OFFICE *of* INSPECTOR GENERAL
UNITED STATES DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Servicers Followed the COVID-19 Foreclosure Moratorium Requirements but Could Have Better Communicated the Requirements to Borrowers

Audit Report Number: 2024-KC-0002

May 24, 2024

Office of Audit | Office of Inspector General
U.S. Department of Housing and Urban Development

To: Sarah J. Edelman
Deputy Assistant Secretary for Single Family Housing, HU

//signed//

From: Kilah S. White
Assistant Inspector General for Audit, Office of Inspector General, GA

Subject: Servicers Followed the COVID-19 Foreclosure Moratorium Requirements but Could Have Better Communicated the Requirements to Borrowers

Attached is the U.S. Department of Housing and Urban Development (HUD), Office of Inspector General's (OIG) final results of our audit of the Office of Single Family Housing's COVID-19 foreclosure moratorium for Federal Housing Administration loans.

HUD Handbook 2000.06, REV-4, sets specific timeframes for management decisions on recommended corrective actions. For each recommendation without a management decision, please respond and provide status reports in accordance with the HUD Handbook. Please furnish us copies of any correspondence or directives issued because of the audit.

The Inspector General Act, as amended, requires that OIG post its reports on the OIG website. Accordingly, this report will be posted at https://www.hudoig.gov.

If you have any questions or comments about this report, please do not hesitate to call Patrick Anthony, Audit Director, at (716) 646-7056.

Highlights

Servicers Followed the Requirements of the COVID-19 Foreclosure Moratorium but Could Have Better Communicated the Requirements to Borrowers | 2024-KC-0002

What We Audited and Why

We conducted an audit of the Federal Housing Administration (FHA), Office of Single Family Housing's moratorium on foreclosures during the COVID-19 pandemic. From March 18, 2020, through July 31, 2021, there was a pause on new and ongoing foreclosures for FHA single-family mortgages for homes that remained occupied. The U.S. Department of Housing and Urban Development, Office of Inspector General (HUD OIG), issued 2023-KC-0005, COVID-19 Loss Mitigation, in June of 2023. The objective of that review was to determine whether servicers provided borrowers of FHA-insured loans proper loss mitigation assistance after the COVID-19 forbearance ended. A review of the COVID-19 foreclosure moratorium was the next step in our review of FHA Single Family policy in place during COVID-19. Our objectives were to determine whether servicers followed the requirements of the COVID-19 pandemic foreclosure moratorium and whether delinquent borrowers were notified that foreclosures could not start or proceed during the moratorium if the borrower remained in the home.

What We Found

Servicers followed the COVID-19 pandemic foreclosure moratorium requirements. However, they could have better communicated the moratorium requirements to delinquent borrowers who were subject to foreclosure proceedings. This situation occurred because HUD did not require servicers to notify borrowers directly about the foreclosure moratorium and that occupancy would pause the foreclosure process. Borrowers who were not informed about the moratorium or impacts of vacancy could have abandoned their homes, not realizing that remaining in the home would have afforded them additional time to explore retention options or sell the home to recoup equity. Servicers missed an opportunity to inform as many as 25 of 88 sampled borrowers who vacated their homes during the moratorium that remaining in their homes protected them from foreclosure.

What We Recommend

We recommend that HUD (1) update Handbook 4000.1 to require servicers to share information regarding foreclosure moratoriums with borrowers; (2) simplify the process for accessing its FAQs on its website, including adding a clickable link on its Single Family website home page that will take borrowers directly to the FAQs; and (3) review the two loans in our sample that did not receive appropriate servicing and take administrative actions if appropriate.

Prior to issuing the final report, HUD took steps to address the second recommendation. We verified that a link is now available that will take users directly to the FHA Resource Center's FAQ site. Therefore, we consider this recommendation resolved, and we will close it once the final report is issued.

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Background and Objectives

The Federal Housing Administration (FHA), part of the U.S. Department of Housing and Urban Development (HUD), plays a vital role for the Nation's home buyers, homeowners, renters, and communities through its nationally administered programs. The FHA insurance program is one of the largest insurers of mortgages in the world, insuring more than 50 million mortgages since its inception in 1934. FHA mortgage insurance provides lenders with protection against losses if a property owner defaults on his or her mortgage. The lenders bear less risk because FHA will pay a claim to the lender for the unpaid principal balance of a defaulted mortgage. The combined unpaid principal balance in FHA's insurance portfolio was nearly $1.3 trillion as of October 2022. HUD's Office of Single Family Housing administers FHA's mortgage insurance programs for mortgages secured by new or existing single-family homes, condominium units, manufactured homes, and homes needing rehabilitation.

The lender servicing the loans (servicer) must ensure that FHA-insured loans in delinquency or default are serviced in accordance with FHA requirements and applicable laws. When a borrower with a loan in default cannot or will not resume and complete mortgage payments, the servicer must take steps to acquire the property or see that it is acquired by a third party. When foreclosure is appropriate, servicers must initiate and complete foreclosure in a timely manner. In general, servicers start the foreclosure process about 3 to 6 months after the first missed mortgage payment. HUD stresses the importance of a borrower's staying in contact with the servicer within the first month after missing a payment. Three types of foreclosures may be initiated after default: judicial, power of sale, and strict foreclosure.[1] All types of foreclosures require public notices to be issued and all parties to be notified regarding the proceedings.

The President proclaimed that the COVID-19 outbreak in the United States constituted a national emergency on March 13, 2020. The U.S. Congress passed a $2.2 trillion stimulus bill called the Coronavirus Aid, Relief, and Economic Security (CARES) Act in March 2020 to lessen the economic damage set in motion by the global COVID-19 pandemic. Section 4022 of the CARES Act prohibited a servicer of a federally backed mortgage loan from initiating any judicial or nonjudicial foreclosure process, moving for a foreclosure judgment or order of sale, or executing a foreclosure sale for a 60-day period beginning March 18, 2020, except with respect to vacant or abandoned properties. The purpose of the foreclosure moratorium was to ensure that individuals and borrowers were not displaced during a time when Americans were asked to remain in their homes to stem the tide of COVID-19.

HUD transmitted the requirements of the CARES Act foreclosure moratorium to servicers through a mortgagee letter dated March 18, 2020. The mortgagee letter informed servicers of a 60-day foreclosure and eviction moratorium for all FHA-insured single-family loans. HUD then issued seven additional mortgagee letters that extended the foreclosure moratorium until its expiration on July 31, 2021.[2] Additionally, HUD maintains a question-and-answer informational page for borrowers on its public website. The question-and-answer site was updated to include language from the mortgagee letters so that borrowers could seek out information pertaining to the foreclosure moratorium.

[1] See appendix B for a definition of each type of foreclosure.
[2] See appendix B for a table that defines the effective date and expiration date for each foreclosure moratorium mortgagee letter.

Our objectives were to determine whether servicers followed the requirements of the COVID-19 pandemic foreclosure moratorium and whether delinquent borrowers were notified that foreclosures could not start or proceed during the moratorium if the borrower remained in the home.

Results of Audit

Servicers Followed the COVID-19 Foreclosure Moratorium Requirements but Could Have Better Communicated the Requirements to Borrowers

Servicers followed the COVID-19 pandemic foreclosure moratorium requirements. However, they could have better communicated the moratorium requirements to delinquent borrowers who were subject to foreclosure proceedings. This situation occurred because HUD did not require servicers to notify borrowers directly about the foreclosure moratorium and that occupancy would pause the foreclosure process. Borrowers who were not informed about the moratorium or impacts of vacancy could have abandoned their homes, not realizing that remaining in the home would have afforded them additional time to explore retention options or sell the home to recoup equity. Servicers missed an opportunity to inform as many as 25 of 88 sampled borrowers who vacated their homes during the moratorium that remaining in their homes protected them from foreclosure. We projected this group to be 1,930 of the 8,924 total foreclosures that occurred during the foreclosure moratorium with an unpaid principal balance of at least $208 million. [3]

Servicers Generally Followed the Moratorium but Could Have Better Communicated Its Requirements to Borrowers

Servicers generally complied with the requirements of the foreclosure moratorium. The servicers properly completed a foreclosure action for 85 of 88 reviewed loan files because the borrower vacated the home before or during the moratorium or the borrower was deceased. One borrower remained in the home for the entire foreclosure moratorium, and the foreclosure was correctly paused until after the moratorium expired on July 31, 2021. However, we found two instances in which servicers improperly foreclosed upon borrowers who occupied their homes, as shown in the illustrations below.

Illustration 1. Improper eviction of borrower

> The borrower was first delinquent in March 2019, and the servicer started the foreclosure process in October 2019, with foreclosure scheduled to be held on March 19, 2020. The servicer received HUD's mortgagee letter on March 18, 2020, but proceeded with the foreclosure sale on March 19, 2020, purchased the home, and initiated the borrower's eviction on April 20, 2020. The servicer stated that it was too late to cancel the next-day foreclosure. HUD acknowledged the challenge of canceling the sale at the last minute but noted that the servicer should have reversed the sale or reached some agreement with the borrower to allow the borrower to remain in the home since the servicer purchased the home.

[3] See Appendix C

Illustration 2. Incorrect determination of vacancy

The servicer determined the property of an FHA-insured borrower was vacant in June 2020. The borrower contacted the servicer on November 16, 2020, stating that the borrower had been away caring for the borrower's parents but had returned to the property and intended to keep it. The borrower attempted to resolve issues with the loss mitigation package that had been returned to the servicer, but the servicer ultimately rejected the submission and held a foreclosure sale on December 9, 2020, which was completed in March 2021. The servicer stated that it believed, based on the inspections, that the home had been broken into and was not occupied by the borrower, even though the borrower stated in multiple calls that the borrower was in the property and wanted to keep it.

Despite generally following the moratorium, none of the 25 servicers responding to our question stated that they voluntarily updated their policies and procedures to proactively notify delinquent borrowers about the moratorium and how their occupancy could impact foreclosure.[4] Additionally, none of the servicers volunteered that they would have had an issue with proactively notifying borrowers of the moratorium and the occupancy requirements if HUD had required it. HUD did not instruct the servicers how to implement the foreclosure moratorium or require them to notify borrowers of the moratorium, including how occupancy could impact a foreclosure. Instead, HUD published a series of frequently asked questions (FAQ) on its website to provide the information to the borrowers. The language in the FAQs pertaining to the foreclosure moratorium mirrored the language in the mortgagee letters that were issued to the servicers, but there was no additional clarification provided to the borrowers. Also, the borrowers would have had to know that the FAQs existed and how to locate them on the HUD website regarding their specific situation. The process of navigating to the FAQs involved multiple steps and was not immediately accessible on the Single Family website.

The purpose of the moratorium was to ensure that individuals and families were not displaced during a critical period of uncertainty and spreading illness. By not proactively informing at-risk borrowers of their options during the foreclosure moratorium, servicers missed an opportunity to inform as many as 25 of 88 sampled borrowers who vacated their homes during the moratorium that remaining in their homes protected them from foreclosure. Had they known this, borrowers might have decided to remain and take additional loss mitigation options, up to and including selling their home to avoid losing established equity through foreclosure. We projected this group to be 1,930 of the 8,924 total foreclosures that occurred during the foreclosure moratorium with an unpaid principal balance of at least $208 million.

[4] A total of 30 servicers were included in our sample. We asked them what proactive steps they took to communicate with their delinquent borrowers about the moratorium and how occupancy could impact their foreclosure. Five servicers did not respond to our inquiry.

Recommendations

We recommend that the Deputy Assistant Secretary for Single Family Housing

1A. Update Handbook 4000.1 to require servicers to share information regarding foreclosure moratoriums with borrowers.

1B. Simplify the process for accessing its FAQs on Single Family's website, including adding a clickable link on its website home page that will take borrowers directly to the FAQs.[5]

1C. Review the two loans in our sample that did not receive appropriate servicing and take administrative actions if appropriate.

[5] During the audit, HUD added a link to the Office of Single Family Housing's home page that takes users directly to the FHA Resource Center's FAQ site. Therefore, we consider this recommendation resolved, and we will close it once the final report is issued.

Scope and Methodology

We performed our audit work from May to December 2023. We conducted our fieldwork remotely for this assignment. Our audit period covered March 18, 2020, through July 31, 2021.

To accomplish our objectives, we

- reviewed relevant laws, regulations, and HUD's mortgagee letters;
- interviewed HUD's staff to gain an understanding of the program;
- reviewed HUD's Single Family Housing Handbook;
- selected and reviewed a statistical sample of FHA-insured loans with an indication that a foreclosure started or continued during the foreclosure moratorium; and
- followed up with servicers on issues found during the audit and asked them if they updated their policy and procedures to notify borrowers about the foreclosure moratorium.

We relied in part on data contained in HUD's Single Family Data Warehouse (SFDW) system to achieve our audit objectives. SFDW is a large and extensive collection of database tables, organized and dedicated to support the analysis, verification, and publication of single-family housing data. Specifically, we relied on the system to identify loans with indicators that a foreclosure started or progressed between March 18, 2020, and July 31, 2021. Although we did not perform a detailed assessment of the reliability of the data, we performed a minimal level of testing, which included comparing information from SFDW to servicers' records, and found the data to be adequate for our purposes.

Using data from SFDW, we identified an audit universe of 8,924 FHA-insured loans with an unpaid principal balance of more than $961 million as of April 3, 2023, with an indication of a foreclosure starting or progressing during the foreclosure moratorium. The universe contained loans from four subsets of data that we identified as an indicator of a foreclosure start or progress during the moratorium.

Subset description	Sample items
Foreclosure start and completion date during the foreclosure moratorium[6]	603
Foreclosure start and foreclosure sale held date during the foreclosure moratorium[7]	2,972
Foreclosure start date between March 2017 and March 2020 and a foreclosure completion date during the foreclosure moratorium	1,493

[6] Foreclosure completion date is the date the title is acquired and possession of the property is received.
[7] The date on which the foreclosure sale is held.

Subset description	Sample items
Foreclosure start date between March 2017 and March 2020 and a foreclosure sale held date during the foreclosure moratorium	3,856
Totals	8,924

From the universe, we selected a statistical sample of 88 loans totaling more than $11 million from 30 servicers. (See appendix C.) We requested documentation from the 30 servicers for each sampled loan, including dates and methods of occupancy follow-up, copies of all completed inspection reports, call logs and all forms of correspondence with the borrower, loan payment history for March 2020 through July 2021, and a chronology of foreclosure. We reviewed the information provided for the sample loans to determine whether a foreclosure was started or proceeded during the moratorium for a borrower who still occupied the property. To make the determination, we relied on the inspection reports, including photographs of the property and notes in the inspection reports.

From our sample of 88 loans, we identified 25 borrowers we wanted to contact. Their files provided no explanation of why they vacated the property during the moratorium. This action led to their foreclosure. We used an online locate and research tool to obtain the most up-to-date contact information for each of the 25 borrowers. During that process, we learned that 3 of the 25 borrowers were deceased, and 1 borrower was serving a prison sentence. We attempted to contact the remaining 21 borrowers by mailing letters and making phone calls, however, we were unable to establish a conversation with any of them.

We conducted the audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective(s). We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendixes

Appendix A – Auditee Comments and OIG's Evaluation

Ref to OIG Evaluation – Auditee Comments

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-8000

OFFICE OF HOUSING

4/19/2024

MEMORANDUM TO: Kilah S. White, Assistant Inspector General for Audit, GA

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Sarah Edelman
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FROM: Sarah J. Edelman, Deputy Assistant Secretary for Single Family Housing, HU

SUBJECT: Discussion and Comments on Draft Audit: Servicers Followed the COVID-19 Foreclosure Moratorium Requirements but Could Have Better Communicated the Requirements to Borrowers *OIG Audit Report Number: 2024-KC-XXXX*

The Office of Inspector General (OIG) has audited the U.S. Department of Housing and Urban Development (HUD), Federal Housing Administration's (FHA) moratorium on foreclosures during the COVID-19 pandemic. The audit objectives were to determine whether servicers followed the requirements of the COVID-19 pandemic foreclosure moratorium and whether delinquent borrowers were notified that foreclosures could not start or proceed during the moratorium if the borrower remained in the home. The OIG provided a draft audit report to the Office of Single Family Housing (Single Family) for comment.

Comment 1 >

Single Family appreciates the OIG's work on this audit and discussions regarding how to update Single Family policy and procedures to better ensure that FHA-insured borrowers have access to current policy and Frequently Asked Questions (FAQ) relating to foreclosure moratoria. While we do not specifically disagree with any recommendations, we proposed a revision to the language in Recommendation 1A during the OIG Exit Conference on Friday, April 12, 2024. The OIG concurred to change the wording in Recommendation 1A. Also, we propose that Recommendation 1B be identified as completed and closed after the issuance of the final audit report. Below, we provide comments to the OIG's recommendations on pages 4 and 5 of the draft audit report.

1. **<u>Recommendation 1A</u> - Update Handbook 4000.1 to require servicers to share information regarding foreclosure moratoriums with borrowers.**
   a. Single Family will update Handbook 4000.1.

Comment 2 >

2. **<u>Recommendation 1B</u> – Simplify the process for accessing its FAQs on Single Family's website, including adding a clickable link on its website home page that will take borrowers directly to the FAQs.**
   a. Single Family has provided the OIG with information to support the completion of Recommendation 1B of the draft audit report (Links and location of Single Family's home page and FHA Resource Center's FAQ site). On the SFH home page on hud.gov there is an existing clickable link that took site visitors to the FHA Resource Center's FAQ site in two clicks. This has been streamlined to take site visitors directly to the FAQ site in one click.

www.hud.gov espanol.hud.gov

Comment 3 >

3. **<u>Recommendation 1C</u> – Review the two loans in our sample that did not receive appropriate servicing and take administrative actions if appropriate.**
   a. Single Family will review the two loans in the OIG's sample.

Single Family will propose and submit a Management Decision to respond to the audit recommendations after the issuance of the final audit report. Single Family will provide action plans and final action target dates in its Management Decision.

OIG Evaluation of Auditee Comments

Comment 1	HUD has provided us with a suggested change to the recommendation which we have incorporated. We acknowledge HUD's planned corrective action and look forward to working with them through the audit resolution process.
Comment 2	We commend HUD on making information more accessible to borrowers. We verified that a link is now available that will take users directly to the FHA Resource Center's FAQ site. Therefore, we consider this recommendation resolved, and we will close it once the final report is issued.
Comment 3	We acknowledge HUD's agreement with the recommendation. We will provide HUD with the two FHA loans and look forward to working with them to close this recommendation during our audit resolution process.

Appendix B – Definitions and Mortgagee Letter Effective Dates

Types of Foreclosures

Judicial foreclosure – All States allow this type of foreclosure, and some require it. The lender files a suit with the judicial system, and the borrower will receive a note in the mail demanding payment. The borrower then has only 30 days to respond with a payment to avoid foreclosure. If a payment is not made after a certain period, the mortgaged property is then sold through an auction to the highest bidder, carried out by a local court or sheriff's office.

Power of sale – This type of foreclosure, also known as a statutory foreclosure, is allowed by many States if the mortgage includes a power of sale clause. After a homeowner has defaulted on mortgage payments, the lender sends out notices demanding payments. Once an established waiting period has passed, the mortgage company, rather than local courts or sheriffs' offices, carries out a public auction. Nonjudicial foreclosure auctions are often more expedient, though they may be subject to judicial review to ensure the legality of the proceedings.

Strict foreclosure – A small number of States allow this type of foreclosure. In strict foreclosure proceedings, the lender files a lawsuit against the homeowner who has defaulted. If the borrower cannot pay the mortgage within a specific timeline ordered by the court, the property goes directly back to the mortgage holder. Generally, strict foreclosures takes place only when the debt amount is greater than the value of the property.

Foreclosure moratorium mortgagee letters

Mortgagee letter number	Mortgagee letter date	Mortgagee letter effective date	Mortgagee letter expiration	Extension yes or no
ML 2020-04	March 18, 2020	March 18, 2020	60 days	Yes
ML 2020-13	May 14, 2020	May 17, 2020	June 30, 2020	Yes
ML 2020-19	June 17, 2020	July 1, 2020	August 31, 2020	Yes
ML 2020-27	August 27, 2020	September 1, 2020	December 31, 2020	Yes
ML 2020-43	December 17, 2020	January 1, 2021	February 28, 2021	Yes
ML 2021-03	January 21, 2021	March 1, 2021	March 31, 2021	Yes
ML 2021-05	February 16, 2021	February 16, 2021	June 30, 2021	Yes
ML 2021-15	June 25, 2021	July 1, 2021	July 31, 2021	No

Appendix C – Sampling and Projection

Scope of Audit

The objective of this audit is to determine if servicers followed the requirements of the COVID-19 pandemic foreclosure moratorium. We designed a sample of records to test this objective. If the audit team finds deficiencies during sample review, we will project the overall risk to the FHA portfolio for loans that were improperly foreclosed during the COVID-19 pandemic foreclosure moratorium (dollar and counts).

Audit Universe

The audit universe consists of 8,924 loans with unpaid principal balance of more than $960 million. These loans were reported in HUD's Single Family Default Management System (SFDMS) with a First Legal Action to Commence Foreclosure status code before or during the moratorium with a foreclosure sale or foreclosure completion date during the moratorium period. These loans were reported in SFDMS with a First Legal Action to Commence Foreclosure status code between March 2017 and July 2021. Details of the grouping are below:

1. FC start indicator during the moratorium period (04/2020 – 07/2021) and FC completed during that same time
2. FC Start indicator during the moratorium period and FC Sale Held during the same time period
3. FC Start indicator (03/17 – 03/20) and FC completed during the Moratorium (04/2020 – 07/2021)
4. FC Start indicator (03/17 – 03/20) and FC sale held during the moratorium (04/2020 – 07/2021)

Sample Frame

The aforementioned universe.

Sampling Unit

Individual delinquent loans.

Sampling Unit Valuation

The total unpaid balance (in IDB1) as of March 2023 for a given sampling unit.

Sample Selection Method

Sample Design:

Stratified Systematic Sample, Neyman Optimized Allocation

We identified a stratified sample of 88 records for auditing among the universe. We designed the strata to group sampling units by the size of their valuation. Therefore, we rank ordered the sampling units by the unpaid balance for each loan. The strata breakpoints encompassed following ranges by percentile: 0-10, 10-30, 30-50, 50-70, 70-80, 80-90 and 90- 100th. We employed a systematic sort in the final sample design to help control for differences across foreclosure status groupings and the location (state) of each property. The table below lists the strata boundaries and other key data related to this sample design.

Stratum label	Amount	Total count in stratum	Sample count per stratum	Probability of selection	Sampling weight
0-10pct	≥ 0	892	10	0.01121	89.2
10-30pct	≥ $43,860	1,786	10	0.00560	17.6
30-50pct	≥ $69,422	1,784	12	0.00673	148.7
50-70pct	≥ $95,060	1,784	16	0.00897	111.5
70-80pct	≥ $126,040	893	10	0.01120	89.3
80-90pct	≥ $149,478	892	12	0.01345	74.3
90-100pct	≥ $190,880	893	18	0.02016	49.6
Total		8,924	88	N/A	N/A

To help better control the variance and minimize effects from random selections within influential strata, we used an optimized Neyman sample to assign sample counts to each stratum. A Neyman sample distributes the selection of sampling units according to how much uncertainty an area has and how much it will affect the final projection, thereby making the most effective use of samples. Optimized samples require some basic knowledge of the relative variance between strata.

To be effective, optimized samples require some prior knowledge of how the total standard deviation is (or might be) distributed between strata. Without general, prior knowledge, we would risk an over-sized margin of error that would unnecessarily reduce any future projections. In our case, we have prior knowledge based on experience with prior audits, but even more importantly, we modeled the dollar impact of the unpaid balances defaulted loans- and this value is the primary factor that drives the design of a Neyman sample. Under the Neyman design, the sample count in each strata (n_h) is based on the weighted(N_h), relative, standard deviation (S_h), as can be seen in the sample distribution formula below (Cochran 1977).

$$n_h = \frac{N_h S_h}{\sum N_h S_h}$$

We base the underlying standard deviation of the average unit value within a given stratum (S_h) on the dollar amount of unpaid balance of the defaulted loan. In the case of audits, many items will have zero-dollar findings, and the final standard deviation will be some fraction (f_e) of what it would be if we found all dollar amounts (unpaid balance) to be deficient. We demonstrate, and it is intuitive, that this fraction has a linear relationship to the ratio of findings versus those without findings. For design purposes, it is reasonable to treat this as a uniform ratio across all strata. Because f_e will also have an equal, proportionate effect across all strata, it drops out of the equation with respect to how the samples are distributed.

$$n_{h-audits} = \frac{f_e N_h S_h}{\sum f_e N_h S_h} = \frac{f_e N_h S_h}{f_e \sum N_h S_h} = \frac{N_h S_h}{\sum N_h S_h}$$

As illustrated above, the standard deviation computed from known dollar amounts is sufficient information to design an effective Neyman sample, without knowing the exact rate of error since any effect from f_e drops out. Testing by means of replicated sampling at various error rates confirmed the results suggested in the formula above. We can force minor and insignificant variations in sample distributions under very sparse error rates with poorly stratified data, but these variations are not relevant here. For the purposes of this design, we used a simulated error rate of 30 percent (meaning 30 percent of the records audited had material deficiencies) to compute the standard deviations used in distributing the samples among various strata. This error rate is like that found in previous OIG audit results that did not survey out.

Sample Size and Validation:

Design Testing, Refinement, and Validation:

Audit data often exhibit a skewed distribution when evaluating sampling unit valuations; this audit universe is no exception. To verify that the sampling distribution of possible audit findings do conform to the central limit theorem under this design, and to ensure this design is dependable enough to rely on a traditional confidence interval of $\mu \pm z_{(1-\alpha/2)} * SE$, we used computer simulations to model the true sampling distribution of possible audit findings.

To parameterize the computer simulations (or replicated sampling), we modeled the behavior and accuracy of possible audit findings. We used the audit universe of 8,924 loan records and modeled circumstances where the likelihood of error (how often the audit team found a material deficiency in their test questions per sampling unit) ranged 15 percent to 50 percent in 5 percent increments over various sample sizes. For each of these error ranges we assumed the unpaid balance as of March 2023 for each record.

Ultimately, we found that a sample size of 88 records consistently yielded accurate results and confidence intervals. The risk of overestimating the audit finding outside the 5% confidence level did not occur. However, there is a minimal risk of underestimating the audit finding.

Lastly, the sample is only designed to be statistically valid for projection estimates if at least 15 percent (or at least 14) of the records audited meet the criteria set forth by the audit team to indicate a material deficiency; we require that all 88 records be audited/reviewed for projection valuation purposes.

Sample Selection:

Sample records were randomly selected with the number of samples in each strata being optimally selected using the Neyman technique described above. We selected the audit sample by means of computer routines written in SAS® using the surveyselect procedure and a seed of 7. To incorporate the systematic approach employed, we sorted each record within each strata by both the foreclosure status grouping (listed in the audit universe section) and the location (state) of each property.

Findings:
Based on a stratified random sample of 88 properties designed to minimize error, we can say the following statement:

Dollar Projection Results:
We found that in 25 out of 88 loan records reviewed, there was an exception. The properties were vacant for unknown reasons before they were foreclosed during the foreclosure moratorium. This amounts to a weighted average of $32,557.60 per loan. Deducting for a statistical margin of error, we can say- with a one-sided confidence interval of 95 percent- this amounts to at least $23,339.41 per loan. In the context of this universe of 8,924 loan records, this amounts to at least $208 million in FHA loans were related to properties that were vacant with unknown reason before they were foreclosed during the foreclosure moratorium, and this dollar amount could be more.

Percent/Count Projection Results:
We found that in 25 out of 88 records reviewed, the associated properties were vacated for unknown reasons during the foreclosure moratorium. This amounts to a weighted average of 30.49 percent of the sample. Deducting the statistical variance to accommodate for the uncertainties inherent in statistical sampling, we can still say, with a one-sided confidence interval of 95 percent, this amounts to at least 21.63 percent of the records in the universe have this same characteristic. Extending this percent to the total universe count of 8,924 properties - at least 1,930 properties met this condition, and it could be more.