

Timing of Flood Insurance Payments

Mallick Hossain and John Orellana-Li¹



KEY TAKEAWAYS

- Though only 61 percent of flood insurance claims are fully settled after 90 days, nearly 80 percent of claimants receive at least partial monetary relief within 90 days.
- The median time for claimants to receive advance/partial payments has decreased significantly in the past decade, from about 60 days in 2011 to only 20 days starting in 2020, though median processing time for full settlement of claims has remained stable.
- Larger claims are much more likely to receive advance/partial payments than small claims. Additionally, larger claim amounts are associated with shorter processing time for advance payments but longer processing time for full settlement of claims.

¹ Thanks to Xudong An, Siddhartha Biswas, and Bob Hunt for comments, as well as to Chris Page, Dan Thorne, and Leesa Tomsett for background on the claims process. This product uses data from the Federal Emergency Management Agency but is not endorsed by FEMA. The federal government or FEMA cannot vouch for the data or analyses derived from these data after the data have been retrieved from the agency's website(s).

Introduction

Insurance is supposed to help homeowners recover after disaster strikes. However, many press articles portray tragic stories of homeowners fighting with insurance companies to obtain insurance payouts to rebuild their homes in the wake of major disasters (Moreschi and Brauer 2023, Downey 2023, Rado 2023, Sullivan 2021, Action 9 2017). Despite many states having laws limiting how much time insurers have to process claims (Gimbel 2022),² survey evidence of wildfire disasters dating back to 2007 has consistently found that about one-third to one-half of dwelling claims remain unsettled after a year, and a similar proportion of respondents complain about delays in the claims process itself, as well as lowball offers (United Policyholders 2024).

To the best of our knowledge, no robust empirical analysis of the timing of insurance claims payouts has been conducted. In this research brief, we document important stylized facts about the payout structure and speed of flood insurance claims from the National Flood Insurance Program (NFIP) underwritten by the Federal Emergency Management Agency (FEMA).³ Our findings provide insights into the circumstances under which payout periods may be extended, and

where more streamlined insurance products (e.g., parametric insurance) could provide the most value. Overall, we find that most flood insurance claims are settled relatively quickly, suggesting that the marginal benefits of further accelerating payments may be small.

We first provide important background information on our data. Then, we discuss important statistics about the length of flood insurance claim processing periods. Finally, we end with suggestions for future research in this area.

Data

We obtained the universe of flood insurance claims from the NFIP.⁴ The data include, among other variables, the date of loss, claim amount, building type, flood zone designation, insurance coverage limit, census tract, and, crucially for our analysis, the first and final payment dates of insurance claims.⁵ To examine heterogeneity in the claims process across major disasters, we also add information from FEMA's Disaster Declaration Summaries (see Appendix for details).⁶ Finally, we adjust all claim amounts for inflation using the consumer price index from the Bureau of Labor Statistics. Several unobserved factors may increase the time it takes claimants to receive payouts. Factors include:

- claims that are in litigation or under appeal;
- FEMA extension of proof of loss deadline for claimants to provide evidence of damage (e.g., catastrophic disasters requiring evacuation of homes and delay of inspection);
- overburdened claims adjusters or building contractors;
- disasters that include multiple perils requiring insurers to disentangle multiple causes of damage to homes (e.g., wind and water damage for hurricanes);
- increased administrative burden of requests for advance payment; and
- delay on the claimant's side in signing or completing proof of loss documentation.

Throughout this brief, we will refer to the time between the date of loss and the disbursement of claim checks as a payment "interval," "delay," or "lag." As listed above, a range of factors can contribute to changes in payment timing, especially for catastrophic disasters and particularly hurricanes, which often involve a combination of wind damages and flood damages.

² Insurers typically have 30 to 45 days to review a claim and up to 90 days to pay out after approving a claim.

³ While the NFIP covers only floods and is underwritten by the government, the claims process may be a good approximation of how private insurers may manage insurance claims since many of the same insurers that write homeowner's insurance also partner with FEMA to sell and service flood insurance.

⁴ Data were obtained through FOIA request #2022-FEFO-00004, received by FEMA on October 4, 2021.

⁵ Depending on the nature of the disaster, FEMA will make advance payments to claimants before a full damage assessment is done. Because of these advance payments, some claimants will receive multiple claim checks.

⁶ Federal Emergency Management Agency (FEMA), OpenFEMA Dataset: Disaster Declarations Summaries - v2. Retrieved from <https://www.fema.gov/openfema-data-page/disaster-declarations-summaries-v2> on February 1, 2024. This product uses the FEMA OpenFEMA API, but is not endorsed by FEMA. The federal government or FEMA cannot vouch for the data or analyses derived from these data after the data have been retrieved from the agency's website(s).

Furthermore, FEMA does not directly process claims. Rather, this is the responsibility of Write Your Own (WYO) private insurers, who write and service NFIP insurance in their own name, and NFIP direct service contractors. FEMA oversees the two groups to ensure adherence to FEMA policies, processes, and procedures.

Results

Using the NFIP claims data, we estimate the interval between when disaster strikes and when a household receives a claim check from the NFIP for flood-related losses. First, we explore the breakdown of payment intervals by when the NFIP makes its first and final payments to the policyholder. For each claim, we observe only the final amount paid, not the stream of payments that a policyholder may have received. We assume that first payments are

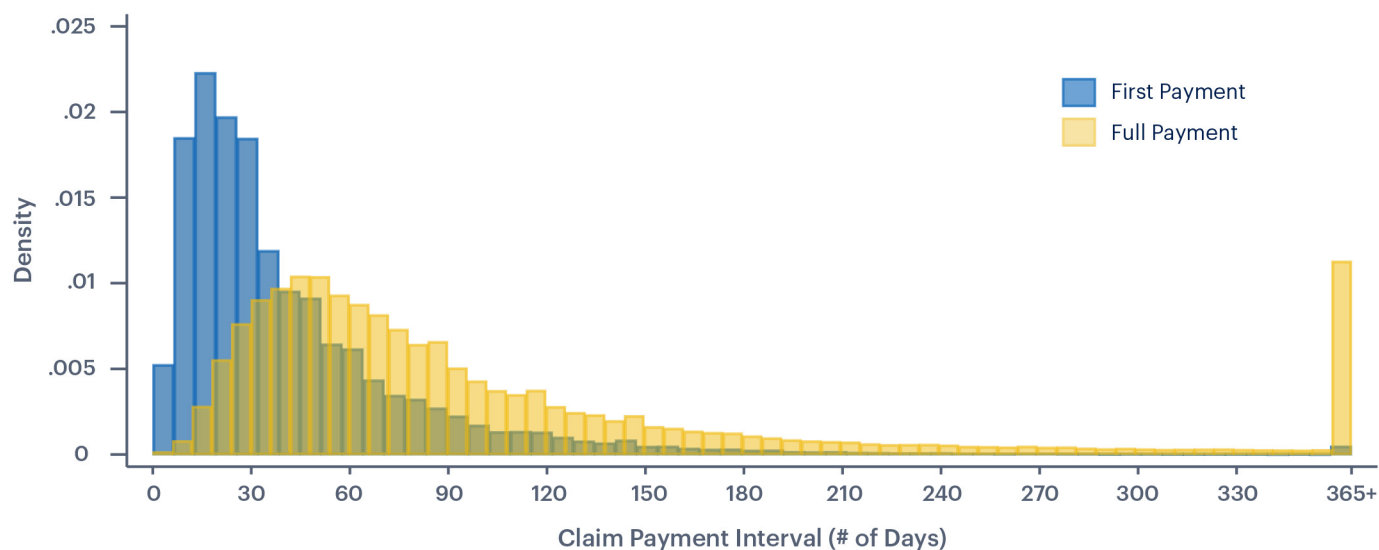
advance partial payments while final payments occur when the claim was fully satisfied.⁷

Approximately 63 percent of all claims have identical first and final payment dates, which we assume are claims fulfilled without any partial payments or the need for post-claim negotiation. **Figure 1** below displays the distribution of payment intervals — the number of days between when the loss was incurred and when a first or final payment was made on the claim. After 30 days, nearly 28 percent of claimants have received their first payment, and within 90 days, nearly 80 percent have received their first check. However, about 37 percent of claims require multiple payments, so, even after 90 days, only 61 percent of claims are fully settled.

We also plot the median payment times by year to examine whether

there have been any changes over time in the claims process. Throughout this brief, we focus on median times (rather than means) to limit the impact of excessively long outlier processing times in our analysis. **Figure 2** shows that the median time to receive a final payment has remained relatively stable over time, fluctuating around 60 days. This makes sense because the insurance claims process remains labor-intensive and requires a lot of paperwork and site visits to fully resolve a claim. Payment intervals for first/advance payments, however, have declined in recent years. While the median time for first payments in 2011 was 60 days, that claim time has gradually declined to as little as 30 days in 2016 and about 20 days starting in 2020. Since the reporting burden for advance payments is relatively low, both process improvements and technological advances (e.g., internet,

FIGURE 1 Histogram of First and Final Claim Payment Intervals



Source: NFIP claims data

Note: Figure depicts histograms of the distribution of payment intervals in number of days for both first/advance payments (in blue) and full payments (in yellow). Payment intervals greater than 365 days are top-coded at 365 days for ease of reading.

⁷ However, it's possible that in some instances, first payments could denote full claim payments (i.e., no advance was requested or needed) while final payments denote "requests for additional payment."

smartphones) may have made it easier to meet the minimum requirements for advance payments. This decrease in process time for first (but not final) payments suggests that FEMA is able to get money to homeowners quickly and that this may help them recover more quickly after a disaster.

Potential Drivers of Lags in Claim Payments

Why do some claims payments take longer to issue than others? In this section, we explore a range of explanations for possible lags in claims processing. We will examine the following hypotheses:

- Larger disasters have longer claim intervals because demand for resources is higher.

- Larger claims will take longer to settle.

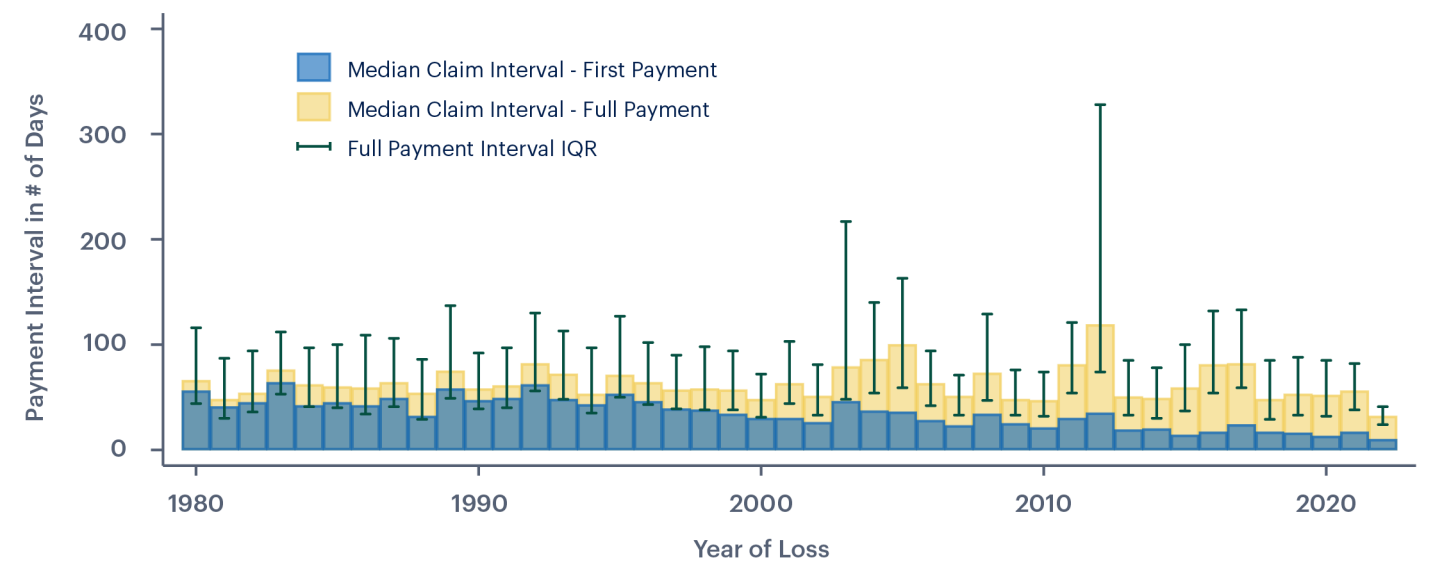
Large Disasters and Claims Intervals

We hypothesize that larger disasters will have longer claims intervals because the insurance claim system will be more stressed by the severe influx of damage claims, as will building contractors, who are needed to provide estimates of home repairs. However, FEMA is also more likely to authorize advance payments during large disasters. We identify the top 10 disasters in the flood insurance claims data (through 2022): Hurricanes Isabel (2003), Ivan (2004), Katrina (2005), Ike (2008), Irene (2011), Sandy (2012), Matthew (2016), Harvey (2017), Irma (2017), and Florence (2018). Indeed, we find that advance payments are issued much more frequently for claims

related to major disasters (57.5 percent of claims) than for other types of claims (29.4 percent). We then compare the distribution of claim times for these top 10 disasters to that of all other insurance claims. **Figure 3a** shows that policyholders receive first/advance payments in virtually the same amount of time for both major disasters and other claims (median of 31 days in major disasters, 28 days otherwise). Unsurprisingly, **Figure 3b** shows that claim payments take longer to fully resolve for major disasters (median of 99 days) than for other disasters (median of 63 days).

Larger disasters are likely to require longer times for contractors to give estimates and longer times for homeowners to submit required documentation (FEMA usually offers

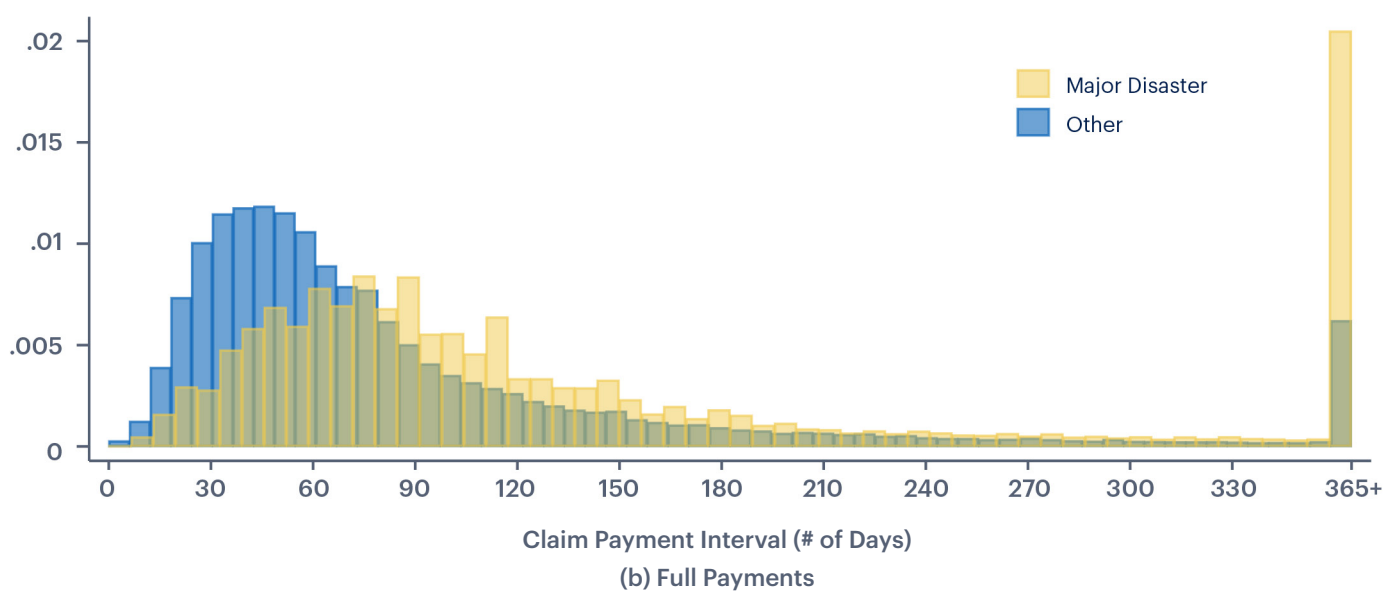
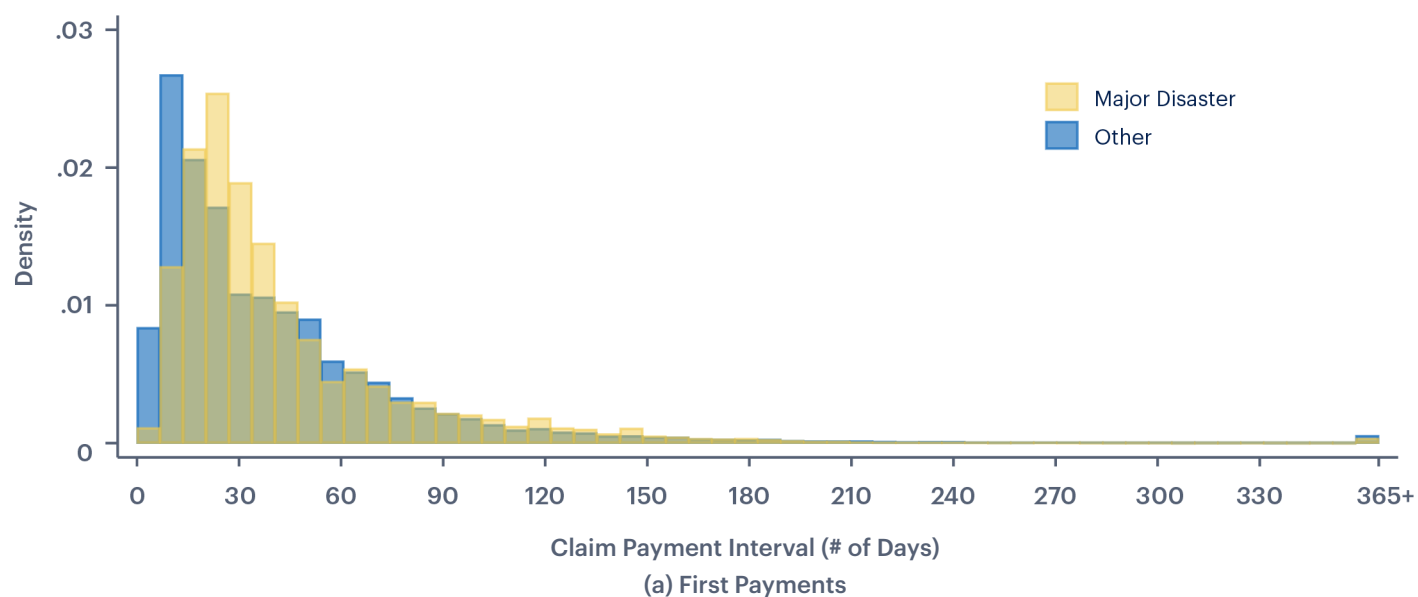
FIGURE 2 Median Claim Intervals by Year of Loss



Source: NFIP claims data
Note: Figure depicts median claim intervals, for both first/advance payments and full payments, by year of claimed loss. Interquartile ranges (IQR) on full payment are displayed in green.

FIGURE 3

Histograms of Claim Payment Intervals Split by Major Disaster and Other



Source: NFIP claims data

Note: Figure depicts histograms of claim payment intervals split by claims following a major disaster and all other claims. To be deemed the result of a major disaster, a claim must have a date of loss on or after the date of the disaster (but still in the same month) and originate from a location in the same county as the disaster.

extensions for big disasters) and may require more discussions among insurance companies to coordinate wind and flood claims.

Large Claims and Claim Intervals

We hypothesize that larger insurance claims will have longer claim intervals because they may take longer to investigate, require more scrutiny, or require more documentation by FEMA before the claim can be fully settled. On the other hand, larger claims may also warrant issuance of advance partial payments. **Figure 4** shows the distribution of median claim times for advance and full payments for

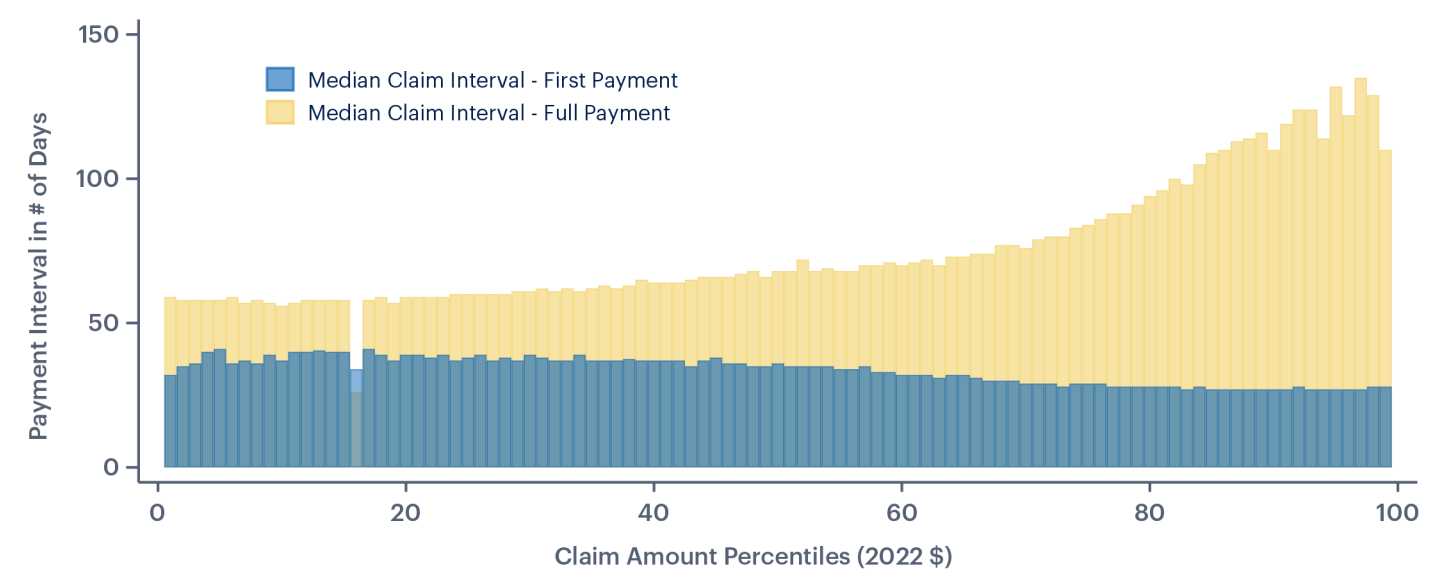
each percentile of the claim amount distribution. We find that the median processing time for partial payments decreases as claim amounts increase.

Figure 5 also shows that advance payments are much more likely to be utilized for larger claims, with 80 percent of claims in the top decile receiving advance payments and less than 10 percent in the bottom decile receiving advance payments.⁸ The increased utilization of advance payments and decreased time to issue such payments to policyholders for large claims suggest that FEMA is using advance payments to help stabilize homeowner disaster victims quickly. However, in line with our hypothesis,

we find that larger claims do take longer to fully settle, with the top 20 percent of claims taking over 90 days to fully pay out. Though flooding events have become more severe in the past two decades, FEMA’s increased utilization of advance payments has allowed homeowners much needed temporary reprieve to stay afloat while the larger claims process plays out. As a result, homeowners may be able to start rebuilding sooner because of the advance payment and can continue submitting the additional documentation necessary for the full payout.

⁸ We note a large dip in median claim processing times at the 16th percentile in both Figure 4 and Figure 5. This dip comes from nearly 9,500 claims payments of exactly \$2,500 that were issued in response to Hurricane Katrina. These payments were made particularly quickly, with 50 percent issued within 21 days, and 95 percent issued within 32 days.

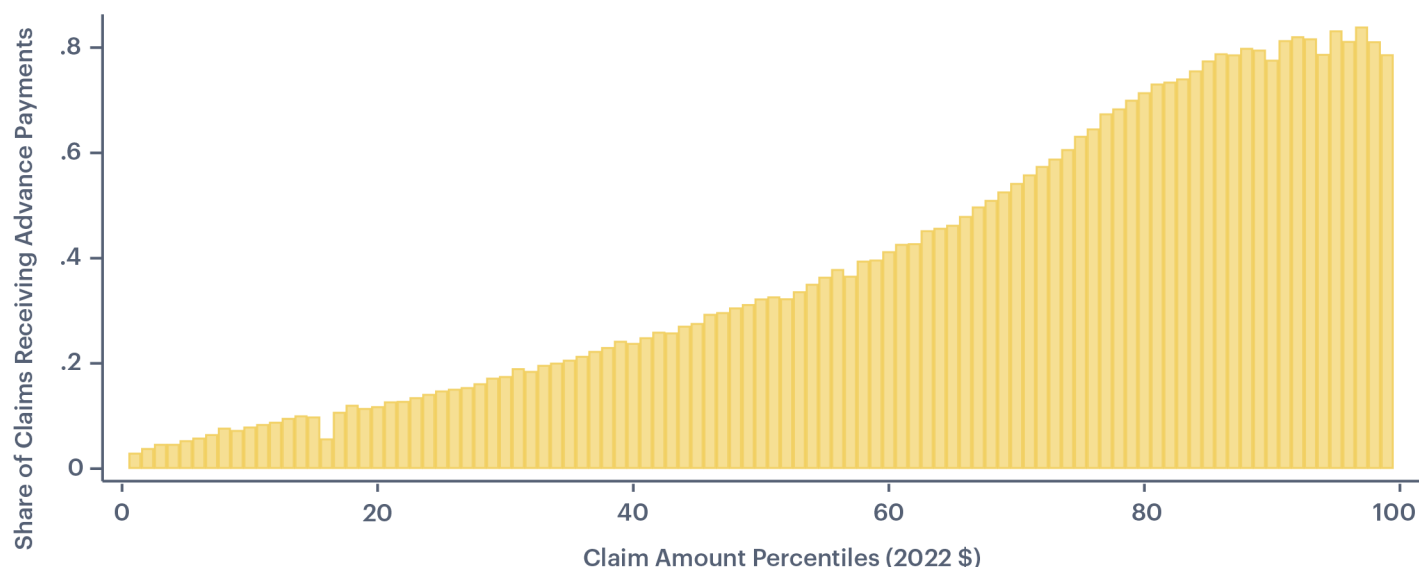
FIGURE 4 Median Claim Intervals by Claim Amount Percentile (in 2022 \$)



Source: NFIP claims data
Note: Figure depicts median claim intervals, for both first/advance payments and full payments, by percentile of claim total (after adjustment to 2022 dollars).

FIGURE 5

Share of Claims Issuing Advance Payments by Claim Amount Percentile (in 2022 \$)



Source: NFIP claims data

Note: Figure depicts proportion of advance payments issued by percentile of claim total (after adjustment to 2022 dollars).

Conclusion

Our analysis shows that there is substantial variation in how long it takes for homeowners to receive insurance payments from the NFIP. However, this variation masks some important developments. First, while claim times can be long (in some cases, longer than a year), most claimants receive at least part of their claim within 90 days. Furthermore, advance payments are expedited for large natural disasters, meaning that homeowners may have some financial stress alleviated during a major disaster and can start rebuilding sooner.

This research contributes to current policy discussions around how to improve insurance markets. Notably, parametric insurance has been championed as a way to expedite insurance claims by automatically disbursing claim checks — without the need for expensive inspections or adjustments — when a certain trigger is met (Sengupta and Kousky 2020, Kousky 2023). For example, a parametric policy could be written such that when a river overflows its banks by one foot, the insured home receives some payout under the assumption that it will sustain flood damage. Our research shows that the NFIP's advance

payments are serving a similar function by providing initial financial support without extensive documentation.

Looking ahead, future research could leverage these novel data to estimate the importance of initial financial support in the aftermath of disasters. If advance or parametric payments prevent claimants from accruing credit card debt to “muddle through” while waiting for an insurance check, then it may save households substantial amounts of interest, reduce financial stress and anxiety, and improve resilience and recovery after natural disasters.

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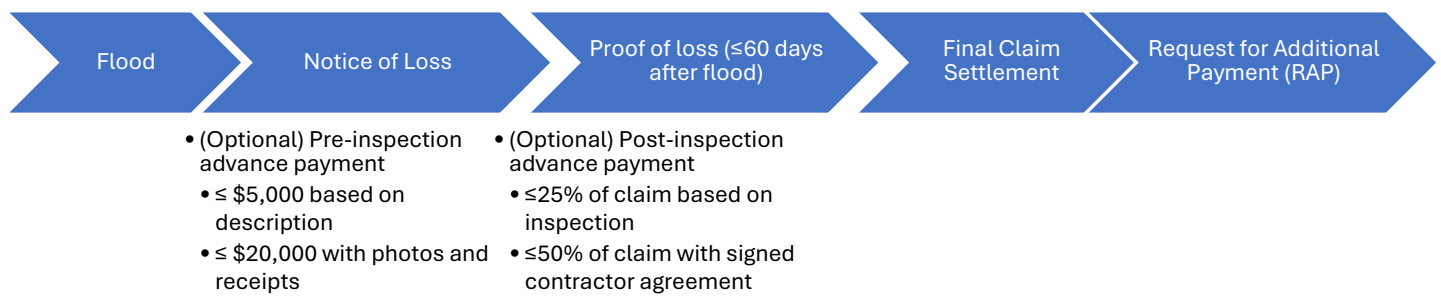
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Appendix

Claim Payment Administration

This section describes the institutional details of the NFIP claims process, the timeline, and under what conditions advance payments will be made.

FIGURE A1 Flood Insurance Claims Process



To receive compensation for flood losses, policyholders must first file a notice of loss with their FEMA claims office, detailing the type of claim (e.g., household, business, government) and general information about the type of damage sustained (e.g., property, contents). Once this notice is filed, the policyholder is contacted by an insurance adjuster within 48 hours to confirm filing of the claim, discuss details of the claim, and schedule an inspection of the home. The policyholder then works with the insurance adjuster to document the losses and submit a proof of loss to FEMA within 60 days of the flooding event. Payment is distributed only once the policyholder and insurer come to an agreement on the amount of insured losses.

In many cases, policyholders can request advance partial payments on their losses while the claims process plays out. Whether such advance partial payments are made and the amount of such payments depend on many factors, such as the loss amount, insurance deductible, and event severity (see FEMA’s [memo](#) to servicing agents following Hurricane Isaac). The FEMA National Flood Insurance Program [Claims Manual](#) lists several circumstances that warrant advance payments at different stages of the claims process. FEMA often authorizes advance payments after a large flooding event. Pre-Inspection Advance Payments (when authorized by FEMA) can be made in amounts up to \$5,000 based on claimants’ statements about the extent and source of damage or up to \$20,000 with more substantive documentation (e.g., photographs, verified out-of-pocket expenses).

Advance payments can also be authorized post-inspection by the insurer for 25 percent of the reserve amount.⁹ Up to 50 percent of the reserve amount may be issued when the policyholder also provides the insurer with a signed contract between the policyholder and repair contractor itemizing repair cost estimates for the property. Advance payments may also be made in amounts pursuant to FEMA’s own authorized Building Loss Valuation Assessment methodology or the insurer’s proprietary loss valuation methodology.

Even after the full insurance claim is distributed, a policyholder may submit a request for additional payment (RAP) if, for instance, damage for a particular part of the building was omitted from the original claim. Policyholders may also receive RAP

⁹ The “reserve amount” is the adjuster’s best approximation of the damages to the insured building at the time of inspection (minus deductible).

payouts if they incurred greater repair costs than initially estimated, contingent on providing sufficient proof and showing those greater costs were reasonable.¹⁰

Data Construction

We obtained the universe of flood insurance claims from the NFIP. The data include variables such as the date of loss, claim amount, building type, flood zone designation, insurance coverage limit, census tract, and the first and final payment dates of insurance claims. In addition, we merge in flood disaster information to which claims are most likely linked to explore heterogeneity in claim payment intervals by disaster. Specifically, disaster declarations are merged into our claims data by the month of loss and county. We further require that the date of the claim not precede the date of the disaster event.

We keep only policies on single-family residences and drop claims with zero or missing claim payment amounts. We also drop claims with missing census tracts, claims made outside the contiguous United States, claims with payment dates preceding the date of loss or claims missing payment dates, and claims preceding the year 1978.¹¹ We start with 2,568,817 insurance claims and are left with 1,533,778 after imposing these restrictions.

¹⁰ These cost overruns are separate from the additional costs incurred to meet current building requirements (e.g., code upgrades). The additional costs to bring a home into compliance with updated flood management ordinances or regulations are covered (up to \$30,000) by FEMA's Increased Cost of Compliance coverage, which is attached to their flood insurance policies. Examples of ways to reduce flood exposure and meet improved regulations are elevating the existing building, relocating the building, demolishing a flood-damaged building, or floodproofing the building.

¹¹ We observe extremely long claim intervals for the years preceding 1978, with annual medians as high as 1,000 days, as well as very few observations in these years. We drop these, given the potential inaccuracy of these data.