Guidehouse

How Financial Institutions Can Weather the Climate Risk Storm — Proactive Risk Management is Key

Financial Services

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Introduction

Climate change risks, particularly those related to flooding, pose a tangible threat to thousands of properties located in many communities across the United States. Based on a recent study, within 30 years, there will be 802,555 homes worth approximately $450 billion located in flood-risk zones.[1] A 2019 study showed that even a modest sea-level rise of six feet would displace over 13 million people, including 2.5 million Miami residents alone.[2] **As underwriters, servicers, and investors, financial institutions should be keenly aware of the properties in their portfolio that are at risk and actively monitor the appropriateness of their risk mitigation activities**.

In recent years, federal, state, and local governments have helped mitigate flood risks through subsidies or funding for flood prevention measures. However, the COVID-19 pandemic has exasperated budgets and financial institutions should not rely on or expect future government support to mitigate their risk. Therefore, financial institutions should proactively manage their risk exposure and take action now. Below we discuss key risks, explain why early adopters of climate risk monitoring will benefit, and describe how the current COVID-19 pandemic has elevated the level of attention climate risk has received on the mortgage market.

Background

Within the next few decades, projections indicate that there will be significant climate change-driven and flood-related impacts to the mortgage market.[3] The effects of climate change are already being seen through rising sea levels and increases in storm frequency and intensity.[4] Despite these risks, borrowers continue to build and reside in properties in high-risk areas. For example, in Connecticut, a 2019 study found homes built in "high-risk areas increased at more than three times the rate elsewhere in the state."[5]

> **"Within 30 years, there will be 802,555 homes worth approximately $450 billion located in flood-risk zones."**

1. Paul Centopani, Climate change puts $450B of homes at risk by 2050, National Mortgage News, August 2, 2019, https://www.nationalmortgagenews.com/news/climate-change-puts-450b-worth-of-homes-at-risk-by-2050.
2. Jim Morrison, Climate Change Turns the Tide on Waterfront Living, Washington Post magazine, April 13, 2020, https://www.washingtonpost.com/magazine/2020/04/13/after-decades-waterfront-living-climate-change-is-forcing-communities-plan-their-retreat-coasts/?arc404=true.
3. See footnote 1.
4. Jeff Berardelli, How climate change is making hurricanes more dangerous, Yale Climate Connections, July 8, 2019, https://yaleclimateconnections.org/2019/07/how-climate-change-is-making-hurricanes-more-dangerous/.
5. Christopher Flavelle, Homes Are Being Built the Fastest in Many Flood-Prone Areas, Study Finds, The New York Times, July 31, 2019, https://www.nytimes.com/2019/07/31/climate/climate-change-new-homes-flooding.html?auth=login-email&login=email.

From the borrower perspective, these risks are likely overlooked for two key reasons:

1. **Outdated FEMA Maps:** The FEMA maps "guide where and how to build, whether homeowners should buy flood insurance, and how much risk mortgage lenders take on." In 2020, a study showed as many as "14.6 million properties are at risk, [...] far more than the 8.7 million properties shown" on FEMA maps.[6] Further, a report by Jupiter Intelligence found FEMA maps do not account for climate-induced flood risk, such as increased storms or heavy rainfall.[7]
2. **National Flood Insurance Program:** The government currently subsidizes flood insurance for homes in flood-risk zones, which helps keep costs lower than they would be otherwise. However, these rates fluctuate from year to year, based on FEMA maps, and the government can cut subsidies at any time.

As borrowers remain undaunted by the potential risks of building and/or buying in high-risk areas, financial institutions and investors should appropriately measure the climate risk-affected properties they hold in their portfolios. To currently assess risk, financial institutions generally leverage the FEMA maps in many stages of the origination process. However, because these maps often underestimate the flood risk, financial institutions may be blind to potential vulnerabilities.[8] In addition, FEMA maps are updated infrequently and do not account for the rapidly growing risks brought on by climate change. They are retrospective and, similar to the period just before the housing crisis, many properties may be currently overvalued. In 2016, the chief economist at Freddie Mac warned "losses from flooding [...] are 'likely to be greater in total than those experienced in the housing crisis and the Great Recession.'"[9] In the end, no organization wants to be caught with a poor or over-leveraged portfolio.

Areas of Risk

Climate change-driven impacts on the housing market pose different risks to borrowers, lenders, and investors. Some short-term risks include:

Underestimating potential flood risk: This could cause borrowers and lenders to be underinsured to cover losses/damages from flooding, especially in cases of sustained and frequent flooding.

Reclassifying high-risk neighborhoods: Adjusting potential flood risk of communities leads to a cost-of-living increase, in the form of insurance premiums, for residents. Some may not be able to afford this increase, which could lead to financial difficulties for residents and may even lead to a rash of selling.

Declining property values: Increasing flood damage and insurance premiums could potentially make areas less desirable, leading to a decrease in property values and higher frequency of negative equity mortgages. Financial institutions may not hold sufficient collateral or cash reserves in situations where their mortgage portfolios are downgraded.

COVID-19: The global pandemic has strained many local and state government budgets, so funds may not be available to help mitigate flood risk through property purchases/buyouts and other flood prevention/protection infrastructure programs. Without flood prevention funding, climate change impacts may accelerate.

6. Christopher Flavelle et al, New Data Reveals Hidden Flood Risk Across America, The New York Times, June 29, 2020, https://www.nytimes.com/interactive/2020/06/29/climate/hidden-flood-risk-maps.html.
7. Jupiter Intelligence, The Danger in Relying on FEMA Flood Maps for Risk Management, Jupiter Intelligence, 2020, https://jupiterintel.com/jupiter_news/special-report-fema-flood-maps/.
8. See footnote 7.
9. Christopher Flavelle, Rising Seas Threaten an American Institution: The 30-Year Mortgage, The New York Times, June 19, 2020, https://www.nytimes.com/2020/06/19/climate/climate-seas-30-year-mortgage.html.

With federal, state, and local government support expected to decline, financial institutions also should be mindful of other long-term or systemic risks. Such as:

1. **Fannie Mae and Freddie Mac Rule Changes:** The Government Sponsored Enterprises (GSE) currently purchase a large portion of properties within flood risk zones. However, Mark Calabria, director of the Federal Housing Finance Agency, recently stated there is a high likelihood the GSEs will institute rules changes to mitigate their risk.[10] These changes could include stricter lending standards, larger insurance plans, or additional capital requirements. Financial institutions should ensure they have the proper policies and procedures in place to respond to such a potential change in the future.
2. **Fair Lending Laws:** Many high-risk and potentially unmapped areas disproportionately affect minority communities. "In more than two-thirds of states, [...] areas with more minority residents also had a greater share of unmapped flood risk than the statewide average."[11] Academic papers have suggested that financial institutions are using flood information to "blue-line"[12] areas and restrict funding, which could lead to future litigation.[13]
3. **Sustained Sea-Level Rise:** Coastal properties may eventually become uninhabitable and thus lose their total value with no expectation of recovery. The inevitable bankruptcies and foreclosures would impact the stability of the overall housing market for those areas.

The short- and long-term risks posed from climate change will likely not affect only coastal communities. Many inland cities could also be reclassified as vulnerable because of rain-based flooding, especially those near lakes, rivers, streams, or other bodies of water. For example, Washington, D.C., would see a 438% increase, Utah would see a 419% increase, and Wyoming would see a 325% increase, in the number of properties listed as "vulnerable to floods."[14] Lenders, servicers, and investors will therefore need to be keenly aware of which properties in their portfolio are at-risk.

10. Zack Colman and Katy O'Donnell, Borrowed time: Climate change threatens U.S. mortgage market, Politico.com, June 7, 2020, https://www.politico.com/states/new-york/albany/story/2020/06/07/borrowed-time-climate-change-threatens-us-mortgage-market-1291552.
11. See footnote 6.
12. Blue-lining is a practice where lenders will refuse to make loans in areas they deem susceptible to flooding or being submerged.
13. See footnote 6.
14. Leslie Kaufman et al, Mapping America's Underwater Real Estate, Bloomberg Green, June 29, 2020, https://www.bloomberg.com/graphics/2020-flood-risk-zone-us-map/.

Benefits of Early Risk Identification and Mitigation

Despite the significant risks lenders, servicers, and investors face, there is still time to take action and mitigate many of them. Those that act first will likely see the biggest benefit. Some early potential advantages are:

Deleveraging impacted portfolios: Through a portfolio analysis, financial institutions can identify and offload loans that are backed by properties in the highest-risk communities and monitor others.

Investing in mitigation strategies: Financial institutions can properly prepare for the inevitable depreciation in property value by charging higher interest rates or requiring additional flood insurance. They can also conduct stress tests to ensure cash reserves/collateral are high enough to avoid penalties or other punitive measures imposed by regulators or the government.

Avoidance of potential credit losses: By proactively identifying their risk, financial institutions can likely avoid or at least protect against the devaluation of portfolios.

More attractive to investors: In the current market environment, there is a premium applied to those that focus on environmental, social, and governance principles.[15]

How Guidehouse Can Help

Despite the many risks, there is still time to act, but, as detailed above, it is prudent to act now to assess current risk and understand your monitoring capabilities. We are strategically positioned to help clients in a variety of ways. We can conduct:

1. **Portfolio Review:** Perform a portfolio review to analyze the processes that might be impacted to identify areas of exposure, decrease exposure, assist in rebalancing a portfolio, or identify risk mitigation strategies.
2. **Stress-Testing:** Carry out stress tests to ensure lenders have appropriate capital allocation, monitoring, and response processes in place to prepare for, identify, and respond to high-impact climate events.
3. **Periodic Asset Monitoring:** Conduct periodic reviews to ensure risk is within appropriate parameters and develop ongoing monitoring reports to track portfolio risk.
4. **Policy and Procedure Analysis:** Define and document processes to identify risk, decrease exposure, and determine thresholds to offload/rebalance portfolios to support investor and regulatory inquiries.

Conclusion

Climate change is an emerging threat with the potential to wreak havoc on markets throughout the country, including the housing market. It is easy to ignore a problem when the impact may not be truly felt for years; however, those organizations who take action now to identify and mitigate their exposure to climate risks will be well-positioned against the market.

15. Elliot Smith, The numbers suggest the green investing 'mega trend' is here to stay, CNBC, February 14, 2020, https://www.cnbc.com/2020/02/14/esg-investing-numbers-suggest-green-investing-mega-trend-is-here.html

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About Guidehouse

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