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June 3, 2022

Martin J. Gruenberg
Acting Chairman
Federal Deposit Insurance Corporation
550 17th Street, NW
Washington, D.C. 20429

Acting Chairman Gruenberg,

Thank you for the opportunity to respond to the Federal Deposit Insurance Corporation's (FDIC) April 4, 2022, Request for Comment on its draft principles for managing exposures to climate-related financial risks. We commend the FDIC for taking proactive steps to assess climate-related financial risks, and for engaging with finance industry participants (through mechanisms such as this request) as you consider plans for future action.

At CoreLogic, property data - spanning single family residential, multifamily residential, and commercial - is our DNA. We provide real estate professionals, financial institutions, insurance carriers, government agencies, and other housing market participants with reliable, property-level data, analytics, and platforms that deliver the most qualified, comprehensive information available. We couple this with the country's most extensive network of field researchers, analysts, and data scientists to curate, connect, and uniquely enrich this property data with further insightful intelligence, particularly climate-related financial risks. CoreLogic is connected at almost every step of both the insurance and mortgage production process and has the insights necessary to help the FDIC and other federal agencies implement and evaluate a strategy to tackle financial risks stemming from climate change.

Our wealth of property data, analytical capabilities, and connectivity throughout the financial ecosystem places CoreLogic in the best position to holistically evaluate the physical risks of climate change and the potential impacts to financial institutions, markets, and systemic risk.

The following pages will provide you with best practices that we suggest FDIC consider in its regulatory framework when guiding institutions on reliably assessing the physical risk of damages to property and infrastructure. Importantly, our comment will also suggest mechanisms for how institutions can forecast varying climate change scenarios and their projected severities, including how these scenarios may alter property-level, physical risk profiles in the years and decades to come.

Thus, we believe the FDIC and the financial industry at large will benefit greatly from an approach that utilizes a currently available, market-tested business intelligence platform, which combines the best of commercially available, open source, public, and other government proprietary data, analytics, and models, enabling them to answer any number of pressing policy questions, including which communities are most vulnerable to the effects of climate change.

Our team of scientists, economists, and public policy experts would welcome the opportunity to brief the FDIC staff on the information contained in this response. We look forward to continued conversations with your office as we all work collaboratively to protect our financial system from climate-related risks.

Sincerely,

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NOTES ON RESPONSE OUTLINE

In our response, we address each of the six general principles that FDIC has identified as integral to their eventual rulemaking:

A. Governance
B. Policies, Procedures, and Limits
C. Strategic Planning
D. Risk Management
E. Data, Risk Measurement, and Reporting
F. Scenario Analysis

However, in outlining the necessary steps that need to be taken by the FDIC – and other federal regulators – we have addressed the FDIC's specific questions in our own order, organizing our responses to better reflect our prioritization of these actions.

As such, we first dive into the specific data & analytical capabilities that are necessary to measure and report climate-related financial risks. This leads directly into our discussion of scenario analyses and risk management practices. Once the data & analytical capabilities have been identified and addressed, we then begin to discuss proper ways to oversee this accumulation and assessment of data (governance), as well as suggestions for certain policies and procedures that can minimize the burden to financial institutions' strategic planning processes.

E. Data, Disclosures, and Reporting

Question 11: What, if any, specific climate-related data, metrics, tools and models from borrowers and other counterparties do financial institutions need to identify, measure, monitor, and control their own climate-related financial risks? How do financial institutions currently obtain this information? What gaps and other concerns are there with respect to these data, metrics, tools or models?

Climate change introduces two facets of risk to an institution:

1. Physical risk to their assets due to climate shifts such as rising sea levels and changing weather patterns and volatility.
2. Transition risk causing a loss of value of the investments in sectors (such as Oil, Gas and Coal) in which they are invested.

At CoreLogic, our focus on the first of these two prongs – physical risk – has led us to develop a unique understanding of the specific data sets and analytical capabilities that will be required by the financial sector to both measure and assess overall climate-related financial risk.

The first step is to establish a baseline of the current risk profiles for all physical structures across the United States.

Establishing a Baseline of Physical Risk

Climate risks are high-gradient perils that can change over short distances, making them wide-reaching yet still acutely felt.

To understand these disparities, current and future risk data on numerous natural hazards – such as flood, wind, wildfire, and more – is needed for each individual structure. This is key: despite the fact that many areas in the U.S. are exposed to multiple natural hazards, the industry has historically reviewed these hazards individually. Although insightful, this does not provide an accurate risk measurement for structures that are impacted by multiple hazards. Instead, we need structure-specific, integrated hazard risk scores. The goal of an integrated hazard risk score is to represent the total hazard risk for any location across the U.S.

Because many property-and-casualty insurance companies and enterprise risk managers are already looking for a single score to reflect the combined risk of all natural hazards that affect their portfolio, CoreLogic created such a model that combines our existing natural hazard datasets into a comprehensive single hazard score. In our experience, these such models should incorporate, at a minimum, the following hazard risks:

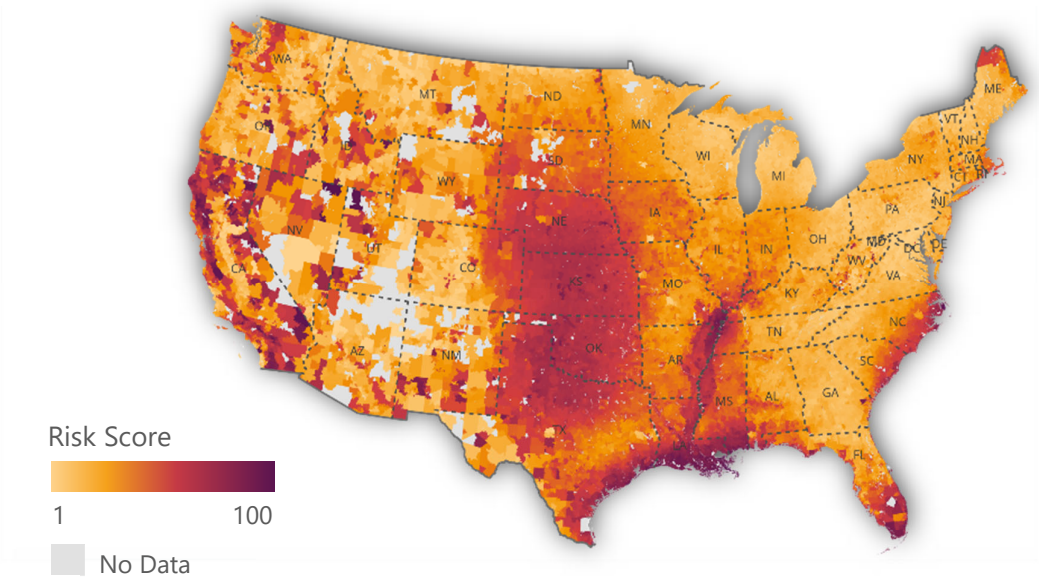
- Earthquake
- Wildfire
- Inland Flood
- Severe Convective Storm
- Winter Storm
- Hurricane/Tropical Storm Surge
- Hurricane/Tropical Storm Wind

To create these scores, we utilized risk modeling to combine the severity and frequency of damage into a composite risk score, which represents the sum of the Annual Adjusted Loss (AAL) for the seven individual hazards mentioned above for approximately 105 million residential structures across the U.S. The value of this composite AAL, relative to the calculated Reconstruction Cost Value (RCV), is used to rank all structures with a 1-100 score, where the higher scores equate to higher risks. When combined with our innovative

Hazard-Effected Loan Performance (HELP) models, which correlate the property's composite natural hazard risk score to a probability of mortgage loan delinquency, default, and economic loss severity, these climate-related financial risk analytics can be used not only in property and casualty insurance markets, but also in the housing finance ecosystem (primary and secondary), by investors in residential mortgage-backed securities (RMBS), asset-backed securities (ABS), and credit risk transfers/other financial risk derivatives, and by financial services prudential regulators for supervisory stress testing and oversight, as well as by publicly traded companies preparing materiality disclosures in Securities and Exchange Commission (SEC) and CFTC filings. The AAL for the seven individual perils mentioned above and the composite AAL is calculated using our high definition Catastrophe Risk Models conditioned with today's climate.

Additionally, these composite scores can be represented in a composite risk map to identify the areas with the highest risk homes. The map below illustrates risk levels across the country, showing that the highest risk homes are in California (dominated by earthquake and wildfire); Texas, Oklahoma, Kansas, Nebraska (dominated by tornado/hail); along the Mississippi River (dominated by river flooding and earthquake risk); and large Gulf and Atlantic coastal stretches (dominated by hurricane winds and storm surge/riverine flooding).

CoreLogic 2020 Climate Change Catastrophe Report[i]



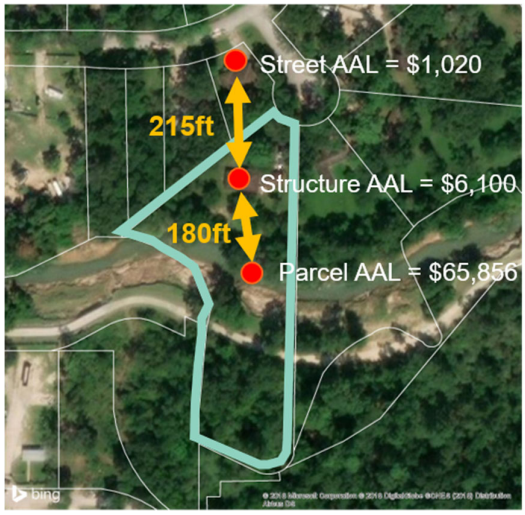
Catastrophe modeling and property risk analysis are paramount to accurately predicting, down to a parcel and structure(s) level, the damages that could occur. Institutions can model large-scale financial needs (for example, ensuring adequate capital reserves) using composite risk scores for a certain portfolio or area to understand their AAL. The insurance industry has already begun to adapt to climate change evolving in the way they protect homeownership and property, offering new insurance options and transformational experiences that better suit today's reality of risk and policyholder expectations.

With composite risk scores available across the United States, the second step is to get as granular as possible with those assessments.

Achieving Granularity

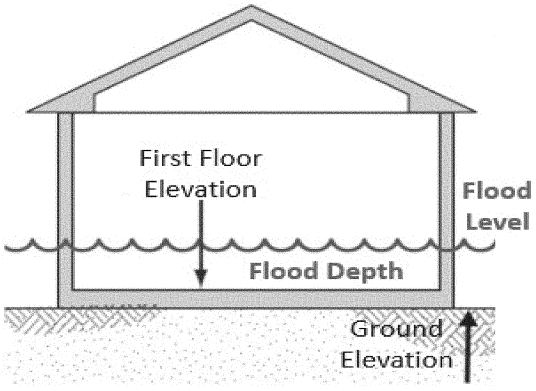
There appears to be a perception within federal government that physical risk from climate change is already well understood. We respectfully suggest that various agencies look deeper into the data and analytics – at least with respect to reliable property-level physical risk assessments.

To reliably assess physical risk, one must be able to both identify the property itself and identify the specific structure(s) on that property that require separate assessments. This identification requires geospatial/location data that can reliably assess the geographical boundaries of a property and its structure(s), along with rich data describing the attributes of the property's parcel/land and the structure itself. If the underlying location data is not accurate, assessments – such as AAL calculations – will not reflect the true risk to the structure, as exemplified below.



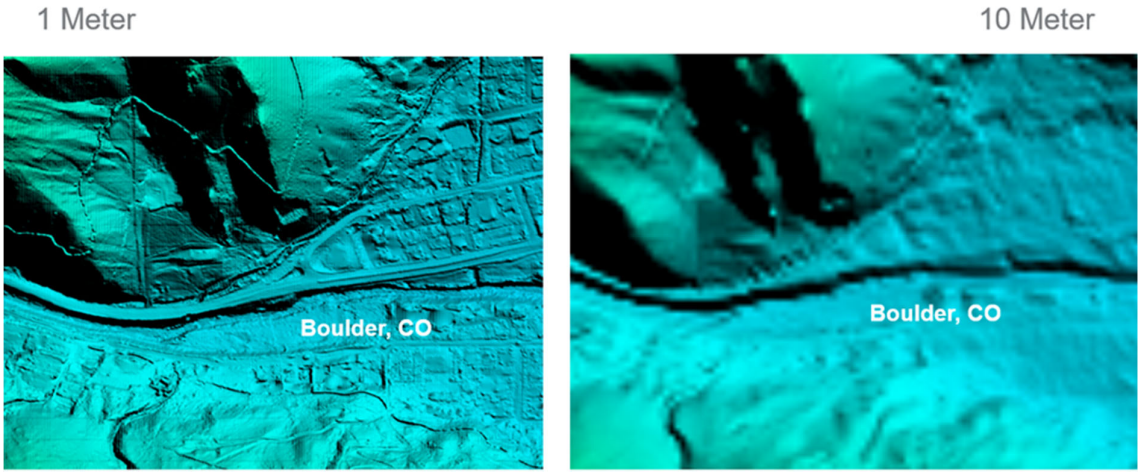
Source: CoreLogic

These reliable assessments involve the use of models that are based on underlying data inputs that reliably determine First Floor Height (FFH) Elevation (relative to sea level and ground level). They also require use of reliable technology innovations: most notably Light Detection and Ranging (LIDAR) technology, which employs an approach called Digital Elevation Monitoring (DEM) – the remote sensing technique used to identify the 3-D footprint of the structure(s), its ground elevation, and height above sea level – as well as the structure's first floor height relative to the ground elevation and sea level, including the number of feet/inches above ground or below ground relative to industry standard "safety" benchmarks.



Source: CoreLogic

The key to reliability is use of 1-meter resolution DEM, the level of granularity necessary to permit reliable assessment of FFH elevation and related footprint data in any municipality that has relatively large population centers, including exurbs, suburbs, and urban core. Using anything less – such as 10-meter or 30-meter resolution DEM – in densely populated areas will not provide reliably accurate assessments for individual households, as evidenced below.



Source: CoreLogic

Now that we've identified composite risk scores and achieved a structure-specific level of granularity, the next, forward-looking step is to project future risk levels based on expected impacts from climate change.

Question 12: How could existing regulatory reporting requirements be augmented to better capture financial institutions' exposure to climate-related financial risks?

CoreLogic has no additional comments regarding existing regulatory reporting requirements.

Our only recommendation is that, should FDIC choose to augment regulatory reporting requirements to capture financial institutions exposure to climate-related financial risks, the FDIC follow an approach that includes the following:

- Using market-tested, industry-leading climate-related financial risk models and related data that establish a baseline of the current risk profiles for all physical structures across the United States, which should include granular, integrated hazard risk scores that consider a wide number of potential perils, as well as average annual loss and reconstruction cost value estimates, which can be combined with property/flood insurance coverage and loan-level performance data to ascertain both collateral value and loan delinquency exposures.

- If applicable, projecting future risk levels based on expected impacts from climate change, through the use of industry leading tools that are market-tested in conjunction with data, technology, and internationally recognized climate scenarios for stress testing catastrophe models.

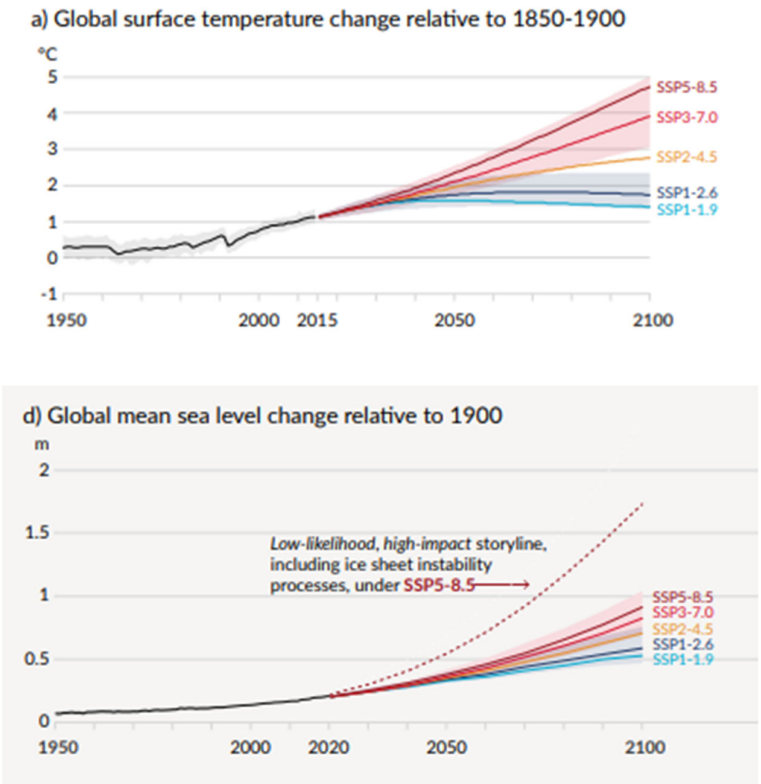
F. Scenario Analysis

Question 13: Scenario analysis is an important component of climate risk management that requires assumptions about plausible future states of the world. How do financial institutions use climate scenario models, analysis, or tools and what challenges do they face?

Climate Scenarios and Catastrophe Risk Models

The best way to measure climate-related financial risk is to use industry leading tools that are market-tested in conjunction with data, technology, and internationally recognized climate scenarios to stress test climate / catastrophe risk. CoreLogic recommends using catastrophic risk models informed by the Intergovernmental Panel on Climate Change (IPCC), the leading world body for assessing the latest science related to climate change, its impacts, and potential future risks.[ii] Composite risk scores that integrate IPCC climate scenarios with market tested natural hazard modeling will give both financial institutions and the FDIC a clearer understanding of the climate-related financial risks facing the industry.

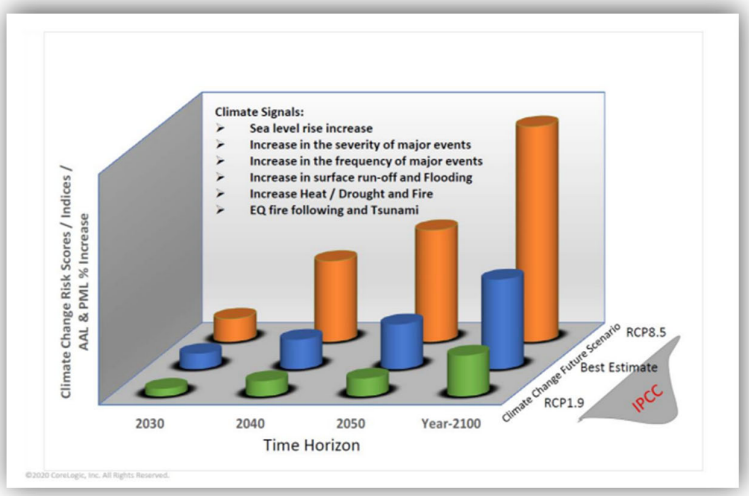
Over the past decade, the IPCC has worked to create Representative Concentration Pathways (RCPs) to model prospective climate futures based on varying projected level of greenhouse gas concentration in our atmosphere. These four pathways provide insight into potential rises in global temperature alongside a number of additional consequences, such as rise in sea level. The IPCC 6th Assessment Report (due 2022) will include five Shared Socioeconomic Pathway (SSPs) scenarios to model prospective climate futures based on varying projected levels of greenhouse gas concentration in our atmosphere.



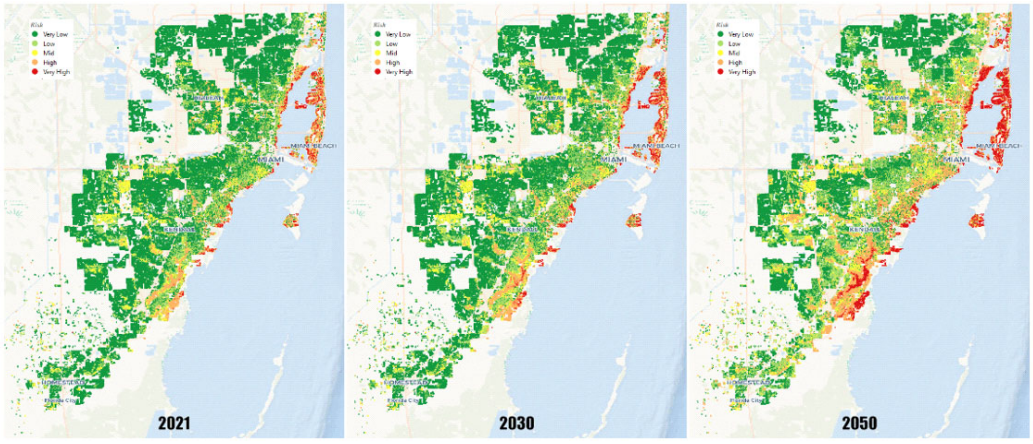
IPCC: Climate Change 2021: The Physical Science Basis, Summary for Policymakers[iii]

CoreLogic has taken these IPCC scenarios – which define the severity and frequency distributions of different future climate parameters (e.g. global temperature, sea surface temperature, sea level rise, precipitation, etc.) – and integrated them with our own suite of hazard risk data & high definition catastrophic probabilistic models to produce climate change risk metrics for each RCP scenario down to the individual property level, as exemplified by the case study below on Miami, Florida, where we calculated Average Annual Loss and Probable Maximum Loss estimates across the different IPCC climate change scenarios.

CoreLogic Average Annual Loss and Probable Maximum Loss Estimates across Different Climate Change Scenarios



Climate Change Multi-Peril Risk Index for Every Building in Miami under 2021, 2030, and 2050 Climate Conditions



This figure above shows the multi-peril risk index for every building in Miami under today's climate conditions (left-most figure), as well as the projected conditions in the years 2030 and 2050 (center and right-most figures, respectively). As we move from today's climate conditions to the future projections, more buildings move from green to yellow and from yellow to red as their risk profiles increase due to the effects of climate change.

As mentioned above, the IPCC expects to release an updated assessment report ('Assessment Report 6' or 'AR 6') in the first half of 2022. It is widely expected to be a significant update from the current assessment report (AR 5), which was produced in 2014. In preparation for this update, CoreLogic is readying its platform to incorporate the scenarios from AR 6 as soon as they are available.

Recommendation: In order to effectively measure the financial sector's exposures to climate-related financial risks, institutions and the FDIC will need access to granular, property-specific data and precise location analytics to understand exposure down at the individual structure level, which can then be aggregated to portfolio and geographic levels for more comprehensive and insightful analyses.

Recommendation: The FDIC will need to establish a baseline of current physical risks, which should be collectively represented by a structure-specific composite risk score.

Recommendation: To best measure climate-related financial risk, the FDIC will need to use market-tested industry-leading tools in conjunction with data, technology, and internationally recognized climate scenarios for stress testing catastrophe models, such as those used by the IPCC in their current (and future) assessment reports.

Question 14: What factors are most salient for the FDIC to consider when designing and executing scenario analysis exercises?

In an effort to prevent another system-wide failure as experienced in the financial crisis of 2008-2009, banking supervisors and governments around the world tightened regulatory standards – bringing stress testing to the forefront.[iv] In general, stress tests are aimed at providing an overall assessment of a company's current risk position, the key drivers of that risk, and the main sensitivities of its portfolio.[v]

As such, stress tests are a constant topic in discussions surrounding climate-related financial risks. Appearing before the Senate Banking Committee in mid-July of 2021, Federal Reserve Chair Jerome Powell said that the U.S. central bank is looking into using climate stress scenarios to make banks more aware of and resilient to ever-more-frequent severe weather events, specifically stating "My guess is that's a direction we'll go in".[vi] A couple of months later, in September 2021, a new study was published by the Federal Reserve Bank of New York that offered a model for potential future stress tests on big banks for their exposure to risks from climate change.[vii] [viii] Additionally, the Federal Housing Finance Agency (FHFA) included a question on stress testing in its January 2021 Request for Input on Climate and Natural Disaster Risk Management, asking if FHFA should "implement a stress testing, scenario analysis, or similar program to assess the regulated entities' climate and natural disaster risk?"[ix]

If the FDIC decides to follow this same path, it may be beneficial to institute region-specific climate stress tests that can be used by institutions across all geographic markets in the United States. Incorporating region-specificity into climate stress tests would be beneficial to both the regulator and those being regulated, as it would allow both to separately analyze portfolios that may face differing types and levels of climate risk, before combining those analyses to produce a nationwide assessment of risk. This level of granularity is necessary due to the varying impacts of climate change across distinct regions of the United States, which affect region-specific portfolios in distinct ways. Additionally, it would be beneficial for the FDIC to separately engage with private sector third parties to evaluate the entire market's economic loss potential for these scenarios. The comparison of these two sources of data would help the FDIC assess both the quality and completeness of industry exposures.

Recommendation: If the FDIC decides to implement climate stress tests for larger institutions, it should consider instituting region-specific tests to allow for separate analysis of portfolios that may face differing types and levels of climate risk.

Recommendation: If the FDIC decides to implement climate stress tests for larger institutions, it should engage private sector third parties to evaluate the entire market's economic loss potential for these scenarios.

D. Risk Management

Question 5: What specific tools or strategies have financial institutions used to successfully incorporate climate-related financial risks into their risk management frameworks?

Case Study: Current Mortgage Investor Practices

Banks, mortgage servicers, and capital markets investors are actually already assessing how climate change has altered the physical risk profile to properties servicing as collateral to their mortgage loans and Mortgage Servicing Rights (MSRs). Due to the current absence of new regulatory requirements, these entities are approaching climate-related financial risks in a manner aligned with their existing risk management practices.

However, even the more proactive banks are still in the early stages – they are looking to understand and quantify their climate risks, and CoreLogic is presently assisting them with the tools and techniques that we've described throughout this response.

The figure below provides an example of merely one way mortgage investors are utilizing our composite natural hazard scores and related data, analytics, models, and software tools. In this example, a large commercial bank has engaged ten "sub-servicers" who provide performing and non-performing mortgage servicing activities on the commercial bank's behalf. For the first time, the commercial bank wanted to evaluate how their sub-servicers were distributing natural hazard risk (i.e., current physical risk) across the portfolio of MSRs they were responsible for. As noted in Figure 14, six of the sub-servicers were deemed to have too heavy a concentration of natural hazard risk in the MSR book they are responsible for servicing, while three servicers had a moderate concentration risk profile, and only one that was deemed to have an adequate concentration risk profile. This insight was crucial to the commercial banks, who subsequently worked with their sub-servicers to rebalance their respective MSR books under their respective purviews so that each of them achieved a "green" (i.e., adequate concentration risk) rating.

Percentage of Loans in Servicer Portfolios by Composite Risk Score

Composite Risk Score	Servicer "A"	Servicer "B"	Servicer "C"	Servicer "D"	Servicer "E"	Servicer "F"	Servicer "G"	Servicer "H"	Servicer "I"	Servicer "J"	Grand Total
1-10	16.4%	14.2%	25.3%	29.8%	12.7%	11.6%	17.4%	8.1%	8.2%	11.3%	13.1%
11-20	30.5%	14.3%	18.5%	26.9%	16.8%	14.2%	6.1%	9.4%	11.6%	17.1%	16.9%
21-30	7.6%	15.5%	8.4%	10.0%	13.9%	13.9%	16.8%	20.0%	11.3%	11.1%	13.6%
31-40	10.4%	12.5%	7.2%	8.9%	12.9%	11.2%	8.2%	6.9%	10.4%	12.2%	12.5%
41-50	9.2%	14.1%	7.9%	7.0%	12.7%	11.1%	8.8%	15.0%	12.2%	11.2%	12.5%
51-60	7.6%	7.4%	6.3%	4.6%	8.1%	8.7%	6.7%	8.8%	10.4%	8.9%	8.1%
61-70	4.8%	5.1%	7.2%	4.5%	5.7%	6.7%	9.8%	8.1%	7.9%	6.8%	5.7%
71-80	6.2%	7.0%	5.6%	4.0%	7.3%	8.5%	10.4%	8.1%	12.7%	9.2%	7.4%
81-90	4.5%	6.4%	7.7%	3.2%	6.2%	9.1%	12.5%	8.8%	9.1%	7.7%	6.4%
91-100	2.9%	3.5%	5.8%	1.2%	3.6%	4.9%	3.4%	6.9%	6.5%	4.5%	3.7%
81-100	7.40%	9.95%	13.51%	4.35%	9.83%	14.01%	15.85%	15.63%	15.55%	12.22%	10.11%
total	4,168	5,337	7,192	3,178	**83,544**	3,083	3,328	2,160	3,003	6,171	121,164

By Servicer or Portfolio | By Peril

	Hurricane wind change from 50 yr to 100 year PML	**Coastal Surge** change from 50 yr to 100 year PML	**Wildfire** change from 50 yr to 100 year PML	**Severe Convective Storm** change from 50 to 100 year PML
min	0.012%	0.019%	0.008%	0.038%
max	20.707%	23.611%	24.38%	21.732%
average	1.850%	2.940%	3.313%	3.441%
median	1.432%	2.481%	2.905%	3.128%
	12,046 of the 121,164 locations have the 50-100 year PML difference greater than 10%	**20,116** of the 121,164 locations have a 50 to 100 year PML difference greater than 10%	**26,480** of the 121,164 locations have a 50 to 100 year PML difference greater than 10%	**27,326** of the 121,164 locations have a 50 to 100 year PML difference greater than 10%

By Servicer or Portfolio | By Peril

Moreover, once the commercial bank was able to establish the current physical risk baseline to the MSRs across their book of business, as well as across the sub-servicers servicing those MSRs, the commercial bank could apply future climate scenarios, using CoreLogic catastrophe modeling techniques, to assess how many of the properties serving as collateral to the mortgage loans in the MSR book of business are at risk of having Probable Maximum Loss (PML) exceeding 10% from the next 50 to 100 years as a result of future climate change scenarios.

Question 6: How do financial institutions determine when climate-related financial risks are material and warrant greater than routine attention by the board and management?

Consistent with the SEC climate-related financial risk Proposed Rule (RIN 3235-AM87), it generally makes sense to leave the work of determining materiality of climate-related financial risks to the financial institutions themselves. However, the FDIC can provide guidance that offers clarity to financial intuitions and reduces their burden, while still promoting healthy corporate governance practices.

For example, a financial institution can use CoreLogic climate models to assess the current and future climate-related financial risk to their assets for which property serves as collateral (e.g., RMBS) or influences the health of the asset (e.g., municipal bonds). With this quantitative assessment, financial institutions can decide how to best incorporate these findings into assessments of how they may materially affect their financial condition, as part of their existing corporate governance procedures.

Question 7: What time horizon do financial institutions consider relevant when identifying and assessing the materiality of climate-related financial risks?

Please refer back to our response to Question #13 above, where we discuss specific time horizons and demonstrate how multiple climate change scenarios can be visually represented.

Question 10: How do financial institutions currently consider the impacts of climate-related financial risk mitigation strategies and financial products on households and communities, specifically LMI and other disadvantaged communities? Should the agencies modify existing regulations and guidance, such as those associated with the Community Reinvestment Act, to address the impact climate-related financial risks may have on LMI and other disadvantaged communities?

We highlight the insurance industry again for what may be a helpful example for financial institutions and regulators when considering disadvantaged and LMI communities.

The effect on availability and affordability when considering climate and financial risk mitigation strategies and financial products should be viewed through a number of demographic lenses, most notably income and race. Some areas are becoming more costly to insure but are still appealing (e.g., coastal properties). Affordability is not the major concern here, as these homeowners tend to be higher-income individuals with the ability to afford higher insurance costs for beachfront properties. Instead, insurance availability is the greatest cause for concern. Many insurers may be unwilling to offer policies for expensive properties built in high-risk areas.

That being said, there are still low-to-moderate income homeowners that live along the coast, residing in poorer communities, and are less able to fortify their homes or absorb increasing insurance costs. These homeowners are disproportionately people-of-color living in majority-minority communities. Efforts should be made to identify these communities and homeowners (perhaps through an analysis of Reconstruction Cost Values (RCVs) of homes within the community) and provide them with assistance. Comprehensive home-by-home analytics are available to enable this type of supervisory evaluation of communities at risk by relying on data and analytics providers.

Recommendation: The FDIC should undergo an analysis of LMI and minority communities living in high-risk areas to quantify the total level of risk these communities face and the amount of federal/state assistance that would need to be directed toward these communities to mitigate these risks.

A. Applicability

Question 1: What additional factors, for example asset size, location, and business model, should inform financial institutions' adoption of these principles?

No additional comments.

B. Tailoring

Question 2: How could future guidance assist a financial institution in developing its climate-related financial risk management practices commensurate to its size, complexity, risk profile, and scope of operations?

Please refer back to our response to Question #14 above, where we discuss region-specificity issues, which could be implemented by financial institutions themselves when developing their own internal climate-related financial risk management practices.

C. General

Question 3: What challenges do financial institutions face in incorporating these draft principles into their risk management systems? How should the FDIC further engage with financial institutions to understand those challenges?

In order for the FDIC to assess and regulate climate-related risk in the financial sector, it must ensure that it is receiving accurate, comparable, and actionable information from financial institutions, which brings us to a key structural issue that must be addressed: standardization.

To understand the varying levels of risk that institutions face – and to rank-order the geographic areas/institutions with the most exposure – the FDIC needs to receive comparable, standardized reports. The current lack of a common reporting mechanism creates confusion for both financial institutions and the FDIC. Institutions do not have a concrete understanding of the information that they need to include in their supervisory reporting, leading them to potentially omit data that the FDIC considers material while including data that is not applicable to the FDIC's oversight authorities.

From the FDIC's perspective, a common reporting structure is necessary to compare individual institution's risk exposure at a specific point in time to understand where the highest concentrations of risk exist. It is also needed to accurately assess whether an institution is taking proactive steps to address their climate-related risks over the course of multiple reporting periods.

Recommendation: The FDIC should take steps to standardize the reporting forms and data that it collects from institutions, in order to accurately assess and manage climate-related financial risk.

Question 4: Would regulations or guidelines prescribing particular risk management practices be helpful to financial institutions as they adjust to doing business in a changing climate?

The financial industry as a whole could learn important lessons from the insurance industry.

Insurance companies have been on the front lines of understanding, pricing, and mitigating the risk caused by the increasing frequency and severity of natural hazard events due to climate change. CoreLogic works hand-in-hand with the insurance industry – from underwriting to risk management to claims – to help families and businesses protect their homes and properties. This protection starts with understanding risk, having the latest and greatest underwriting tools and construction cost data, keeping close tabs on Mother Nature, and being at the ready in a moment of loss.

Big data and technology are disrupting risk-assessment norms, and insurers are rethinking how they fundamentally conceptualize risk itself. Traditionally, the focus was on the size or severity of claims—not the probability that there would be a claim in the first place. This incomplete concept of risk affects market share with insurers leaving potential profits on the table.

True disruption will come not from the most high-tech industry participants but from those who use data and technology to get smarter about insurance risk assessment and mitigation, which we've seen from our clients over the past several years.

Our clients in the insurance industry are monitoring the effects of climate change on catastrophe event frequency and severity, relying largely on loss projection models and active event monitoring, and using these to manage enterprise-level risk accumulations. To a limited extent, these are used to support pricing but are somewhat limited due to lack of acceptance.

Additionally, many communities are embarking upon resilience efforts, but insurers are struggling to incorporate these into their analytics. More effective resilience requires better cataloging of all community resilience efforts (especially more uniform reporting), and improved auditing of mitigation plans to ensure that the work was completed and is effective.

Recommendation: The FDIC should coordinate with the Treasury FIO and state insurance regulators to the extent that FDIC wishes to provide guidance for financial institutions regarding the consideration/evaluation of community resiliency efforts, the impact of those efforts on the overall risk levels of their portfolios, and how those efforts may be viewed by insurers, among other transition-related risks.

Appendix A – Comprehensive List of Recommendations

F. Scenario Analysis

Recommendation: In order to effectively measure the financial sector's exposures to climate-related financial risks, institutions and the FDIC will need access to granular, property-specific data and precise location analytics to understand exposure down at the individual structure level, which can then be aggregated to portfolio and geographic levels for more comprehensive and insightful analyses.

Recommendation: The FDIC will need to establish a baseline of current physical risks, which should be collectively represented by a structure-specific composite risk score.

Recommendation: To best measure climate-related financial risk, the FDIC will need to use market-tested industry-leading tools in conjunction with data, technology, and internationally recognized climate scenarios for stress testing catastrophe models, such as those used by the IPCC in their current (and future) assessment reports.

Recommendation: If the FDIC decides to implement climate stress tests for larger institutions, it should consider instituting region-specific tests to allow for separate analysis of portfolios that may face differing types and levels of climate risk.

Recommendation: If the FDIC decides to implement climate stress tests for larger institutions, it should engage private sector third parties to evaluate the entire market loss potential for these scenarios.

D. Risk Management

Recommendation: The FDIC should undergo an analysis of LMI and minority communities living in high-risk areas to quantify the total level of risk these communities face and the amount of federal/state assistance that needs to be directed toward these communities.

C. General

Recommendation: The FDIC should take steps to standardize the reporting forms and data that it collects from institutions, in order to accurately assess and manage climate-related financial risk.

Recommendation: The FDIC should coordinate with the Treasury FIO and state insurance regulators to provide guidance for financial institutions regarding the consideration/evaluation of community resiliency efforts, the impact of those efforts on the overall risk levels of their portfolios, and how those efforts may be viewed by insurers.

Appendix B – References

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