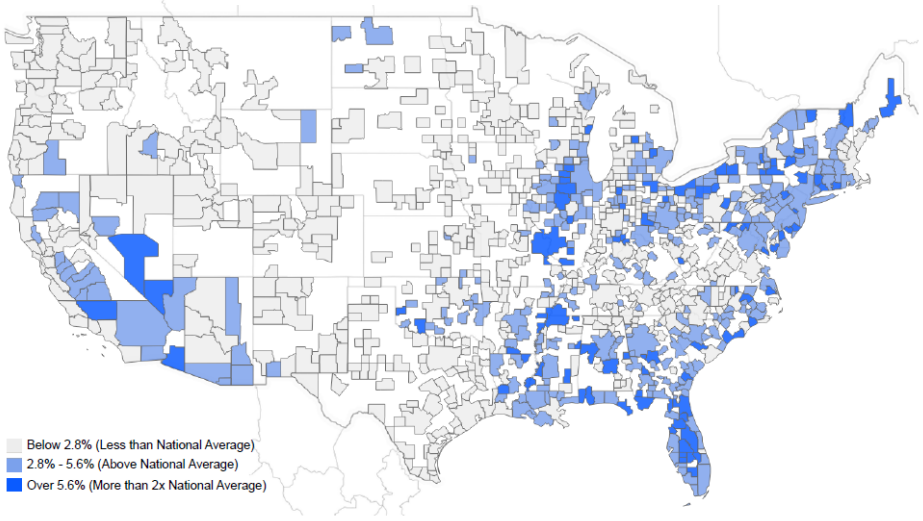
Another NFIP innovation of recent years has been the NFIP's reward of premium credits under the CRS where communities engage in flood insurance promotion to improve flood insurance coverage in the community.[16] Promotion efforts subject to the credit include: (1) assessing current flood insurance coverage; (2) assembling a committee with representation from local insurance agents to develop a coverage improvement plan; (3) implementing such plan; and (4) providing technical assistance and advice to community members. The flood insurance promotion credit itself has been small (110 basis points) relative to other credits. The credit sits within the larger multi-pronged CRS system, which is designed to help physically mitigate flooding, increase community flood awareness and planning, and ultimately encourage flood insurance purchases. The insurance promotion credit has been off to a slow start, with only 4 percent of communities receiving the credit since its inception in 2013, but with FEMA's recently announced initiative to double flood insurance uptake, one wonders whether the credit's time has come for greater weighting and a much bigger push.

GSE/Government Agency Gearing against Foreclosure

As discussed above, scholarly studies identify a one-to-two-year recovery period for communities and banks hit by disaster. In that period, residential mortgage delinquencies historically spike upwards. While there are always some number of foreclosures, the GSEs help "eat up the clock" by imposing fore-closure moratoria to allow homeowners the time to get back to work, effect flood insurance claims, take guidance on and pursue FEMA grant and loan assistance, and resume mortgage payments.[17] Meanwhile, local banks leverage their go-forward lending to help with recovery. In most circumstances the system has worked well and banks and communities recover—but that assumes a single disaster striking a community with a sound economy. The 2017 hurricane season showed us, with Hurricane Maria, that when a hurricane strikes a struggling local economy like Puerto Rico's, certain assumptions about timely recoveries and the gearing of moratoria are diminished.[18]

Scenarios similar to Puerto Rico's can also occur in depressed mainland economies where homeowners are beset with negative equity and might walk away from a flooded, uninsured home. For example, after Hurricane Irma, industry data firm Black Knight, Inc. called attention to additional default risk in Florida due to the state's high negative equity rate.[19] Black Knight, Inc. included the map below demonstrating nationwide areas of negative equity, any of which could be hit by cyclonic or non-cyclonic flooding.

Negative Equity Rates by CBSA – Q2 2017



Map courtesy of Black Knight, Inc.

The banking industry also remains concerned about the remote but catastrophic risk of a double strike, where a first storm hits a given community only to be overwhelmed by a second storm. As we have seen over the years, hurricanes can come in quick succession and follow the same tracks as they approach the coastline. During the National Academies' deliberations around CBFI, one national bank warned that such a double strike would likely cause widespread defaults.[20] Luckily, the double-strike scenario has yet to occur.

Unfortunately, however, it may not take a double strike to impact the finances of financial institutions that have concentrations of risk in communities impacted by natural disaster, particularly where certain mortgage types are involved. For example, a lender with a significant number of Federal Housing Administration-insured loans secured by properties in a disaster area may take a financial hit if a material number of the properties are damaged and go through foreclosure without the damage repaired. In these circumstances, the lender will need to repair the properties prior to filing mortgage insurance claims or obtain HUD's prior approval to deduct from the lender's mortgage insurance benefits HUD's estimate of the cost of repairs or any insurance recovery that the mortgagee receives (whichever is greater).[21] Likewise, Ginnie Mae issuers may suffer because they must continue monthly principal and interest payments to investors while pooled loans are in forbearance or default (absent Ginnie Mae agreeing to "last resort," short-term relief). While Ginnie Mae may permit Issuers to buy the loans out of pools, that comes with a hefty price tag.[22] Although these Ginnie Mae requirements are not new, in the past, Ginnie Mae's issuers were primarily heavily-capitalized banks. Currently, the issuer mix is tilted toward non-banks, which generally are less capitalized.[23]

Although they are not keen to do so, banks with a nationwide, or at least geographically diverse, footprint generally should be equipped to absorb such localized disasters. That is not to say that they are willing to do business without the protections of a flood insurance program; in fact, large banks are some of the most ardent advocates of the NFIP. One article described the industry's heavy lobbying efforts and noted that, with current flood insurance coverage levels in place, the balance sheets of large banks with nationwide footprints should absorb most disasters.[24] With respect to local banks, however, the article remarked:

> Small community banks and local branches of big banks in flood-prone municipalities are especially vulnerable [...] They're exposed to risk because they have millions and even billions of dollars in collateral at risk. [And since] a whole neighborhood could be wiped out, [...] the risks are really concentrated. Community banks in those areas could see a big loss.[25]

Mortgage default risk caused by floods could thus be said to exist on two horizons: an acute one of a fortuitous storm in a depressed region or double strike in any region, and a chronic one that imperils local banks and investors with highly concentrated assets. Each is mitigated by flood insurance and each is expected to be exacerbated in the future.

Flood Zones of the Future

As indicated, the risk of localized catastrophic loss is already part of our national mortgage risk appetite; however, without any further consideration of increase in storms or their intensity, local and regional banks face a persistent threat to their mortgaged properties. One debate that the 2017 hurricane season re-sparked was whether climate change has resulted in more intense hurricanes. While windier and wetter storms are a threat, too much focus on the relationship between global warming and hurricane intensity distracts from objectively measurable increases in rainfall and sea level, neither of which necessarily involves a hurricane. Below we discuss what the next decades may hold in store for flood losses.

The most recent U.S. government study on point, the U.S. Global Change Research Program's Fourth National Climate Assessment ("USGC Assessment"), reported that extreme precipitation events since 1901 have increased in most parts of the country, with continued increases predicted through the 21st century.[26] These increases have been measured with a long-standing and undebatable system of rain, river and other gauges maintained for the last century. The gauge system's data is made publicly available by the National Ocean and Atmospheric Administration.[27]

(Illustration – "tipping bucket" rain gauge)

As respects the threat of sea level rise ("SLR"), the USGC Assessment expressed very high confidence in a worldwide SLR of 7-8 inches since 1901 (measured by tidal gauges), and medium confidence in an additional global SLR of .5 to 1.25 feet by 2050, with greater increases anticipated along our Atlantic and Gulf coasts. Based on those increases, USGC projected that by 2050 there would be an 8-fold increase in ordinary tidal flooding events. Importantly, while much of national media attention focuses on so-called king tides and other flooding in Miami, the top ten cities suffering increased nuisance flooding tend to

cluster at the mid-country seaboards and include: San Francisco, Norfolk, Annapolis, Baltimore, Atlantic City, Sandy Hook, Washington, D.C., and Philadelphia.[28] The USGC projection of an 8-fold increase in flooding did not factor in simultaneous storm surge or rainfall, which would obviously exacerbate floods, similar to what occurred when Superstorm Sandy made landfall at high tide. In the wrong combination of circumstances, nuisance flooding could therefore turn into catastrophic flooding.

The USGC Assessment should be read in conjunction with a 2013 study that FEMA commissioned ("FEMA Study").[29] The FEMA Study analyzed two previously modeled scenarios: one where coastal communities do not retreat from SLR but build seawalls, elevate properties, adopt new building codes and develop forward-looking land use plans; and one where coastlines are abandoned to the rising ocean. In the first "no retreat" scenario, the study predicted that coastal SFHAs would increase in size by 55 percent by 2100 with wide variability; in the second scenario it posited that the SFHA would remain the same size but migrate inland along with our coastline.[30]

Given the huge economic values in U.S. coastal cities, one can only surmise that communities may, as they say, "make a go of it" and attempt to adapt, thus seeing a significantly larger coastal SFHA for at least some period of time.[31] For example, 22 U.S. cities have joined a global municipal coalition sponsored by the Rockefeller Foundation called 100 Resilient Cities ("100RC").[32] These include both seaboard[33] and inland cities.[34] In addition to other factors affecting their long term stability, these cities are acutely conscious of the flood insurance gap and in their own NFIP white paper specifically called for greater distribution of private flood insurance as well as federal funding for flood mitigation projects.[35] In answering the funding call, the White House recently proposed a $12 billion budget provision to enable a competitive SLR resilience program in coastal communities.[36] No doubt, resilience plans are becoming necessary because rating agencies are calculating SLR response into state and local bond ratings.[37] A scenario where federal funds are made available for resilience projects in part to maintain community credit ratings is plausible. Clearly, no one is yet prepared to "retreat" from SLR, so at least a temporary growth of coastal SFHAs seems inevitable. Banks, and especially local banks, should be preparing for that reality.

As respects inland SFHA's, the FEMA Study posited an increase of 45 percent in their size by 2100.[38] While inland communities do not face the challenge of SLR, they do face increasing rainfall and populations, over-development, and continued paving and tarring of otherwise permeable land, all of which entered into the increase calculation. Significantly, apart from Harvey, some of the most devastating recent flooding disasters have occurred inland at locations like Baton Rouge, Louisiana, Columbia, South Carolina, Eureka, Missouri, and Boulder, Colorado.[39] Again, local banks that are lending in and around flood zones may be well-served by helping educate and prepare against the risk to their communities.

Predictions of growing flood zones might be more manageable if it were not for uncertainties around our baseline conclusions as to where flood risk currently lies. A month after Harvey's landfall, the Department of Homeland Security released an audit that found approximately 60 percent of FEMA flood maps had not been assessed for updates in 5 years or more as required by statute.[40] Soon after, it was announced that FEMA was partnering with catastrophe modeling firm Applied Insurance Research (AIR) to better understand the NFIP's flood exposure.[41] Since then, the analytics firm Corelogic released a report comparing its proprietary flood maps to FEMA flood maps. That analysis revealed that 23 percent of US homes are at high to moderate risk of flooding but lie outside SFHAs and thus the flood insurance mandate.[42] Not surprisingly, these allegedly lower risk zones generate 66-80 percent of all flood losses and almost 20 percent of NFIP payouts.

The impact of creeping flood zone growth was brought home to industry in April 2016 when the chief economist at Freddie Mac published an article using a local Washington State flood exposure – Washaway Beach – to illustrate the nationwide threat of growing flood zones leading to depressed prices and potential housing bubble bursts.[43] He noted the challenge housing economists face in developing a time path to such inflection events and the various contingencies like the future of the NFIP program. The article did not consider flood insurance's role as a brake to slow the event arrival, but, as entire flood zones expand, and we become more and more capable of estimating the risk of flood in low or medium hazard areas, flood insurance serves as a critical part of managing the mortgage industry's constantly expanding risk of flood loss.

The issue, then, is making the time to re-approach a problem that has not been adequately solved and is positioned to grow worse. As we discussed above, the mortgage industry is already severely burdened with the SHFA insurance mandate. When an industry is that busy, it is hard to look beyond the task at hand, much less decades into the future. Still, industry knows that the SFHA mandate is imperfect, that there are unprotected mortgages with security properties lying just feet over the SFHA line, and that there will be many more in the future. Even now, there is a gross mismatch between flood insurance uptake and where the losses occur. About 50 percent of homes in the SFHAs carry flood insurance, a low number when one considers that these high risk homes face a flood at least

once every thirty years. However, when one crosses the SHFA line into the X (moderate risk) zones, the lack of flood insurance penetration is shocking, with participation rates often in the single digits.[44] Yet that's where the losses are:

> It is estimated that between 66% and 80% of flood losses occur outside of SHFA's, and the [NFIP] notes that almost 20% of its payouts are to properties outside of the SFHAs.[45]

This mismatch is perhaps one of the better illustrations that the current SHFA demarcation lines are unreliable and that the existing mismatch can be anticipated to grow worse with time.

The State of Play and Recommendations for Action

Given the threat, government has not stood still while Congress wrestles with a long term NFIP reauthorization. As noted above, in 2017 FEMA engaged a leading consultant to help refine its maps. This year, Congress set aside $262.5 million to fund the mapping work and $249 million for flood resilience grants to state and local governments.[46] Also, this year, the NFIP took steps to expand the role of private flood insurance by increasing its risk-sharing with the private reinsurance market and by removing a restriction that had prevented companies that distribute NFIP flood policies from selling their own private polices.[47] Those steps helped further the NFIP's "moonshot" goal of doubling flood insurance uptake by partnering with the private market.[48]

If FEMA is to achieve its goal, it will need other partners. Undoubtedly, given the pernicious risk of flood plain growth, the mortgage industry can find an ultimately self-protective role by ensuring consumers are aware of the actual flood risks and the availability of flood insurance on non-SFHA homes, which should help to increase flood insurance acceptance from the current, abysmal one percent. Commentators often claim that realtors and industry will not mention flood insurance unless required by the SFHA mandate for fear of losing a sale, but that begs the question: will the cost of flood insurance outside the SFHAs really be a home sale and mortgage deal-breaker?

We believe the answer, generally, to be "no." Once outside the SFHAs, flood insurance is surprisingly inexpensive and can be scaled to a homebuyer's budget. On the next page, is the current rate table for the NFIP's Preferred Risk Policy (PRP), which can be obtained on low to medium risk homes and begins building and contents coverage at $20,000 for an annual premium of $127, and tops out at a $386 annual premium for $250,000 in coverage. Inclusive of federal fees and assessments, the PRP product has an average total cost of less than $500.

Preferred Risk Policy Premium Table: Residential

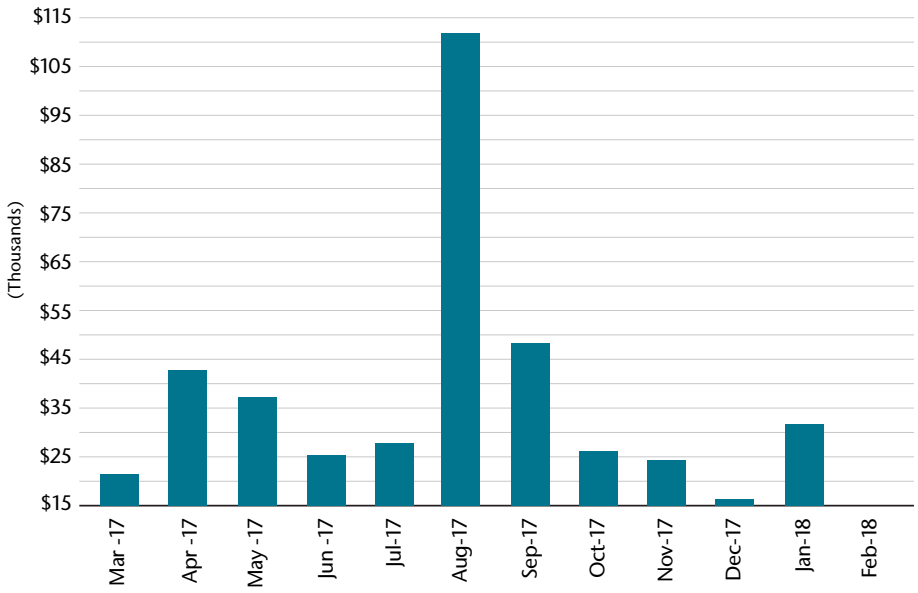
(Effective April 1, 2017)

Building & Contents			Contents Only		
Coverage	Annual Premium		Coverage	Annual Premium	
	With Basement or Enclosure	Without Basement or Enclosure		Contents Above Ground Level *(More Than One Floor)*	All Other Locations *(Basement-Only not eligible)*
$20,000/8,000	$127	$100	$8,000	$20	$40
30,000/12,000	$160	$133	12,000	$37	$66
50,000/20,000	$214	$187	20,000	$70	$104
75,000/30,000	$258	$226	30,000	$85	$125
100,000/40,000	$286	$255	40,000	$98	$143
125,000/50,000	$302	$270	50,000	$111	$161
150,000/60,000	$321	$290	60,000	$124	$179
200,000/80,000	$358	$321	80,000	$149	$200
250,000/100,000	$386	$344	100,000	$175	$222

A year of FEMA loss statistics, set forth below, shows that at the peak of last hurricane season, August 2017, the average flood loss was just over $110,000 – a number quite capable of tipping a mortgagor into default, but one avoided by an annual PRP premium of $302. Flood losses outside hurricane season did not exceed $45,000 – still a potential default scenario and one avoided by an annual PRP premium of $214. Contents-only coverage is much less expensive.

Average Claim Payments by Date of Loss

(As of February 28, 2018)



As noted above, through the CRS, FEMA has also constructed a system within which a community bank can find a participative role and help lower flood insurance rates for mortgagors and other community members that live in high to medium flood zones. The CRS grants premium credits of up to 45 percent on SFHA policies and up to 10 percent on non-SFHA/non-PRP policies. Flood awareness and insurance promotion credits are small when compared to physical steps such as relocating flood prone homes out of floodplains, but awareness and promotion credits can add up if executed thoughtfully and effectively. To that end, the CRS makes a series of templates available for creating outreach and distribution plans which, if the FEMA "moonshot" is to be taken seriously, may need to see further development including a potential increase in insurance promotion crediting.[49]

Lastly, it is important to note the growing role of private flood insurance as a driver of increased flood insurance acceptance, as well as cost improvements. With continued improvement in private mapping technologies, private flood insurance companies have become much more adept at underwriting flood insurance and more willing to do so. The flood insurance market is opening up to greater competition, improving technologies, and expected further price refinements and improvements. Within the SFHAs, the mortgage industry is becoming more and more accustomed to the entry of private flood carriers, although sticking points remain with some banks around the adequacy and portability of coverage, which it is hoped a long term NFIP reauthorization will resolve. Tension can be expected between what has been essentially a government monopoly and new private entrants, but it can also be expected that we will see a resolution towards greater options and price choices for consumers and better public-private partnering inside and outside the SFHAs. In the meanwhile, mortgage lenders (especially local ones) would appear to be well-served to keep an eye toward the future and stay ahead of creeping sea level rise and brimming rain gauges, no matter what this hurricane season brings.

Endnotes:

1. Heather Timmons, Why 85% of Houston Homeowners Have No Flood Insurance, Quartz (Aug. 29 2017), https://qz.com/1063985/hurricane-harvey-why-85-of-homeowners-in-houston-dont-have-federal-flood-insurance/; TribCast: Hell and High Water, Texas Tribune (Mar. 9, 2016).
2. National Flood Insurance Act of 1968, as amended, and Flood Disaster Protection Act of 1973, as amended, 42 U.S.C. § 4001 et seq.
3. Id. at § 4012a(f)(5). Subject to regulatory inflation adjustments, the statute previously limited civil penalties to $350 per violation, and $100,000 in the aggregate, against any single regulated lending institution or enterprise during any calendar year.
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Photo - inland flooding at Ellicott City, Maryland on May 27, 2018

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