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Office of the Director
400 7th Street SW, 10th Floor
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Re: Climate and Natural Disaster Risk Management Request for Input

By electronic submission to <https://www.fhfa.gov/AboutUs/Contact/Pages/Request-for-Information-Form.aspx>

Dear Director Calabria:

Thank you for the opportunity to offer both spoken and written remarks on the important topic of climate change, housing risk, and the role of the Federal Housing Finance Agency (FHFA) and the housing government-sponsored enterprises (GSEs).

The Urban Institute is a non-profit, non-partisan research organization with interest in the development of sound policies that ensure stable housing markets with equitable adaptation responses to climate change's effects. Our comments summarize our response to the two categories of questions noted in your Request for Input (RFI), and we also provide more contextual information.

We commend FHFA for embarking on this nationally critical assessment methodically and conscientiously. FHFA is uniquely positioned to drive a responsible, long-term and holistic approach for ensuring that all residents live in safe, decent, and affordable housing. In collaboration with the US Department of Housing and Urban Development, the multiple agencies within the Federal Emergency Management Administration, the White House Office of Domestic Climate Policy and the Council on Environmental Quality among others, we encourage FHFA to ensure that mortgage markets account for both the housing market risks from the effects of global climate change and ensure that current and future low- and moderate-income households can access housing. We are prepared to assist FHFA in this endeavor.¹

¹ The views we express are our own and do not necessarily reflect those of the Institute or its Trustees.

Summary Responses to RFI Areas of Inquiry

While uncertainties around the quantified magnitude of the hazards posed by climate change abound, there are some things of which we can be sure. First, the hazards already occurring and recent experiences shed light on what is yet to come. Second, the exposure to these hazards is systemic, involving numerous stakeholders in the private industries and public- and quasi-public institutions involved in housing transactions beyond and often unbeknownst to the individual homebuyer and mortgage borrower. Third, absent concerted and coordinated effort, vulnerable populations—particularly, households of color and low-income homeowners—will bear the brunt of climate change-related hazards, like prior disasters and the current COVID crisis. They are currently the most exposed physically and the least prepared financially.

The identification and assessment of climate and natural hazard risks for the enterprises

Ensuring that new borrowers avoid purchasing homes in harm's way—and assisting current borrowers who may already be in it—requires, obviously, understanding the nature and magnitude of the harm. Risk is a function of:

- **hazard**—an environmental phenomenon's potential severity, frequency, and environmental medium (e.g., air, soil, water),
- **exposure**—the nature of the housing location in relation to the hazard and its physical construction's capacity in relation to the hazard strength and medium,
- **vulnerability**—the social and economic conditions of occupants and owners and communities in which they reside, including factors like household savings and income, presence of property hazard insurance, the state of public works and infrastructure such as stormwater systems, and persistence of racism in appraisals, assessments, and sales transactions that undervalue units based on characteristics beyond hazard and exposure.

Our analyses demonstrate that all components of risk are real, but that exposure and vulnerability are more immediately measurable with existing data. The individuals and communities that are financially struggling pre-hazard are hit hardest by hazards regardless of the hazard type, severity, or periodicity. More to the point of FHFA's jurisdiction, many low- and moderate-income mortgage borrowers stand in all these harms' way as much as the GSEs and the Federal Government foresee dark fiduciary clouds from climate change effects.

Consequently, we present the following recommendations:

- FHFA should include all environmental hazards (including both the acute and chronic ones posed by climate change's effects as well as non-climate hazards) in its review of possible hazard exposures to properties secured with GSE-securitized loans.
- FHFA should also seek a robust set of data to measure properties' exposures and borrowers' vulnerability to these hazards as equal factors for FHFA's risk definition and as important considerations for subsequent decisions about GSE rules.
- Because these hazards will change over time, FHFA should review dynamic models that account for the state of physical hazards for properties in any given year over a loan's term. This will allow for better timing and staging of rules for addressing current and future loans so as not to pose an abrupt shock to housing markets or borrowers—particularly the current borrowers who were often unaware of hazard profiles at the point of underwriting.

The enhancement of FHFA's supervisory and regulatory framework regarding that risk

The robust and transparent accounting of current property and loan risks—including hazard, exposure, and vulnerability profiles—is a necessary exercise. How that assessment is interpreted and shapes FHFA policies towards the GSEs' current and future tranches is a different one. The GSEs play an important role in providing access to a wider pool of homeowners than would otherwise exist; consequently, they are important stakeholders in each property transaction and in each property's security.

However, the GSEs are not the only stakeholder. They should not assume the full risk nor bear all the financial costs of mitigating that risk, particularly when such action portends limiting access to other potential borrowers or jeopardizes the wellbeing of current ones. Their risk should also not be transferred to other entities such as the FHA or NFIP only to displace the burden to other parts of the federal government. The FHFA should also exercise extreme caution when issuing loan level pricing adjustments, as these will have dramatic effects on local housing markets which in turn will impair local economies and tax revenues. To this end, while considering FHFA's statutory roles, we provide the following suggestions:

- Consider developing different approaches to existing borrowers and their homes' risk than those you would employ for future borrowers, mortgage tranches and portfolios—though ideally based on the same principles of duty to serve, fiduciary responsibility, and risk distribution.
- For existing borrowers:
 - Consider promoting forbearance and relief standards with consistent triggers for the GSEs based on disaster severity or extreme chronic exposure and borrower financial capacity, but ensuring that forbearance costs are streamlined so that they do not reduce access for future low- and moderate-income borrowers,
 - Expand duty to serve areas for refinance and equity lending that promote home hazard mitigation projects,
 - Partner with insurers for reduced premiums, such as the Fortified Home Program, to reduce physical and financial risk as possible,
 - Partner with FEMA, HUD, and state and local governments to plan and resource community-level decision making on adaptation options (including possible buyouts and relocation);
- For future borrowers:
 - Expand duty to serve area definitions for new loans to focus on regions with less immediate and severe exposures to climate change risks,
 - Expand the use of the Federal Home Loan Banks' Affordable Housing Program to encourage the construction, purchase or rehabilitation of housing in less exposed places,
 - Require that Fannie Mae's and Freddie Mac's affordable housing goals focus on purchasing low-income and very low-income single-family and multifamily mortgages in the less-exposed regions. The pool of these loans must increase dramatically to provide for both natural population growth as well as incentivize settlement and ownership away from exposed places.

- For the entire portfolio:
 - Partner with other stakeholders that have contributed to current and future exposure by expanding study and programming for the range of potential intervention points with borrowers and lenders,
 - Support accurate exposure data to aid informed risk analysis, along the lines of FEMA's Risk Rating 2.0 but for all climate related risks (transparently, as per above);
 - Monitor local property risk disclosure rules and their effectiveness. Other Urban research suggests that disclosures need to be better communicated as disclosure requirements for sellers and their agents are expanded;
 - Explore the role of financial counseling requirements that include hazard risk awareness along with other educational campaign;
 - Uncover potentially fraudulent home sales and mortgage loan practices that consciously do not disclose known risks or spread false information about them;
 - Document and weigh in on local land use and development practices that encouraged building in risky areas where exposure is known to be significant.

As discussed in more detail below, there are also some things that the GSEs should avoid, including acting in a vacuum and relying on loan level price adjustments as the primary risk mitigant.

Additional Background

Below, we provide further context and considerations as FHFA tackles these critical questions. Our observations fall into four categories:

- due consideration of the range of hazards, both acute and chronic, to which the nation's housing stock is and will be exposed dynamically;
- inequity in current housing exposures to climate change and in access to hazard mitigation resources because of current social and economic vulnerabilities. More to the point, we are concerned about the danger of exacerbating inequity through a sole focus on the financial risk to the GSEs;
- the need for data and its transparency to remove information asymmetries regarding risk, exposure, and vulnerability and to ensure informed decision making by all stakeholders while protecting the common welfare;
- the range of public entities (federal, GSE, state, and local) and private housing service providers (sales agents and brokers, title agents, lenders, builders, and appraisers) who have played a role in the housing inventory's current conditions and must be involved in integrated solutions to distribute risks and address future conditions.

The range of hazards to be assessed

In the case of climate change's effects, hazard estimates require nuanced consideration. The effect of global warming on the severity and frequency of acute events (such as hurricanes) are

increasingly understood, as are some of the chronic environmental and geographic changes (e.g., flooding, heatwave, drought, etc.). The exact magnitude of these effects on specific properties are highly dependent on current policy and market forces as much if not more than on progress in climate science.

Disasters lead to broad, substantial, negative impacts on households' financial health, and these negative effects persist, even grow, over time. An important nuance to this point, further, is that much of the work on the financial exposures and vulnerabilities after hazard events has focused solely on the most severe acute disasters such as Hurricanes Katrina, Sandy, Harvey, and Maria. Despite the obvious evidence, public assistance before and after hazard events and the GSEs', FHA's, and private lenders' forbearance policies are still inconsistent for many households across these hazard types. In these specific hazard events, there has often been discretionary forbearance and borrower relief from the GSEs and FHA as well as direct federal assistance from FEMA for short-term aid and from the SBA and HUD for long-term housing recovery.

We have seen a different pattern emerge from “medium-sized” disasters, where delinquency rates do not rise as quickly or severely as after the more severe disasters, but foreclosure rates rise by the third or fourth year. For example, we found that credit scores in these medium disasters decreased by almost 22 points by the fourth year compared to a 10-point decrease from Sandy at the same point in time. For consumers with poor credit before the disaster, these effects were magnified: they experienced almost 29-point decreases by the fourth year after these medium disasters.

The individuals and communities that are financially struggling pre-disaster are also often hit hardest and for more extended periods. Climate science predicts with significant certainty that acute events are likely to increase in frequency and severity, but also that the chronic and slow-onset environmental effects such as heat and drought that fall outside traditional disaster management capacity do not receive the same forbearance, relief, and direct aid. Their aggregate effects will, with all probability, be just as harsh.

The potential to exacerbate inequity

Existing inequities expose certain vulnerable households to great risk, and the wrong policy decisions today will exacerbate that exposure—and likely that vulnerability—in the future. Exposure and vulnerability, in contrast to hazard, are more immediately measurable but require more analysis on FHFA's part than what is revealed in the current studies that focus on the hazard only.

For example, many of the same regions that are already experiencing direct climate effects—the Gulf Coast, coastal Atlantic, Arctic Alaska, and rural Southwest—also are those with highest shares of households with subprime or no credit scores (some as high as 75% of communities). Consequently, there are clear disparities by race and wealth when it comes to addressing the immediate life-altering changes to health, livelihood, and property brought on by hazards. Early Urban Institute analysis of home improvement permits in the city of New Orleans indicates that major renovations after Hurricane Katrina were largely by homeowners living in lower-income Black neighborhoods.

Upswings in mortgage delinquency and foreclosure rates are two indicators of the spillovers from hazard events, as demonstrated in past Urban work. Mortgage performance

reflects both labor market and house price conditions. Separate Urban Institute analysis indicates that the jump in mortgage delinquency due to Hurricane Katrina largely paralleled soaring unemployment rates with Black workers experiencing disproportionately worse employment outcomes than white workers.

But at the same time, like the current COVID recession, house price appreciation in the New Orleans MSA continued following Hurricane Katrina, even accelerating, before collapsing amid the housing bust. However, at least in the case of Hurricane Katrina, the vast majority of mortgages 90 or more days delinquent returned to current while a small proportion of mortgages existing prior to the hurricane ultimately went into foreclosure. In fact, the 90-plus day delinquency rate appears to have fallen as quickly as it rose and in parallel with the recovery of unemployment.

Home equity represents the primary source of wealth for most households in the US. It represents an even greater share of wealth of Black and Latinx homeowners' wealth. In the face of large and growing wealth disparities between white and non-white households, protecting the housing wealth of non-white households is imperative. Areas where homes are at risk from climate change, particularly from flooding and temperature/weather changes are often lower-income and higher-minority areas. These may be flood-prone areas, and/or may be characterized by older housing stock that has been underinvested due to decades of redlining, steering, environmental degradation, and disinvestment. In the 1930's the HOLC maps were used to classify neighborhoods' "riskiness" and introduced the practice where "redlined" neighborhoods were denied mortgage credit. Though race-based redlining has long been illegal, the legacy of those designations is still felt today.

While we do not want to put households anywhere in danger, there are effective and at-hand solutions to upfit properties in many of these areas without doing so. Demonstrated methods exist to protect against flood risk and make homes more resilient to weather conditions at lower energy costs. That takes resources, resources that many less affluent households and communities lack access to. Our research and that of others finds that homeownership does not return the degree of financial benefits and wealth-building for Black households that it does for white households.

First, the typical Black homeowner has accumulated less housing equity than their white counterparts. And further, Black homeowners face a higher user cost of homeownership. In addition to house prices and mortgage debt, the user cost of homeownership considers such items such as property taxes, maintenance costs, insurance costs, as well as the benefit of the mortgage interest deduction. The higher user cost faced by Black homeowners, measured relative to home values, indicates that they experience a smaller benefit from owning relative to renting, thus leaving fewer resources to invest in retrofitting the home, therefore making it more vulnerable to climate change, and therefore further dampening its value.

When climate incidents do strike, the more vulnerable households are likely to be disproportionately impacted. Analysis of the relative impact of the Great Recession on Black households indicates that not only were they hit harder by the recession, but it also took longer for these households to recover, with some Black households not fully recovered by the time the COVID recession hit.

As industry capacity to evaluate property level climate risk improves, and as market awareness of climate risk increases, there is also risk of value decline in climate-exposed areas due to market forces. Value declines on existing mortgages is also a type of vulnerability the housing enterprises need to consider. These forces could be exacerbated by housing enterprise actions that discourage or make cost-prohibitive the financing of new mortgages on at-risk properties. The inevitable result would be harm to lower income, black and brown communities, both through inability to afford mortgages and through reduced value to existing homes. Such responses risk recreating a new form of redlining that embeds prior racist policies and practices. Nor will pricing new loans alone address risk in the current portfolio, including risk to servicers.

However, to the extent pricing is used as a tool, it's critical to think about the extent to which the costs are socialized in pricing through pooling, and which are not, through LLPAs or third-party insurers. These considerations should be made to minimize economic disruption to lower wealth households. The decisions to apply loan-level LLPAs might be used with discretion to drive behavior through incentives/disincentives, but not as a primary source of risk reserves.

The need for accurate and transparent data

For such a coordinated response to be effective, all stakeholders need to understand the risk of the current portfolio over the life of the mortgages and, to the maximum extent possible, how to think about/measure risk of future portfolios. As tools are being developed both by the FHFA and the GSEs and by private industry, transparency is essential. For example, it important that not only the GSEs and their regulator but also those working with them and the public understand as much as possible about what risks different areas face, who lives there, what their resources are and—especially as questions of relocation or compensation arise—what the best options for their long-term health and safety are.

In a recent analysis (forthcoming) of Louisiana where we overlay demographic factors on flood risk, we find that within New Orleans, the greater the share of high-risk zones, the greater the share of Black residents and the lower the income levels. Notably, we do not find this pattern in other parts of the state, confirming that who and what type of asset is at risk very much varies from place to place. Responses should be tailored to the needs, risks and equity implications for each community to help answer such questions as: when should we allocate more support to make minimal-risk areas more attractive so that households have stronger incentive to migrate out of high-risk areas? And when should we maintain homeownership in high-risk areas?

For the best coordination and outcomes, it is important that the most granular possible data be made publicly available. As has been discussed above, if public policy and private actors do not deal effectively with climate risk, the costs of that risk will be socialized, that is, taxpayers will ultimately have to pick up the tab through a bailout of the housing finance system, FEMA and/or COVID-like responses.

It is reasonable, therefore, to expect that the data to help develop effective risk mitigation strategies should also be socialized, i.e., made publicly available. This holds especially true with respect to data that can help consumers and communities understand, prevent, plan for, mitigate and adapt to risk. These data need to be made available in a way that consumers and communities will actually get when they need it, in a form that they can understand, and that they can use both directly and as they engage in discussion and policy-making with other stakeholders.

The broader context of stakeholders and the need for integrated solutions

It has become abundantly clear that climate risk is currently underpriced, and that the housing enterprises are financially exposed because of that omission. Attempts to price for the risks through insurance (e.g. flood and earthquake) have historically resulted in low take up or workarounds, etc. There is a need to evaluate and develop new ways that the GSEs can lay off their risk, to whom and at what price. Vehicles such as CRTs, Mortgage Insurers, and other potential risk structures are no doubt already being explored.

But putting all climate risk on the backs of GSE borrowers cannot be the solution to ensuring GSE solvency, and moreover the housing enterprises cannot effectively act in a vacuum. To the extent that the GSEs up-price but FHA, VA, USDA and FDIC-insured institutions do not, much of the risk will simply migrate to those parts of the government, and even risk taken on by seemingly fully private players can fall on taxpayers, as happened during the subprime crisis.

In fact, the problems and solutions are much bigger even than the broader housing finance system; they involve other parts of the federal government (e.g., infrastructure, EPA, FEMA), state and local governments, the insurance industry, and more, including parallel considerations about reducing housing's contribution to the global carbon problem. As the Administration and Congress move forward on major infrastructure actions, FHFA should be at the table to encourage infrastructure investments that implicate housing to be climate-sensitive and equitable, and to work with other stakeholders so that the housing finance system can support those investments.

Together, the stakeholders need to collectively consider the costs of not addressing climate change's effects, and not developing responses that consider the range of adaptation needs for each borrower. Here, the housing enterprises can lead a holistic response and be a critical enabler of good policy through its available toolkit, which includes standard-setting, incentives, enabling market adoption of new products, and duty to serve provisions. In this way, they can help to get the right loans in the right places for all people.

Ultimately, we must recognize that doing this right will require resources beyond those in the housing finance system, not only for community-based mitigation and adaptation, but also to help individual homeowners mitigate, and to enable those who are in places that inevitably cannot be sustained to relocate without loss of equity, to support climate-resilient owned and rented affordable housing.

Conclusion

As regulator for the federal housing enterprises – who are seriously exposed – it is reasonable and necessary for FHFA to take a leadership role in this conversation. Some tools at their disposal include pricing, risk transfer, and adjusting property, lending and servicing requirements. But shoring up GSE risk management unilaterally will be insufficient and will have adverse consequences, particularly for homeowners and communities of color. GSE's also can build products and incentives to encourage risk mitigation and resilience at the household and community levels, including through duty to serve, and take a lead role bringing data transparency. They will also need to and will benefit from bringing along all the other stakeholders. Throughout, climate risk, equity, duty to serve, and affordability needs to be considered collectively, not as separate concerns.

Though we are on a timeline, we must all acknowledge that the changes we see happening already are gradual and that, for the sake of current and future low-income borrowers' lives, must be addressed sensitively. Simply refusing GSE-backed mortgages to low-income households in climate-risk-prone areas does not accomplish that and, in fact, contributes to social inequities that will ultimately harm the environment and climate more. Our national environmental policy is finally awakening to environmental injustice, and considerations for the well-being of our most vulnerable citizens should be paramount.

We can't let climate change become the justification for modern-day redlining.