United States Government Accountability Office

Report to the Chairwoman, Committee on Financial Services, House of Representatives

July 2019

FEDERAL HOUSING ADMINISTRATION

Opportunities Exist to Improve Defaulted Single-Family Loan Sales

Accessible Version

GAO-19-228

GAO Highlights

Highlights of GAO-19-228, a report to the Chairwoman, Committee on Financial Services, House of Representatives

July 2019

FEDERAL HOUSING ADMINISTRATION

Opportunities Exist to Improve Defaulted Single-Family Loan Sales

Why GAO Did This Study

HUD insures single-family mortgage loans and is authorized to sell defaulted loans under the National Housing Act. In fiscal years 2010–2016, FHA auctioned off approximately 111,000 loans to private purchasers under DASP. DASP helped reduce a backlog of federally insured defaulted loans stemming from the 2007–2011 financial crisis and was intended to protect the MMI Fund by paying insurance claims before the costly foreclosure process.

GAO was asked to evaluate DASP. This report examines, among other things, certain DASP procedures, including verifying loan eligibility criteria, and documentation; FHA's evaluation of the identified outcomes of sold loans and how these compare with similar, unsold loans; and the potential effects that changes to DASP might have on the MMI Fund. GAO reviewed FHA policies, contracts, and reports, and interviewed FHA officials, selected servicers and purchasers based on sales participation, and other stakeholders. GAO also conducted a statistical analysis comparing outcome data for sold loans and similar loans that remained FHA-insured and analyzed the effect of loan pool characteristics on bidder participation.

What GAO Recommends

GAO is making nine recommendations to FHA, including establishing specific time frames to check loan eligibility, evaluating loan outcome data, and changing auction processes to help protect the MMI Fund. FHA generally agreed with seven recommendations, and neither agreed nor disagreed with two. GAO maintains that all the recommendations are valid.

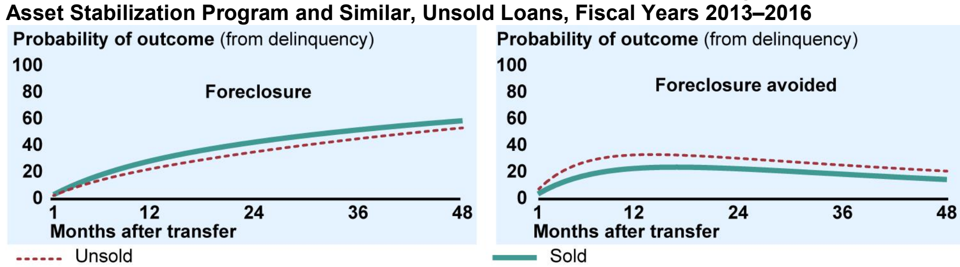
View GAO-19-228. For more information, contact Dan Garcia-Diaz at (202) 512-8678 or GarciaDiazD@gao.gov.

What GAO Found

The Department of Housing and Urban Development's (HUD) Federal Housing Administration (FHA) uses multiple entities to check loan eligibility for the Distressed Asset Stabilization Program (DASP)—in which FHA accepts assignment of eligible, defaulted single-family loans from servicers in exchange for claim payments and sells the loans in competitive auctions. After servicers submit loans for sale, FHA and its contractors concurrently check loan data for completeness, validity, and eligibility. FHA relies on servicers to check eligibility a few weeks before and again after the bid date. The status of delinquent loans can be fluid, and a change in eligibility status close to this date may not be detected. GAO's analysis of fiscal year 2016 default data indicates about 2.67 percent of loans that FHA sold were ineligible based on length of delinquency or loss mitigation status. Without checking loan eligibility closer to bidding, FHA risks selling ineligible loans, and borrowers could lose access to benefits.

FHA does not evaluate outcomes for sold loans against similar unsold loans. GAO found that, in aggregate, sold defaulted loans were more likely to experience foreclosure than comparable unsold defaulted loans (see figure). However, GAO's analysis identified varying outcomes by purchasers and sales. For example, some purchasers' loans had higher probabilities of avoiding foreclosure, with borrowers making regular payments again by 24 months after the transfer of loans. Also, loans sold in 2016 sales were less likely to experience foreclosure compared to unsold loans. HUD policy states that the agency's evaluations isolate program effects from other influences. Evaluating outcomes for sold loans against similar unsold loans could help FHA determine whether DASP is meeting its objective of maximizing recoveries to the Mutual Mortgage Insurance Fund (MMI Fund) and understand the extent to which DASP helps borrowers.

Foreclosure and Foreclosure Avoidance Outcomes for Loans Sold through the Distressed Asset Stabilization Program and Similar, Unsold Loans, Fiscal Years 2013–2016



Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

Note: Graphs do not include loans that were unresolved, paid-in-full, and in some other statuses.

Changing some of FHA's auction processes may help the MMI Fund. FHA could increase participation and MMI Fund recoveries in its auctions by communicating upcoming sales earlier. One purchaser said that additional notice would allow it time to plan for the capital needed to bid. Also, FHA set reserve prices (minimum acceptable price) based on the amount it expected to recover after loans completed foreclosure—yet GAO estimates that some of these loans will avoid foreclosure (see figure). As a result, FHA risks recovering less for the MMI Fund in loan sales than if the loans had not been sold.

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Abbreviations

DASP	Distressed Asset Stabilization Program
default monitoring system	Single Family Default Monitoring System
enterprises	government-sponsored enterprises
FHA	Federal Housing Administration
FHFA	Federal Housing Finance Agency
FICO	Fair Isaac Corporation
GPRA	Government Performance and Results Act of 1993
HAMP	Home Affordable Mortgage Program
HUD	Department of Housing and Urban Development
LTV	loan-to-value
MMI Fund	Mutual Mortgage Insurance Fund
NSO	Neighborhood Stabilization Outcome
OIG	Office of Inspector General
OMB	Office of Management and Budget
purchaser agreements	Conveyance, Assignment, and Assumption Agreements
REO	real estate owned
servicer agreements	Participating Servicer Agreements
submitted loan database	Aggregate Loan Database

U.S. GOVERNMENT ACCOUNTABILITY OFFICE
441 G St. N.W.
Washington, DC 20548

July 3, 2019

The Honorable Maxine Waters
Chairwoman
Committee on Financial Services
House of Representatives

Dear Madam Chairwoman:

The Department of Housing and Urban Development's (HUD) Federal Housing Administration (FHA) helps to broaden homeownership by insuring single-family mortgage loans with less strict underwriting standards and lower down payments compared with conventional loans. The mortgage insurance allows FHA-approved private lenders to provide qualified borrowers with mortgages and generally compensates them for nearly all of the losses incurred on such loans.[1] The Mutual Mortgage Insurance Fund (MMI Fund), which covers almost all FHA single-family mortgages, is statutorily required to maintain at least a 2 percent capital ratio, defined as the economic value of the fund divided by the amortized insurance-in-force.[2]

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[1]FHA insures mortgages on properties that meet its criteria by providing guarantees for initial purchases, construction and rehabilitation, and refinancing. To support the single-family mortgage insurance program, FHA imposes up-front and annual mortgage insurance premiums on borrowers.

[2]12 U.S.C. § 1711(f)(4). The economic value of the MMI Fund is the sum of existing capital resources plus the net present value of projected future cash flows. The amortized insurance-in-force is the remaining principal balance on all insured loans in the MMI Fund.

The housing crisis of 2007–2011 resulted in historic rates of mortgage defaults and foreclosures.[3] Since the beginning of the crisis, the federal government has directly or indirectly supported more than two-thirds of the value of new mortgage originations in the single-family housing market.[4] For example, many of these defaulted mortgages were insured by FHA or securitized by the government-sponsored enterprises (the enterprises) Fannie Mae and Freddie Mac.[5] FHA sold pools of defaulted loans in auctions through the Distressed Asset Stabilization Program (DASP).[6] DASP is a program in which FHA accepts assignment of eligible, defaulted single-family mortgage loans in exchange for claim payments to servicers—which cover the unpaid mortgage balance and associated costs—and terminates FHA insurance. FHA then sells the loans in competitive auctions to qualified purchasers. DASP has helped to reduce FHA's backlog of defaulted loans and was intended to help maximize recoveries to the MMI Fund by avoiding the costly foreclosure process.[7] According to a HUD Office of Inspector General (OIG) report, from 2010 through 2016 FHA used DASP to sell approximately 111,000

[3]See GAO, *Rural Housing Service: Actions Needed to Strengthen Management of the Single Family Mortgage Guarantee Program*, GAO-16-193 (Washington, D.C.: Mar. 31, 2016). We use the 2007–2011 date range to identify the housing crisis based on the S&P/Case Shiller National Home Price Index, according to which average home prices fell each calendar year from 2007 through 2011, for a total decline of almost 27 percent. This index is a composite of single-family home price indexes for the nine U.S. Census divisions and is calculated monthly. The methodology used to calculate these indexes is described in *S&P/Case Shiller Home Price Indices Methodology* (February 2015). From 1979 until 2007, mortgage performance had been relatively stable and the rates of default and foreclosure inventory—the percentage of total mortgage loans in foreclosure—were below 1 or 2 percent, respectively. But after the financial crisis, the rates of default and foreclosure rose to historic levels—defaults peaked at 5 percent of mortgages at the end of 2009 and the foreclosure inventory peaked at 4.6 percent of mortgages in the first quarter of 2010.

[4]See GAO, *High-Risk Series: Progress on Many High-Risk Areas, While Substantial Efforts Needed on Others*, GAO-17-317 (Washington, D.C.: Feb. 15, 2017).

[5]In 2006, FHA insured approximately 4.5 percent of purchase mortgages; in 2009, FHA insured 32.6 percent of purchase mortgages. The market share of new mortgages securitized by the enterprises—which guarantee the timely payment of principal and interest on mortgage-backed securities—also increased after 2006.

[6]We use sale and auction interchangeably in this report.

[7]While the large majority of loans sold through DASP were insured under the MMI Fund, some of the loans were insured under the General and Special Risk Insurance Fund, including, for example, loans for condominium units. A number of programs providing insurance through this fund were transferred to the MMI Fund in 2008, although loans under those programs that were originated prior to fiscal year 2009 were kept in the General and Special Risk Insurance Fund.

defaulted mortgage loans with an unpaid principal balance of about $19 billion.[8] Insurance claims for sales from 2013 through 2016 accounted for about 20 percent of FHA claims to lenders over the period.[9]

You asked us to review DASP. This report examines (1) the changes FHA has made to the program over time; (2) certain DASP procedures, including those associated with loan eligibility, and documentation; (3) FHA's evaluation of the identified outcomes for loans that have been sold through DASP and how these compare with similar, unsold loans; and (4) the potential effects that changes to DASP might have on the MMI Fund.

To address all of the objectives, we reviewed relevant laws, FHA policies, contracts, and agency reports. We interviewed officials of FHA and its contractors, the Federal Housing Finance Agency (FHFA), and the enterprises, as well as representatives of companies that service or purchase mortgages and other industry stakeholders. To address the first objective, we examined Participating Servicer Agreements (servicer agreements) and Conveyance, Assignment, and Assumption Agreements (purchaser agreements) from 2010 through 2016—the last year in which a DASP sale was held; HUD's OIG Reports on DASP; and press releases on HUD's website regarding changes to the program. We also interviewed FHA staff and asked them to provide us with a list of changes to the program from 2010 through 2016.

To address the second objective, we reviewed agreements between FHA and mortgage servicers and statements of work for FHA's contractors to identify procedures in place to monitor loan eligibility. We analyzed the default status data for loans sold in 2016 at the submission and bid dates to determine whether loans had eligible status for sale.[10] To assess the reliability of the default status data, we performed electronic checks for consistency and validity. We found the data to be sufficiently reliable for determining default status and length of delinquency. Additionally, we

[8]Department of Housing and Urban Development, Office of Inspector General, *Distressed Asset Stabilization Program*, 2017-KC-0006 (Denver, Colo.: July 14, 2017). The sales years throughout this report refer to fiscal year rather than calendar year.

[9]This percentage represents the share of FHA termination claims. We used FHA quarterly loss severity data from the first quarter of 2013 through the first quarter of 2017, excluding the third quarter of 2015 when no sale claims were reported.

[10]We use submission date as the date servicers put forward loans to sell; this date precedes the bid date by 2 or 3 months. The bid date is the day that purchasers submit bids.

interviewed FHA and contractor officials to discuss their procedures for monitoring loan eligibility.

To address the third objective, we used multiple FHA data sources to match loans sold through DASP to similar, unsold loans and compare outcomes across the groups. Specifically, we identified a comparison group of unsold loans that closely resembled sold loans on characteristics that could affect the likelihood of foreclosure. To compare outcomes, we identified common categories of possible outcomes for sold and unsold loans. Using postsale reports from purchasers for sold loans and default status reports from servicers for unsold loans, we tracked the outcomes at monthly intervals. To assess the reliability of loan and outcome status data, we performed various electronic tests on the logic of the data. We excluded a small percentage of loans with invalid data and found the remaining data to be sufficiently reliable for matching sold loans to unsold loans and comparing outcomes. We also evaluated the loan modifications offered by individual purchasers from the 2013–2016 DASP sales. We obtained pre- and postmodification payment data from FHA and calculated the change in borrowers' monthly mortgage payments. To assess the reliability of the modification data, we checked for missing and invalid data entries across different modification fields. We found the data to be sufficiently reliable for the purpose of assessing the modifications.

To address the fourth objective, we identified key characteristics that may make loan pools attractive to certain purchasers from interviews with industry stakeholders. We built regression models to determine the extent to which loan pool characteristics were associated with bidder participation for FHA loan sales and the enterprises' defaulted loan sales. We obtained data from FHA and the enterprises on bids and the timing of sales. We generated FHA pool characteristics from loan level data in the Aggregate Loan Database (submitted loan database) and supplemented them with FHA default status data. For the enterprises, we used pool characteristics from a published FHFA report. This report provided a range of characteristics to compare to those of FHA's pools. To assess the reliability of the FHA data, we performed reasonableness checks, which resulted in the removal of 4 percent of FHA's pools. We determined that data for the remaining pools were sufficiently reliable for the purposes of examining association with bidder participation. To calculate pool reserve prices, we obtained FHA quarterly loss severity data by disposition method for 2013–2016. Using our results from the outcomes comparison analysis, we calculated pool-level reserve prices and compared them to the winning pool-level bids.

To assess the effect that changing FHA's auction design could have on the MMI Fund, we reviewed economics literature on auction structures and auction descriptions in business and commercial literature. We developed a detailed description of FHA's current auction structure and participants and assessed the benefits and drawbacks of various auction design details. We interviewed DASP stakeholders about potential changes to FHA auctions. We interviewed purchasers on their potential interest in these changes and examined FHA sale data following an instance of a single purchaser winning all the pools in a sale. In addition, we compared FHA's DASP auction structure against key characteristics of successful auctions that we identified in economics and business literature. Appendix I provides additional details about our objectives, scope, and methodology, and appendix V provides more information on our matching and outcomes analysis.

We conducted this performance audit from January 2017 to July 2019 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 objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

History of the Distressed Asset Stabilization Program

The National Housing Act authorized HUD's Office of Housing to accept assignment of and sell defaulted single-family mortgage loans.[11] Additionally, Office of Management and Budget (OMB) Circular No. A-11 (2016) states that under the Debt Collection Improvement Act of 1996, credit agencies with over $100 million in loan assets are expected to sell defaulted loan assets that are more than 1 year delinquent, with some exceptions.[12] The OMB Circular further states that the agency may not be required to sell loan assets if a serious conflict exists between selling loans and policy goals. In 2017, FHA insured over $1 trillion in single-

[11]§204(a)(1)(A), (g) of the National Housing Act, codified, as amended, at 12 U.S.C. §1710(a)(1)(A), (g).

[12]Office of Management and Budget, Circular A-11 (2016), §185.8.

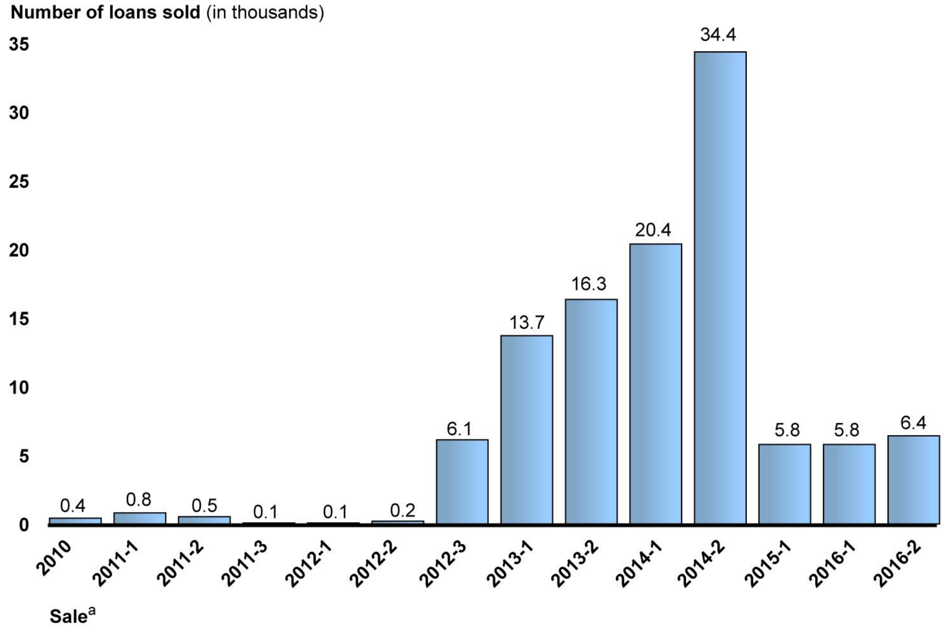
family mortgage loans, including more than 200,000 loans in default. Consistent with the National Housing Act and OMB Circular, FHA uses DASP to reduce its backlog of defaulted loans by selling loans that are severely delinquent. As of 2016, loans must be at least 8 months delinquent to be eligible for sale through DASP. In addition, servicers must evaluate borrowers for all FHA loss mitigation options in order for loans to be eligible for sale through DASP.

FHA has called its single-family forward loan sales program by different names over the years, but it became known as DASP beginning with FHA's third loan sale in 2012.[13] We use DASP throughout this report to refer to FHA loan sales, regardless of the timing or the program name. Between 2010 and 2016, FHA held a total of 16 sales, with between one and four sales annually.[14] As seen in figure 1, the number of loans sold varied significantly among the sales.

[13]From 2002 to 2005, FHA referred to its initial loan sales program as the Accelerated Claims Disposition Demonstration program and conducted four loan sales under the demonstration program. After a nearly 5-year pause, FHA continued with six loan sales under what was called the Single Family Loan Sales program from 2010 through the first two loan sales of 2012. Under DASP, FHA made key changes to its loan sales program, including adding reporting requirements for purchasers and Neighborhood Stabilization Outcome pools. For the purposes of this report, we refer to all the loan sales as DASP.

[14]Although fig. 1 shows 14 sales, FHA divided each of the 2014-1 and 2014-2 sales into two parts, in effect, resulting in four sales in 2014 and 16 sales in total.

Figure 1: Numbers of Defaulted Loans Sold in Distressed Asset Stabilization Program Sales, Fiscal Years 2010–2016



Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

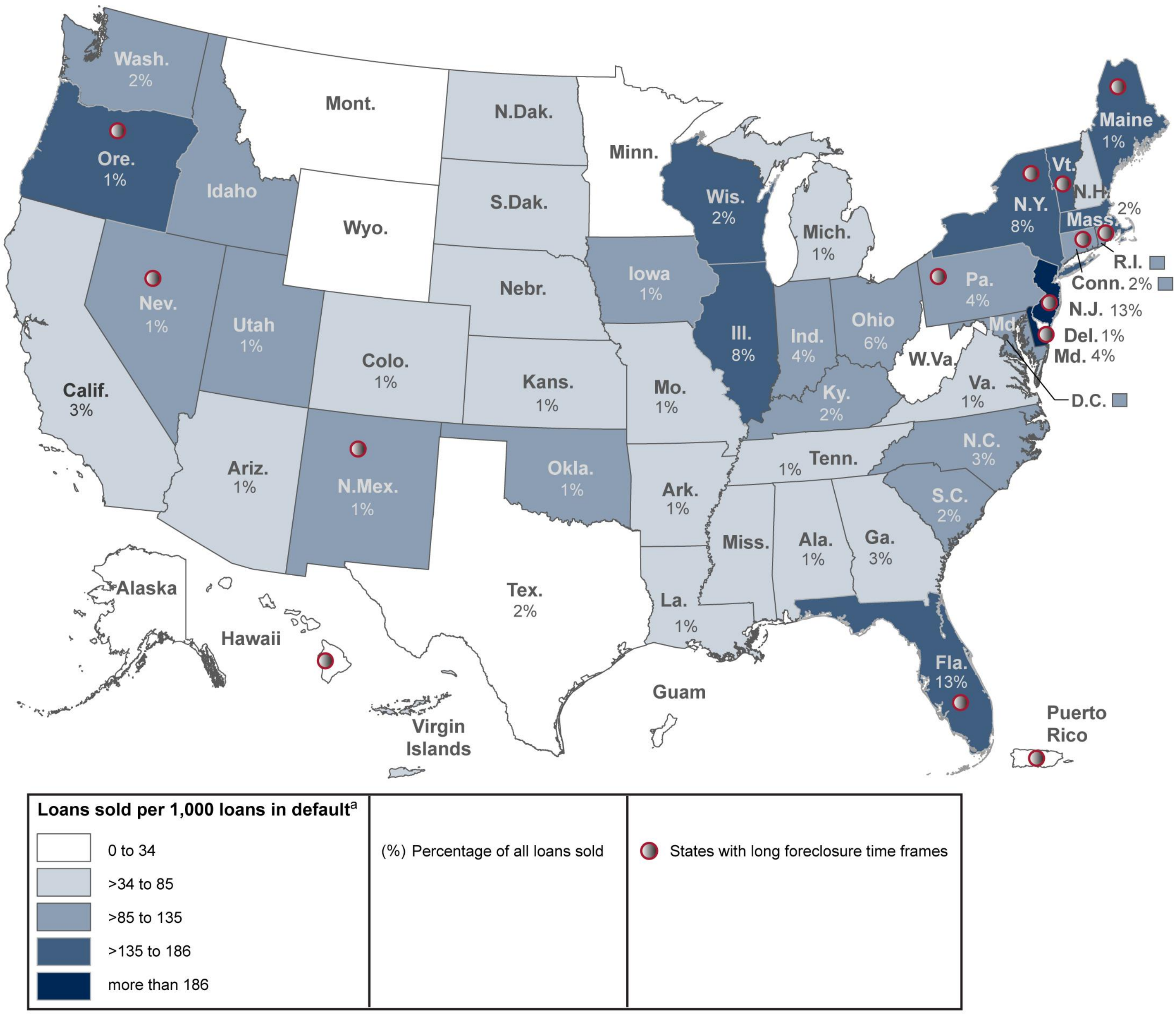
Note: The number of loans sold between the 2010 sale and the second sale in 2012 ranged from 60 to 804. Although the figure shows 14 sales, FHA divided each of the 2014-1 and 2014-2 sales into two parts, in effect, resulting in 16 sales in total.

[a]Sale refers to the fiscal year and the sale number.

Figure 2 shows the extent to which FHA has sold defaulted loans in each state in 2013-2016. The map also indicates states with longer expected foreclosure timelines.[15] The foreclosure process is governed by state laws and differs across states. FHA establishes expected timelines for completing foreclosure and acquiring title to the property in each state. As discussed later, the foreclosure process involves a number of costs, which may be higher in states with longer expected foreclosure timelines. Additional information on the loans sold through DASP can be found in appendix II.

[15]Pursuant to 24 C.F.R. 203.356(b), when foreclosure of a defaulted loan is necessary, FHA servicers must exercise reasonable diligence in completing foreclosure and in acquiring title to and possession of the property. We categorized states based on FHA's expected timelines for completing foreclosure. States in the "long foreclosure" category had an expected foreclosure timeline that was between 19 and 30 months.

Figure 2: Share of FHA Defaulted Loans Sold out of the Total Number of FHA Defaulted Loans by State, 2013–2016



Source: GAO analysis of Federal Housing Administration (FHA) data; Map Resources (map). | GAO-19-228

Note: States without percentages had less than 1 percent of the total loans sold. Foreclosure laws differ by state and FHA establishes expected foreclosure timelines for completing foreclosure and acquisition of title in each state. States in the long foreclosure category had an expected foreclosure time frame that was between 19 and 30 months.

[a]Loans in default have six or more missed payments. Interval numbers align with standard deviations above or below the median of 85 sales per 1,000 loans.

Loan Delinquency, Loss Mitigation, and Costs to the Mutual Mortgage Insurance Fund Associated with Different Loan Disposition Methods

A loan becomes delinquent after the borrower misses a single payment and goes into default after it is at least 31 days—two full payments—past due, including when a borrower may miss payments sporadically over time without repaying the missed amount.[16] Loan servicers—which can be large mortgage finance companies or commercial banks—are responsible for accepting payments from borrowers and managing mortgages.[17] FHA requires the servicers to provide monthly reports on each loan with one or more missed payments through its Single Family Default Monitoring System (default monitoring system). Before initiating foreclosure actions, FHA requires servicers to contact the borrower, collect information on the borrower's finances, and evaluate the borrower using the following ordered steps, referred to as the waterfall of loss mitigation priorities:

- informal forbearance through an oral agreement allowing for reduced or suspended payments for a period of 3 months or less;
- formal forbearance with written repayment plans, which combine a suspension or reduction in monthly mortgage payments with a repayment period;
- special forbearance of up to 12 months for borrowers who are unemployed;
- FHA-Home Affordable Modification Program (HAMP), which works to get a borrower to return to making regular payments (reperforming); FHA-HAMP offers qualified borrowers a loan modification that results in an affordable monthly payment amount that does not exceed 40 percent of the borrower's gross monthly income by reamortizing the debt for a new 30-year term at a fixed interest rate at or below the

[16]Generally, loans that had been securitized may be removed from securities when they are in default for a certain number of months. Therefore, loans sold through DASP usually are already clear of any security.

[17]Servicers do not necessarily finance the mortgages they service; rather they service mortgages for a fee on behalf of those entities that own mortgages.

market rate and, under certain circumstances, deferring the payment of principal through the use of a partial claim;[18] and

- non-retention disposition methods, including a preforeclosure sale (also known as a short sale) in which the borrower sells a property and the mortgage is satisfied for less than the amount that is owed, or deed-in-lieu of foreclosure in which the borrower voluntarily transfers a property to FHA to release all mortgage obligations; FHA may also provide move-out incentive payments to borrowers for short sales and deeds-in-lieu of foreclosure.

To qualify for most of these actions, borrowers must be in default. A servicer must evaluate a borrower for the loss mitigation options monthly, but a borrower may not qualify for any option. However, a borrower’s circumstances are fluid and eligibility can change. For example, borrowers who previously did not qualify for any loss mitigation options could be eligible to be evaluated for loss mitigation options again after starting a new job. FHA provides servicers with incentive payments of varying size for taking certain loss mitigation actions.

FHA generally requires servicers to either use a loss mitigation option for which a borrower qualifies or initiate foreclosure within 6 months of the default date, but a loan also may become eligible for disposition through a DASP sale when loss mitigation has been exhausted and it meets other eligibility criteria.[19] FHA provides servicers with a list of loan eligibility criteria in the servicer agreement for each sale. Servicers use the criteria to identify which loans are eligible for a DASP sale. For example, eligibility criteria include that a loan must be FHA-insured, have no more than four dwelling units, and have an unpaid principal balance (amount owed) greater than $20,000. Other criteria relate to length of delinquency, loan-to-value (LTV) ratio, and the condition of the property. Loans that qualify for loss mitigation or have a foreclosure date scheduled or

[18]Single Family Housing Handbook 4000.1 (section III.A.2.k.vi) defines FHA-HAMP, which may include a Standalone Modification, Standalone Partial Claim, or a Modification with Partial Claim. In a partial claim, servicers may advance funds on behalf of a borrower to reinstate a loan. FHA reimburses the servicer for the partial claim and executes an interest-free subordinate lien for the amount, which is payable when the property is sold or the first mortgage is paid off. The amount of the subordinate lien cannot exceed 30 percent of the unpaid principal balance.

[19]FHA allows servicers some exceptions, including moratoriums or prohibitions on foreclosure due to disasters, bankruptcy, or other reasons, and extensions for loss mitigation options in certain cases.

completed during the sale period are not eligible for DASP.[20] Information on changes to loan eligibility criteria throughout the history of the program can be found later in this report.

Each of the disposition methods FHA uses when loss mitigation on defaulted loans is exhausted has different costs to FHA's MMI Fund (see table 1). For the nonretention disposition methods of short sale, deed-in-lieu of foreclosure, third-party sale, or foreclosure—which we refer to as "out of home" methods—FHA pays a claim to the servicer in the amount of the unpaid mortgage balance and other expenses.[21] In addition, for a deed-in-lieu of foreclosure or foreclosure—in which the property enters HUD's inventory of real estate owned (REO) property—FHA also incurs costs associated with maintaining, repairing, and selling the property.[22] This generally results in a greater loss to the MMI Fund. In the case of a DASP sale, FHA avoids interest and servicing costs during the foreclosure period as well as REO-related expenses, but incurs the cost of the difference between the unpaid balance and expenses and the amount FHA receives for the loan it sells.

Table 1: Federal Housing Administration (FHA) Loan Disposition Methods and Expenses Included in Claim Payment

n/a	Included in FHA claim payments		
Disposition method	**Unpaid mortgage balance and servicing expenses**	**Expenses and costs related to foreclosure**	**Expenses and costs related to maintaining, repairing, and selling property**
Short sale	Yes	Not applicable[a]	Not applicable
Deed-in-lieu of foreclosure	Yes	Not applicable[a]	Yes
Foreclosure with real estate owned disposition	Yes	Yes	Yes
Third-party sale	Yes	Yes	Not applicable
Distressed Asset Stabilization Program	Yes	Not applicable[a]	Not applicable

Source: GAO analysis of FHA information. | GAO-19-228

[20]Loan-to-value ratio is the ratio of the unpaid balance of the mortgage loan to the underlying property value.

[21]FHA refers to a third-party sale as a Claim without Conveyance of Title which involves a third party purchasing the property at a foreclosure sale so that the property is not conveyed to HUD. The claim includes any unpaid balance plus approved reimbursable expenses, which can include taxes and insurance costs associated with preparing a loan for sale, legal fees, utility bills, and costs of protecting and preserving the property.

[22]According to FHA, the repairs FHA performs are limited to preventing further damage to properties and protecting the health and safety of the general public.

[a]In the event the foreclosure process was started and cancelled to pursue a different disposition method, FHA may reimburse servicers for a certain amount of foreclosure-related expenses incurred.

Process of the Distressed Asset Stabilization Program

The loan sale process has three distinct phases: presale, due diligence and bid, and postsale (see figs. 3, 4, and 5, respectively). FHA contractors (the transaction specialist, the compliance analytics contractor, and the program financial advisor) facilitate and perform various tasks throughout these phases. The summary below reflects the process according to 2016 sales documents (the most recent DASP sales documents available), other supplemental information, and interviews with FHA officials and contractors.

Figure 3 shows the presale phase. During this phase, FHA or its contractor notifies interested servicers and communicates loan eligibility criteria to servicers through the servicer agreement.[23] Servicers that plan to participate in the sale identify a list of eligible loans, certify the accuracy and eligibility of the loans, and provide the list to FHA for review through the Claim Submission Report.[24] The servicer uploads information on the loans submitted to FHA. FHA creates the submitted loan database, which includes each accepted loan's current unpaid balance, payment history, and an estimate of the underlying property value.[25] According to FHA staff, FHA reviews the eligible loans submitted by servicers and, with the advice of its transaction specialist contractor, groups them into pools based on geography and other factors. FHA sells loans in national pools or Neighborhood Stabilization Outcome (NSO) pools, for which

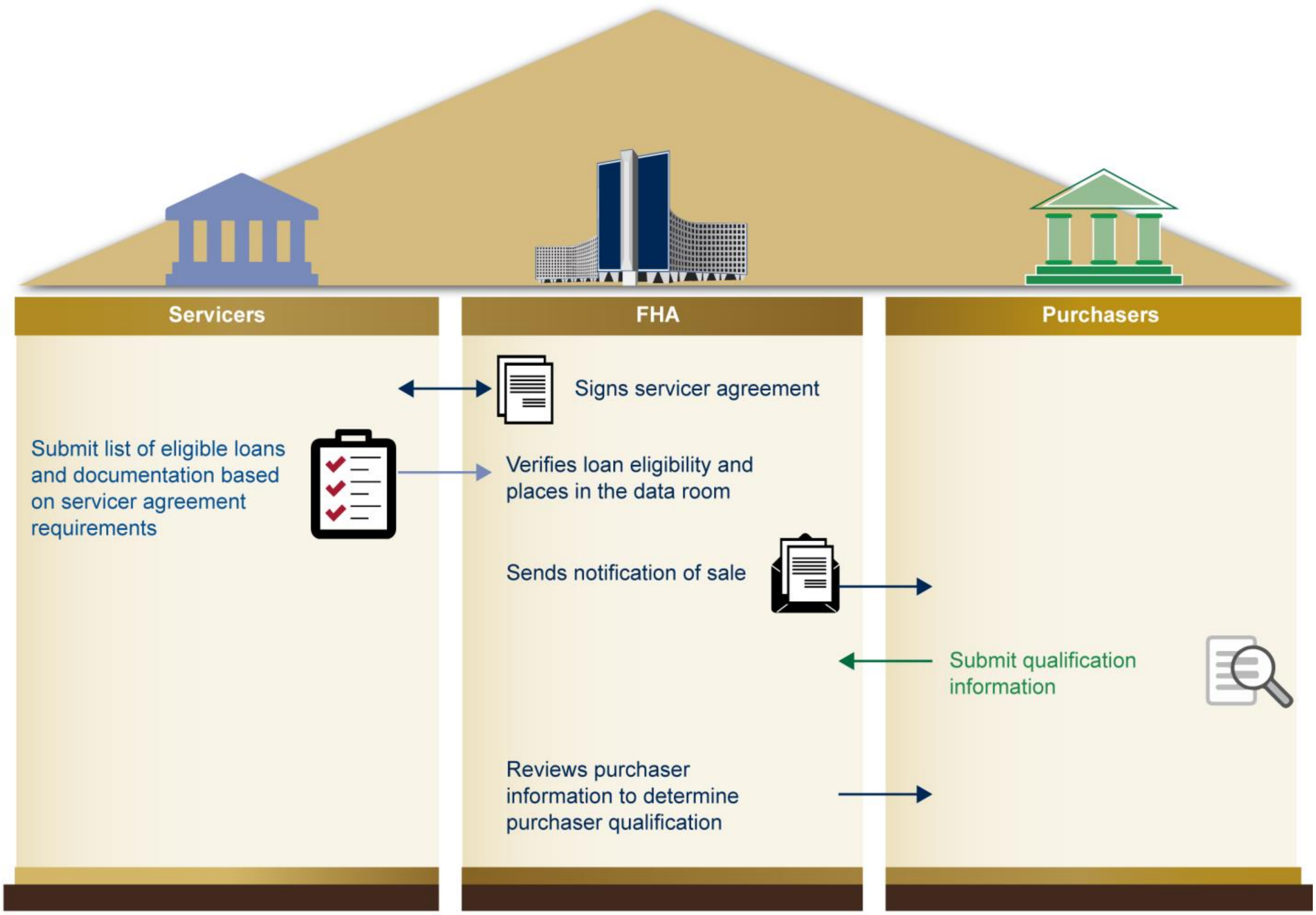
[23]The servicer agreement is a legal document between the Secretary of Housing and Urban Development and the mortgagee of the loan. For the remainder of this report, we use servicer to refer to the mortgagee named in the agreement or any entity acting on its behalf.

[24]At the time the servicer submits the Claim Submission Report, the servicer makes certain representations and warranties to FHA, including its qualifications as a servicer.

[25]The estimated values of loans are in the form of a broker's price opinion, an estimate from a real estate broker.

purchasers must meet specific neighborhood stabilization outcomes for 50 percent or more of the properties in the pool.[26]

Figure 3: Presale Phase of FHA's Distressed Asset Stabilization Program



Source: GAO analysis of Federal Housing Administration (FHA) information. | GAO-19-228

[26]FHA has also offered nine pools designated for nonprofit bidders only. Nonprofit pool purchasers are subject to NSO pool rules. NSO outcomes include resolving the delinquency through a loan modification, sale to an owner occupant, designation as a held-for-rental unit, gift to a land bank or other eligible organization, and loan payoff. A land bank is a public or community-owned entity created to acquire, manage, maintain, and repurpose vacant, abandoned, and foreclosed properties.

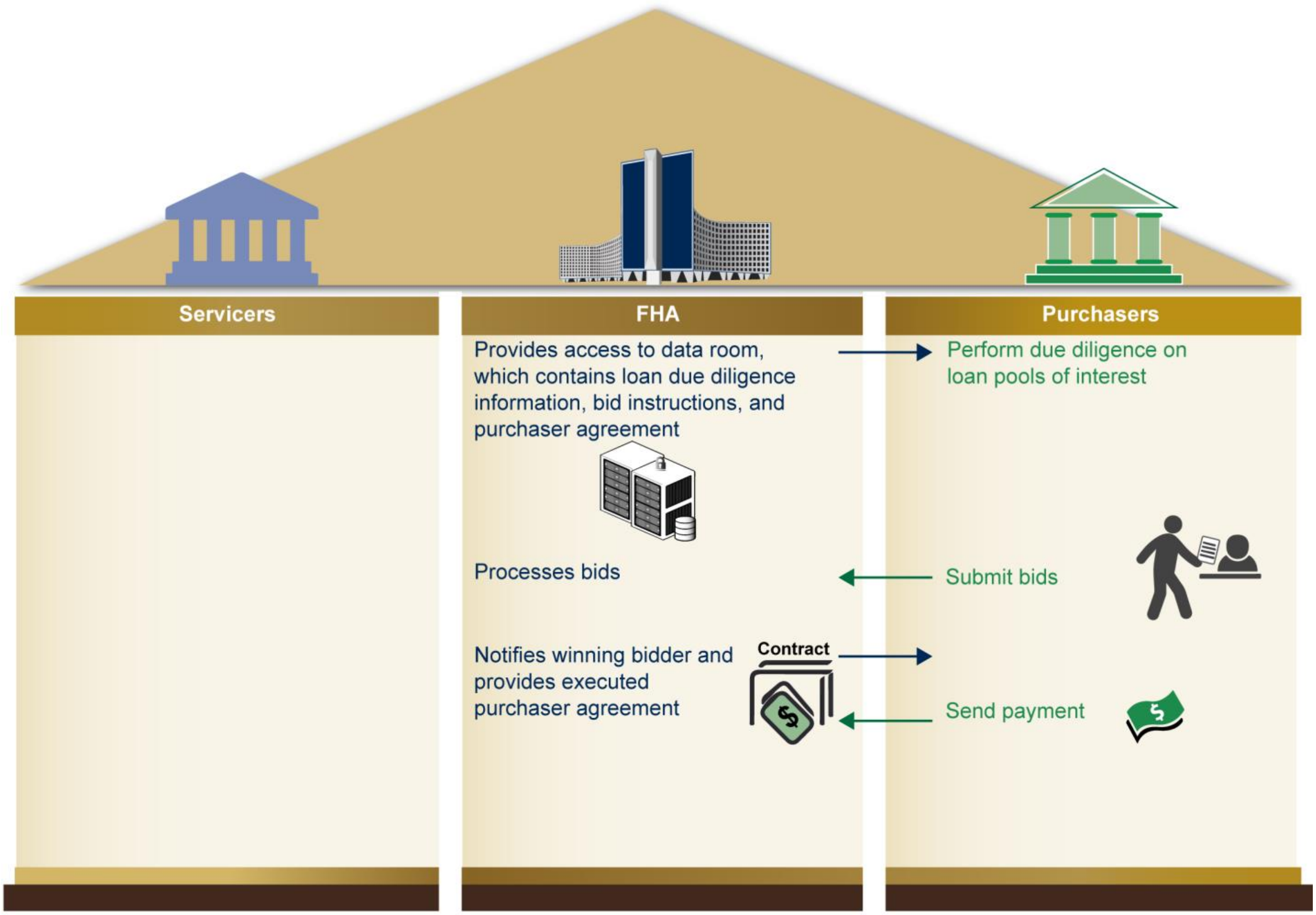
Next, an FHA contractor notifies prospective purchasers about the upcoming sale via email, and notices are posted in the Federal Register, industry publications, and newspapers. Purchasers can include private equity firms, hedge funds, rental housing companies, and nonprofit organizations. Prospective purchasers must submit to FHA a Confidentiality Agreement and a Qualification Statement.[27] FHA reviews the documentation to determine whether the purchaser qualifies to participate in the sale.

Figure 4 depicts the due diligence and bid phase of a DASP sale. During this phase, prospective purchasers receive access to the data room—a shared data website—to review materials including the loan information provided by servicers (due diligence materials); bid instructions; and sale agreement that describes representations, warranties, and postsale requirements, among other things. The servicer, FHA staff, and FHA contractors continue to verify the eligibility of the loans.[28] Prospective purchasers place bids on each loan in a pool and deposit a percentage of their total bid amount. FHA evaluates the bids and selects the highest bidder for each pool based on the total of the loan-level bids. FHA then notifies that bidder and provides an executed purchaser agreement that describes postsale servicing and reporting requirements. Purchasers must agree to follow the terms of the purchaser agreement including avoiding finalizing foreclosures for 6 or 12 months (depending on whether the sale occurred prior to July 2015), evaluating borrowers for loan modification, and reporting outcomes to FHA.

[27]Generally, to qualify as a bidder in a DASP sale, the entity must have a net worth exceeding $5,000,000 ($3,000,000 for nonprofit entities) determined in accordance with Generally Accepted Accounting Principles. The entity must also certify specific representations and warrants that include, but are not limited to, that the entity is in the business of buying, originating, or selling similar mortgage loans, that it has the capacity to bear the economic risk of total loss of its investment, and that it agrees to service the loans following purchase.

[28]According to section 2.01 of the servicer agreement, the servicer should update the data and the list of loans available for sale on specific dates.

Figure 4: Due Diligence and Bid Phase of FHA's Distressed Asset Stabilization Program



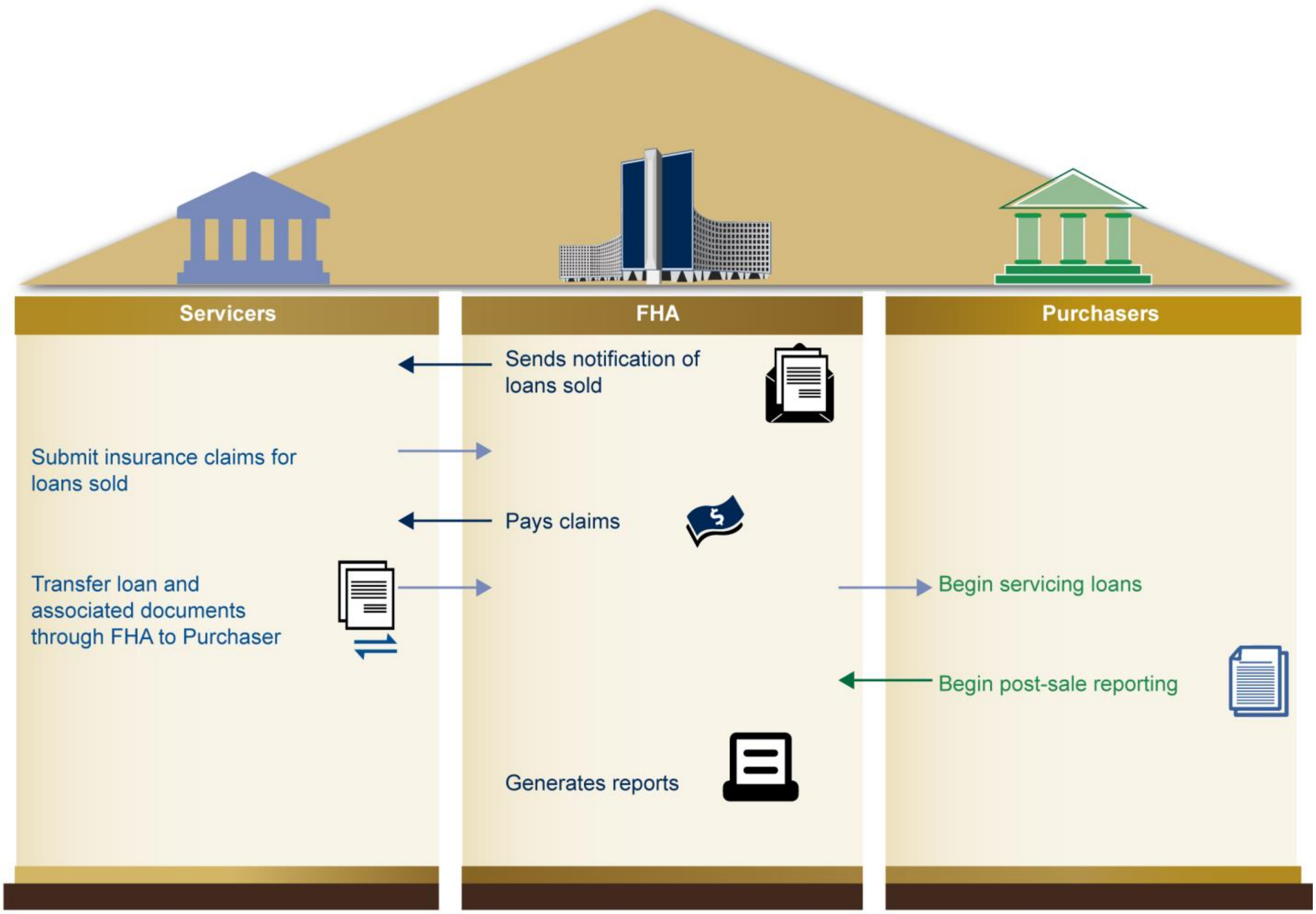
Source: GAO analysis of Federal Housing Administration (FHA) information. | GAO-19-228

Figure 5 depicts the postsale phase. During the postsale phase, FHA provides the list of sold loans to the servicer and winning purchaser, which together determine servicing transfer dates. After bid day, servicers verify that loans continue to meet eligibility criteria for the sale and begin submitting insurance claims to FHA. Purchasers pay FHA for the loans that are sold, and servicers transfer loan information and complete mortgage files to the purchasers.[29] When servicers submit claims to FHA for sold loans, they must report the reason any loans are not transferred. For example, a loan might not be transferred due to ongoing loss mitigation activity or another reason, such as no longer meeting delinquency eligibility criteria, and would remain with the servicer and FHA insured. Following the final transfer of loan documentation, servicing is transferred from the servicer to the purchaser. The servicer notifies the borrowers of the transfer of servicing and termination of their FHA mortgage insurance. Following the transfer, the purchaser sends the borrowers a similar notice of transfer and any required disclosures.[30]

[29]In accordance with section 4.01 of the servicer agreement, within 5 business days after the servicing transfer date, the servicer will deliver the following to the new servicer (purchaser): the trial balance as of the claim date that reflects the unpaid principal balance, a list of loans that have foreclosure or other litigation initiated, the master record data, histories for a minimum of 23 months, escrow information, and default data including modifications. Delivery will have occurred when the purchaser confirms receipt of the mortgage file, or collateral file.

[30]The servicer and purchaser communicate with the borrower through Notice of Transfer of Servicing letters that advise the borrower of the transfer of servicing for the borrower's mortgage loan as required by the servicer and purchaser agreements.

Figure 5: Postsale Phase of FHA's Distressed Asset Stabilization Program



Source: GAO analysis of Federal Housing Administration (FHA) information. | GAO-19-228

Following the final settlement date, the purchaser submits the first of 16 quarterly reports on the status of the sale portfolio using the format provided in FHA's Post-Sale Reporting tool. If a purchaser demonstrates a pattern of failing to report, FHA may disqualify the purchaser from future sales. During the first 12 months of the reporting period, purchasers must evaluate borrowers for a HAMP modification or a substantially similar modification.[31] Additionally, the purchaser must avoid foreclosure for 12 months unless the home is vacant or there are extenuating circumstances.[32]

The purchaser agreement allows the purchaser 10 months starting with the servicing transfer date to notify HUD of any alleged breach of FHA's representations and warranties on purchased loans. For example, a breach could be that a loan does not meet eligibility requirements, is not covered by a valid hazard insurance policy, or has an outstanding mechanic's lien. After notifying the original servicer and reviewing any response, FHA determines whether there is a breach and the appropriate remedy. The breach remedy can include a cure of the breach (such as by the servicer paying an outstanding lien), reduction in claim payment, or repurchase by the servicer.[33] The servicer has 60 days to comply with the remedy. If a breach results in the repurchase of the loan by the original servicer, the purchaser will transfer servicing back to the original servicer.

Program Requirements and Processes for DASP Have Changed over Time

FHA made changes to DASP by adding borrower protections and made efforts to increase the participation of nonprofit organizations. FHA also changed loan eligibility criteria and bidding processes to increase recoveries to the MMI Fund. Other changes included automating and streamlining processes.

[31]HAMP refers to a Department of the Treasury program that provided eligible homeowners the opportunity to reduce their monthly mortgage payments. The program terminated on December 31, 2016, with an exemption for certain applications made before that date.

[32]The purchaser must take commercially appropriate, reasonably necessary steps to ensure that each mortgage loan becomes a resolved default mortgage loan by the end of the postsale reporting period.

[33]The servicer can refute the breach, but FHA issues a final determination regarding the rebuttal.

Some Changes Responded to Concerns about Borrower Protections and Nonprofit Participation

FHA has added to DASP protections for borrowers and requirements to help stabilize neighborhoods in response to concerns raised by various stakeholders. For example, borrower protections included extending the moratorium on foreclosures from 6 months to 12 months and requiring the purchaser to offer a HAMP or substantially similar modification to qualified borrowers beginning with its July 2015 loan sale.[34] In September 2016, FHA also added payment shock protection, which limited increases in a borrower's interest rate to 1 percent per year following a 5-year reduced rate period. In an effort to stabilize neighborhoods, FHA added a requirement in 2016 prohibiting purchasers from walking away from vacant properties.[35] In a hearing before the House Committee on Financial Services in July 2016, the HUD Secretary stated that the changes that FHA made to the program in 2015 and 2016 were designed with input from a broad range of stakeholders and were assessed for how well the changes would fulfill the agency's goal of strengthening neighborhoods.[36]

In 2015, FHA made several outreach efforts to expand the participation of nonprofit organizations in DASP. These efforts included offering nonprofit organizations a "first look" at vacant REO properties, allowing purchasers to resell to nonprofit organizations, and conducting a webinar to educate and encourage the participation of nonprofit organizations. These efforts came about following a September 2014 report from the Center for American Progress and suggestions from other stakeholders that FHA

[34]The foreclosure moratorium applies to owner-occupied properties unless there are extenuating circumstances, the security interest on the property is jeopardized, or the related property is severely neglected. A HAMP-like modification includes actions to decrease borrowers' monthly payments to an affordable level.

[35]For prior GAO reports discussing issues related to abandoned foreclosures, see GAO, *Vacant Properties: Growing Number Increases Communities' Costs and Challenges*, GAO-12-34 (Washington, D.C.: Nov. 4, 2011), and *Mortgage Foreclosures: Additional Mortgage Servicer Actions Could Help Reduce the Frequency and Impact of Abandoned Foreclosures*, GAO-11-93 (Washington, D.C.: Nov. 15, 2010).

[36]Julián Castro, Secretary of Housing and Urban Development, *HUD Accountability*, testimony before the Committee on Financial Services, House of Representatives, 114th Congress, 2nd sess., July 13, 2016.

make it easier for nonprofit organizations to participate in DASP.[37] In 2016, FHA set a target that 10 percent of bids come from nonprofit organizations and local governments, including offering loans in targeted distressed areas. In 2015 and 2016, FHA offered nine pool sales directed at nonprofit organizations only. Some members of Congress expressed concern over FHA's efforts to encourage participation of nonprofit organizations, stating that FHA would likely get lower bids than it would normally receive from private companies.

Changes to Loan Eligibility Criteria and Bidding Were Intended to Increase Recoveries

According to FHA officials, FHA changed its loan eligibility criteria for inclusion in DASP sales in order to decrease losses to the MMI Fund and to give servicers more time to work with borrowers on loss mitigation. FHA lists the eligibility criteria to qualify loans for FHA's loan sale program in each servicer agreement. Our analysis of the servicer agreements from 2010 through 2016 showed that some criteria remained the same during the period, such as the requirement that servicers must have evaluated borrowers for all loss mitigation actions in accordance with FHA regulations or that loans in certain types of bankruptcy were ineligible. Other criteria changed during that period, including the following examples:

- Delinquency requirements for eligible loans changed from six full payments past due to eight full payments past due beginning with the first DASP sale in 2016;[38] and
- FHA changed its eligible LTV ratio. Between the 2010 sale and the second DASP sale in 2012, FHA set a minimum LTV ratio for loan sales at 85 percent or higher—meaning that to qualify for sale, the ratio of the amount owed on the loan to the estimated value of the property was required to be 85 percent or higher. Beginning with the

[37]Sarah Edelman, Julia Gordon, and Aashna Dasai, *Is the FHA Distressed Asset Stabilization Program Meeting Its Goals?* (Washington, D.C.: Center for American Progress, September 2014), accessed February 21, 2017, https://cdn.americanprogress.org/wp-content/uploads/2014/09/Edelman-DASP-report.pdf.

[38]For the first loan sale of 2013, FHA decreased the delinquency criteria to three full payments past due if the servicer determined the property was vacant, then increased the delinquency criteria for vacancy to four full payments past due beginning with the first loan sale of 2016.

first DASP sale in 2015, FHA set minimum eligible LTV ratios by state—70 percent in New York and New Jersey and 85 or 100 percent for other states, with about half the states in each percentage category.

FHA officials said that they analyzed loan-level bid amounts and found that they had greater recoveries relative to REO disposition on loans with shorter delinquencies and higher LTV ratios. According to the officials, this was because these loans had a higher probability of modification by purchasers. Further, they said that the changes in eligibility criteria related to delinquency and LTV ratio were intended to decrease losses to the MMI Fund.

In addition, FHA lowered limits on loan-level bid pricing to minimize the potential negative effects of ineligible loans being removed from sales after bidding. Purchasers could use loan-level bid pricing to strategically take advantage of the expected removal of ineligible loans after bidding. Because a purchaser pays only for the loans that are actually transferred and some loans are removed from sales due to ineligibility, such as due to changes in loss mitigation or foreclosure status, FHA receives less in actual returns on the sale than the winning—highest—bid. For selected loan pools in the second sale in 2013 and the first sale in 2014, FHA analyzed the bid amounts of loans that became ineligible after purchasers had bid. Before the 2015 sale, FHA lowered its maximum purchasers' loan-level bid amount from 200 to 175 percent of the unpaid balance of a loan.

Other Changes Included Automating and Streamlining Processes

FHA contractors deployed tools in 2015 and 2016 to automate previously manually intensive processes of collecting data and emails from about 30 different purchasers and tracking the status of sold loans. FHA, contractors, and purchasers we interviewed said that these processes improved data quality, efficiency, and communication among parties.

- A postsale reporting tool and data repository enables the contractor to send mass emails and target email reminders of upcoming due dates, including report deadlines, to purchasers that have not submitted required documents. In addition, the tool validates data by checking for logic and data type.
- A loan sale system conducts automated checks of data in the submitted loan database for completeness and accurate file layout.

The system also checks whether all required documents are included on the shared data website that purchasers use to perform due diligence and determine bid amounts. The system automatically generates a report of errors that is sent to servicers.

- A web-based breach tracking tool that streamlines and centralizes tracking of loans that breach—that is, were transferred to purchasers but did not meet eligibility standards. The tool allows the purchasers to submit breach requests, notifies servicers automatically about pending breaches, and allows auction stakeholders to review breaches and update the status of the loan.

FHA Lacks Specific Time Frames for Its Loan Eligibility Checks, Criteria for Holding Sales, and Documentation of Key Procedures and Performance Measures

Multiple Entities Check Loan Eligibility, but the Timing of FHA's Checks May Allow Ineligible Loans to Be Sold

Servicers identify eligible loans for inclusion in a DASP sale, certify eligibility, and update loan information and remove ineligible loans prior to bid day. FHA staff and contractors described the various checks they conduct to generally verify a loan's continued eligibility by reviewing the loan's default status in FHA's default monitoring system and in some cases other servicer data before a sale. Specifically, both FHA staff and the compliance analytics contractor conduct eligibility tests by checking each submitted loan's default status. The transaction specialist contractor told us it conducts automated checks of the loan submission and related data that servicers submit to check for data completeness and valid formatting. Additionally, this contractor also checks that the loans match eligibility criteria and that all required documents were submitted. Starting in 2015, FHA officials told us that FHA and its three primary contractors began to verify that all loans submitted for sale had an eligible default status as part of their quality-control process. FHA officials said that any updates or changes servicers make to the status of submitted loans require the program financial advisor contractor to repeat its quality-control procedures.

In addition, servicers are expected to ensure that loans meet eligibility criteria until the loan is sold and servicing responsibilities are transferred to the purchaser. The servicer agreement states that an eligible mortgage loan meets all eligibility criteria as of the date it is submitted for sale and continues to meet all such requirements as of the claim date. FHA officials said that servicers check eligibility at the loan submission date, approximately 3 weeks prior to the bid day when they update loan information, and at the claim date. Servicers should remove ineligible loans from the sale. In 2014, FHA required servicers to self-certify the accuracy of the default status of loans. FHA officials told us that it also has absolute discretion to exclude one or more loans from the sale.

According to FHA officials, FHA has two different provisions in place to correct when a loan should not have been sold. One provision, as described earlier, allows the purchaser to initiate the breach process and the servicer either corrects the reason for the breach or FHA repurchases the loan. Another provision is the “claw-back” provision. Under this provision, FHA or the former servicer can require the purchaser to return the loan to FHA in exchange for the amount the purchaser paid for the loan.[39]

However, we found examples of potentially ineligible loans that were submitted for sale and were sold in DASP auctions. Of the 12,210 loans sold in 2016, a small percentage of loans (about 2.65 percent) did not meet eligibility criteria based on their default status on the date loans were submitted.[40] The error rate was similar at the bid date for the 12,210 loans sold in 2016. In particular, about 2.67 percent of these loans did not meet eligibility criteria based on their default status on the bid date.[41] These loans were ineligible for varied reasons, including because they did not meet FHA’s length of delinquency requirement, were involved in

[39]FHA officials told us that the “claw-back” provision became available in September 2014 for certain situations and has been used once.

[40]Specifically, about 66 loans or 0.5 percent appeared to be ineligible for not meeting the delinquency criteria of being at least 8 months delinquent and the property being occupied; 202 loans or 1.7 percent appeared to be ineligible due to their bankruptcy status; another 62 or 0.5 percent appeared to be ineligible because their status indicated loss mitigation; and one loan was reperforming.

[41]Specifically, about 50 loans or 0.4 percent appeared to be ineligible for not meeting the delinquency criteria of being at least 8 months delinquent and the property being occupied; 72 loans or about 0.6 percent appeared to be ineligible due to their bankruptcy status; another 187 or 1.5 percent appeared to be ineligible because their status indicated loss mitigation; 6 loans or 0.1 percent were in foreclosure; and 21 loans or about 0.2 percent were terminated before the bid date.

certain types of bankruptcy, or were undergoing loss mitigation and therefore should have remained under FHA insurance protection.

Ineligible loans may have been sold because the status of loans changed after the servicer and FHA completed their eligibility checks. FHA’s staff and contractors conduct multiple eligibility checks concurrently during the presale and due diligence and bid phases—about 12 to 14 weeks before bid day according to FHA officials. These early checks conducted by FHA’s staff and contractors do not necessarily occur in a specific order or according to specific timelines. FHA officials told us that FHA relies on the servicers to perform eligibility checks a few weeks before bid day and again after the sale when the servicer submits the claim. However, the status of delinquent loans can be very fluid. According to our analysis of FHA data, 23 percent of loans from 2010 to 2016 were removed between the bid date and the claim date. FHA officials told us that servicers remove loans after FHA’s reviews to maintain compliance with representations and warranties under the servicer agreement. FHA officials also explained that loan removal was due to changes in loans’ eligibility status, such as entering into loss mitigation or the scheduling of a foreclosure sale.

We reviewed a nongeneralizable sample of 10 loans that appeared to be ineligible and interviewed FHA officials about these loans. We found that some changes in the eligibility of loans could be missed due to the length of time between eligibility checks and data updates. The status of loans can change multiple times during a sale process. FHA requires servicers to self-report the status of defaulted loans on a monthly basis to the default monitoring system, usually within the first 5 days of the month, but servicers may report changes throughout the month if a loan’s status changes. However, FHA officials told us that the system updates once a month. FHA’s eligibility checks may have occurred before the updates were posted to the default monitoring system. FHA officials told us that FHA relies on the controls in place and contractual agreements with the servicers that require them to ensure that loans are eligible when submitted to FHA for sale and when they file a claim with FHA. As a result, FHA may not be aware of a change in loan eligibility that was reported in the default monitoring system after its eligibility checks were completed.

Federal internal control standards require that management design control activities to achieve objectives and respond to risks.[42] Control activities can be either preventive or detective. A preventive control activity prevents an entity from failing to achieve an objective or address a risk. Although FHA has implemented a number of controls to prevent ineligible loans from being sold, these controls may miss loans that change status after the eligibility check because FHA staff and contractors do not have a designated time in the process to conduct the eligibility check. Without spacing the timing of the various checks throughout the process, including some checks that occur closer to the bid date, FHA staff and contractors do not have the most reliable and updated data from which to make decisions regarding loan eligibility, and FHA could be selling some ineligible loans. If FHA sells a loan that is ineligible to be sold because of ongoing loss mitigation, it pays a claim for a loan that may become reperforming and never require a claim. Likewise, borrowers could lose access to benefits such as reevaluation for the suite of FHA loss mitigation options.

FHA Has Not Documented All of Its Policies

FHA has begun to centralize its existing written guidance, but policies for when program changes should be evaluated are not documented in this guidance. A July 2017 report from the HUD OIG found that HUD did not develop formal guidance or procedures for its single-family note sales program and recommended that the agency develop and implement formal procedures and guidance for DASP.[43] FHA responded to the OIG that the operations of the DASP sales were documented in a series of procedures used internally by staff and externally by stakeholders.

In May 2018, FHA officials told us that in response to the OIG's recommendation, they were consolidating their current written procedures and guidance into one Asset Sales Handbook to centralize the information for internal and external stakeholders. (See app. III for a description of these documents.) FHA officials told us the key documents governing a DASP sale include the servicer agreement, purchaser

[42]GAO, *Standards for Internal Control in the Federal Government*, GAO-14-704G (Washington, D.C.: Sept. 10, 2014).

[43]Department of Housing and Urban Development, Office of Inspector General, *Distressed Asset Stabilization Program*.

agreement, detailed instructions for bid day, and specific requirements for qualified servicers.

However, we found that if FHA were to compile these existing documents into an Asset Sales Handbook, it would still be missing some important program policies. As of February 2019, FHA officials confirmed that they had no written policies documenting when program changes should be evaluated. When FHA described its process for evaluating program changes, officials stated that the informal practice was to consider changes when planning for a new sale. However, as stated earlier, FHA made a number of changes in 2015 and 2016 but has not held a DASP sale since 2016. FHA officials said the date of the next DASP sale is unknown. FHA also experienced another period when no sales were conducted between 2005 and 2009.

Federal internal control standards require that management implement control activities through policies.[44] This includes documenting in policies the internal control responsibilities of the organization and periodically reviewing policies, procedures, and related control activities for continued relevance and effectiveness in achieving the entity's objectives. For example, the standards state that if there is a significant change in an entity's process, management reviews the process in a timely manner after the change to determine that the control activities are designed and implemented appropriately. However, FHA officials told us that they had not evaluated whether the most recent program changes were effective or should be revised because they were not planning a new sale yet. With several years between sales, written policies for regular consideration and review of program changes can help to ensure that FHA is reviewing the effectiveness of previous changes and controls and considering potential new changes in a timely manner.

FHA Has Not Provided Clear Objectives or Measurable Performance Targets for DASP

FHA has a DASP program objective of maximizing recoveries to the MMI Fund and has some specific targets to assess whether it is meeting this objective. On a quarterly basis, FHA measures how recovery for asset sales compares to foreclosure with REO dispositions and other disposition types, such as short sales and claims without conveyance of

[44]GAO-14-704G.

title. FHA officials explained that they maximize recovery by holding open and competitive auctions for nonperforming single-family loans, with the highest bidder as the winner. In addition, the Office of Risk develops a reserve price—an estimate of the expected REO recovery value of each loan in a sale and a benchmark for comparison with the bids received—to minimize the risk that FHA will not get the best recovery for the loan. In the past, when FHA received a bid below the reserve price, it opted to not sell the pool. As a result, the reserve price serves as a critical target in the agency's determination of whether to sell.

In contrast, FHA has not developed specific targets for meeting what appear to be additional DASP objectives, based on a variety of program documents and recent program changes. In 2016, for example, the HUD Secretary testified before Congress that DASP has a dual goal—"support[ing] recoveries to the [MMI] Fund while preserving homeownership and help[ing] stabilize neighborhoods."[45] Similarly, in HUD's 2016 Post-Sale Report to the FHA Commissioner, HUD explained that it designed DASP "to maximize recoveries to the [MMI Fund], and when possible, help keep borrowers—otherwise headed to foreclosure—in the home."[46] HUD's recent changes to DASP likewise appear to recognize program objectives in addition to maximizing recoveries to the MMI Fund. When HUD extended the prohibition against foreclosure from 6 months to 12 months in 2015, for instance, a HUD press release stated that such changes "not only strengthen the program but help to ensure it continues to serve its intended purposes of supporting the MMI Fund and offering borrowers a second chance at avoiding foreclosure."[47] And when HUD changed DASP in 2016 to prohibit purchasers from abandoning low-value properties in high-foreclosure neighborhoods, it declared that this was done to help stabilize neighborhoods.[48]

[45] Julián Castro, Secretary of Housing and Urban Development, *HUD Accountability*.

[46] Department of Housing and Urban Development, *Report to the Commissioner on Post-Sale Reporting FHA Single Family Loan Sale Program* (Washington, D.C.: Jan. 22, 2016).

[47] Department of Housing and Urban Development, "HUD Announces Changes to Distressed Asset Stabilization Program: HUD requires Investors to delay foreclosure for a year and offers a non-profit only pool sale," HUD No. 15-048 (Washington, D.C.: Apr. 24, 2015).

[48] Department of Housing and Urban Development, "FHA Announces Most Significant Improvements To Date For Distressed Notes Sales Program," HUD No. 16-105 (Washington, D.C.: June 30, 2016).

Despite these repeated department statements that DASP has a "two-fold" goal and multiple "intended purposes," FHA officials told us that preserving homeownership and stabilizing neighborhoods are "ancillary benefits"—positive consequences that flow from DASP's objective of maximizing recoveries for the MMI Fund—but not objectives themselves.[49] Because FHA does not consider homeownership preservation and neighborhood stabilization to be program objectives, the agency has not developed targets to meet them. FHA officials explained that they measure and monitor the extent to which purchasers meet requirements for NSO pools, for instance, by collecting loan outcome data from purchasers for 4 years. These purchasers must have no less than 50 percent of the loans in each NSO pool achieve outcomes such as keeping borrowers in their homes and properties occupied through rentals.[50] However, FHA does not have a similar target for national pools, which represent about 80 percent of the sold loans. FHA requires purchasers of national pools to report on borrower outcomes quarterly for 4 years, but does not measure the extent to which these outcomes meet a specific target and are achieving program objectives.

Prior GAO work identified key attributes of successful performance measures and indicated that performance measures should be clear, have measurable numerical targets, and demonstrate results.[51] In addition, according to federal internal control standards, management should define objectives clearly to enable the identification of risks and define risk tolerances.[52] This includes, for example, defining objectives in specific and measurable terms to allow for the assessment of performance toward achieving objectives. Although FHA officials told us

[49]*See also* https://www.hud.gov/program_offices/housing/comp/asset/hsgloan (accessed Mar. 27, 2019). The website of HUD's Office of Asset Sales states that the DASP "initiative intends to meet the mission and financial objectives of maximizing recoveries to the mutual mortgage insurance fund, reducing claim costs, minimizing the time defaulted assets are held, reducing the number and impact of distressed houses on communities across the country, and keeping homeowners in their homes."

[50]NSO postsale requirements encourage investment in communities hit hardest by the foreclosure crisis to stabilize neighborhoods. As previously noted, some acceptable outcomes include rental to a borrower, gift to a land bank, or loan payoff. HUD informed us that the NSO pool sales had multiple outcomes to achieve the objective of stabilizing neighborhoods with high concentrations of FHA-insured loans, but were not targeted toward achieving any specific outcome for an individual borrower.

[51]GAO, *Tax Administration: IRS Needs to Further Refine Its Tax Filing Season Performance Measures*, GAO-03-143 (Washington, D.C.: Nov. 22, 2002).

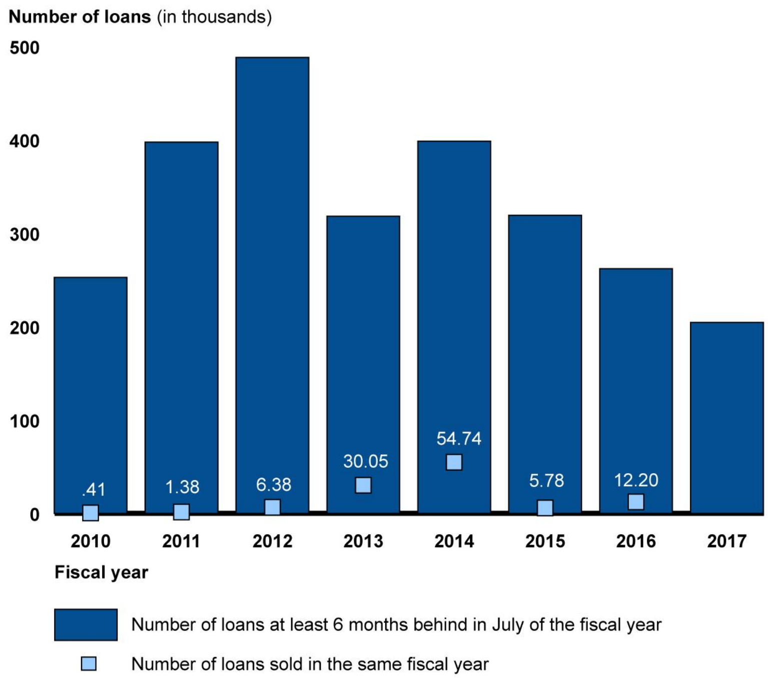
[52]GAO-14-704G.

that DASP has one objective with resulting “ancillary benefits,” it also cited these same benefits as additional program goals and purposes in the recent past. Without clarifying the program’s objectives in light of relevant laws, regulations, and agency statements and setting measurable targets to achieve these objectives, particularly for national pools, FHA cannot ensure that DASP is achieving optimal results.

The Timing of DASP Sales Is Not Informed by Performance Data

FHA has not used performance data to establish criteria for the timing of DASP sales. FHA officials said they have not set criteria for when to hold sales, such as the size of the portfolio of defaulted loans or other considerations. In contrast, Fannie Mae estimates the number of defaulted loans needed to be sold to achieve its goals and assesses market conditions to produce a detailed schedule of sales for the year. Our analysis of FHA’s default monitoring system data shows that several years after the housing crisis, FHA continues to insure a backlog of defaulted loans with six or more missed payments (see fig. 6). FHA officials stated that, in July 2018, FHA had about 300,000 defaulted loans, which is similar to the number of loans as in years when the DASP program was active. Most servicers we talked to told us that they preferred selling defaulted loans through DASP rather than taking them through the REO disposition process due to the servicing responsibility and costs associated with foreclosure. However, FHA officials told us that they did not know when the next sale would be.

Figure 6: FHA-Insured Loans 6 or More Months Past Due and Number of Loans Sold in the Distressed Asset Stabilization Program, Fiscal Years 2010–2017



Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

The GPRA Modernization Act of 2010 established an expectation that agencies use evidence and performance data in decision making.[53] Specifically, the act changed agency performance management roles, planning and review processes, and reporting to ensure that agencies use evidence and performance data in decision making. Our prior work has stated that although the act's requirements apply at the agency-wide level, they can also serve as leading practices at other organizational levels, such as component agencies, offices, programs, and projects.[54]

Because specific criteria for when to hold sales are not in place, FHA's timing of and decisions to hold DASP sales were inconsistent. FHA held

[53]Pub. L. No. 111-352, 124 Stat. 3866 (Jan. 4, 2011). The GPRA Modernization Act of 2010 updated and expanded the Government Performance and Results Act of 1993 (GPRA).

[54]GAO, *Managing for Results: Further Progress Made in Implementing the GPRA Modernization Act, but Additional Actions Needed to Address Pressing Governance Challenges*, GAO-17-775 (Washington, D.C.: Sept. 29, 2017).

16 DASP sales between 2010 and 2016.[55] These sales occurred at varying frequencies. For example, FHA held between one and four sales per year, and the number of months between sales ranged from 2 to 10 months. Officials stated that DASP should be used to address a large buildup of defaulted loans and because of its lower loss severity compared with REO dispositions. Officials also told us they have not developed criteria because FHA operates DASP as a pilot program and continues to make changes after each sale. However, without analyzing the performance data of the portfolio of defaulted loans to identify criteria for the timing of DASP sales—even as a pilot program—FHA cannot make fully informed decisions about when to hold sales and may not be optimizing its use of the program in achieving its objectives.

FHA Does Not Evaluate Loan Outcomes, and Sold Loans Experienced Foreclosure at a Higher Rate Than Unsold Loans in Some Cases

FHA does not evaluate loan outcomes for loans sold through DASP and does not monitor the modifications offered by individual purchasers. Our analysis of FHA outcome data found that in aggregate, sold loans were less likely to avoid foreclosure than similar, unsold loans.[56] However, our analysis also found that for some sales and some purchasers, sold loans were more likely to avoid foreclosure compared to unsold loans.[57] A

[55]We counted FHA's 2014 sales as four because its two sales each were each divided into parts 1 and 2 with different bid and settlement dates. However, for other sales, we counted smaller differences between bid and settlement dates as a single sale—for example, when FHA bid dates were different for NSO and national pools to allow for extra time for bidding on NSO pools.

[56]Outcomes where foreclosure is avoided include reperforming, temporary actions such as forbearance, and short sales or deeds-in-lieu of foreclosure. We refer to this group of outcomes as foreclosure avoidance throughout this report.

[57]Our analysis of loan outcomes included defaulted loans that transferred to a purchaser. This may include the small number of loans that transferred but were not eligible for sale that we discussed earlier in this report. The matching process to find similar unsold loans included length of delinquency, location, occupancy, current LTV ratio, and loan origination year. We did not include some borrower characteristics potentially relevant to loan outcomes, such as current debt-to-income ratio at the time of eligibility, because FHA data systems did not contain them for unsold loans and FHA does not include them as criteria for DASP eligibility. Our results describe relationships between DASP participation and loan outcomes and should be interpreted accordingly.

number of factors may contribute to differences in outcomes between sold and unsold loans by sale and purchaser, including increased postsale servicing and reporting requirements and the types of modifications offered by individual purchasers.

FHA Does Not Compare Outcomes for Sold Defaulted Loans to Similar, Unsold Loans

FHA does not use the data it collects to evaluate outcomes for loans sold through DASP compared to outcomes for similar, unsold loans. We reviewed a contractor report and FHA's periodic reports on DASP outcomes and found that they lacked critical outcome information. Specifically, in 2017, a contractor analyzed home equity preserved as a result of the foreclosures avoided through DASP, and then estimated the effect of avoided foreclosures on surrounding areas. However, the contractor did not estimate the effect of foreclosure avoidance relative to unsold loans. Borrowers with unsold loans may also avoid foreclosure, for example, if their circumstances change and they become eligible for foreclosure mitigation options again. FHA's periodic reports on outcomes also do not compare outcomes between sold and unsold loans.

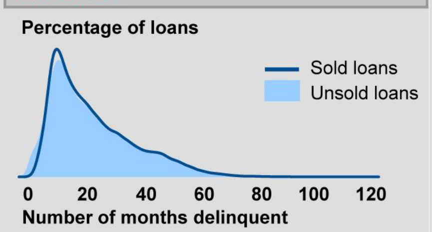
Sold and Unsold Loans Have Similar Characteristics

We compared outcomes for loans sold through the Distressed Asset Stabilization Program (DASP) to outcomes for unsold loans in order to estimate what would have happened in the absence of DASP. We used statistical matching and modeling methods to create a separate comparison group of unsold loans for each of the seven DASP sales that occurred between 2013 and 2016. We found a high rate of similarity between the sold and comparison unsold loans—see chart below for match by delinquency. The matching was based on several factors that could affect the likelihood of foreclosure or foreclosure avoidance, measured generally about 6 months prior to transfer, including

- length of delinquency,
- occupancy status,
- location,
- Federal Housing Administration (FHA) servicer,
- estimated current loan-to-value ratio, and
- loan origination year.

The matched comparison attempted to minimize differences between sold and unsold loans across these factors in order to isolate the effect on outcomes of being sold out of FHA's insurance program.

MATCHED



Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

We compared purchaser reported outcomes for sold loans and servicer reported statuses for unsold loans at monthly intervals following the transfer of the sold loan to the purchaser (servicing transfer date).

Source: GAO. | GAO-19-228

FHA officials told us they had not conducted such a comparison because they expect all loans eligible for sale to be foreclosed. A foreclosed mortgage with an REO property disposition results in the greatest losses to the MMI Fund. However, our analysis of FHA data does not support these claims. When we compared loans sold through DASP to unsold loans with similar characteristics, we found that some unsold loans achieved an outcome other than foreclosure—21 to about 34 percent at various times within a 4-year period.[58]

FHA officials also told us that they evaluate loan outcomes by tracking the extent to which purchasers are meeting NSO requirements. However, because about 80 percent of loans were not sold through NSO pools, FHA's evaluation covers only about 20 percent of DASP loans. In addition, FHA's NSO requirements are targeted toward achieving specific outcomes for a property or community—such as donating the property to a land bank—rather than an individual loan or borrower. Our analysis indicates that sold loans had higher foreclosure rates than unsold loans regardless of whether they were sold through national or NSO pools.

We have previously found that evaluations often involve creating a comparison group.[59] Furthermore, HUD policy states that its evaluations use methods that isolate to the greatest extent possible the effects of the program from other influences.[60] FHA could use loans not sold through DASP to estimate what outcomes would have been observed in the absence of the program and the associated losses to the MMI Fund. A process to evaluate outcomes for sold loans relative to similar, unsold loans could help FHA determine whether DASP is meeting its financial objective of maximizing recoveries to the MMI Fund and understand the extent to which DASP is helping struggling homeowners.

[58]The rates and probabilities associated with achieving different outcomes we discuss in this report are based on the estimated probability of transitioning from delinquency at the servicing transfer date to any given outcome at a future follow-up time. See apps. I and V for additional information on the methodology we used to estimate probabilities and compare outcomes.

[59]GAO, *Designing Evaluations: 2012 Revision*, GAO-12-208G (Washington, D.C.: Jan. 31, 2012).

[60]81 Fed. Reg. 87,949 (Dec. 6, 2016).

FHA Does Not Monitor the Modifications Offered by Individual Purchasers or Collect All Data Needed to Evaluate Their Sustainability

In its reports on DASP outcomes, FHA periodically reports at an aggregate level the change in monthly payments resulting from the modifications offered by purchasers. However, FHA does not track or report the change in payments by individual purchasers. A 2016 white paper prepared by the Department of the Treasury in conjunction with HUD and FHFA defined loss mitigation sustainability as offering solutions that work the first time.[61] It further stated that modifications that provide meaningful payment reduction will decrease the chance of a homeowner redefaulting. Additionally, we reported in 2012 that the change in a borrower's monthly mortgage payment is among the factors that can significantly influence the success of a modification.[62] Since 2015, FHA has required purchasers to offer eligible borrowers HAMP-like modifications or substantially similar modifications designed to lower borrowers' monthly payments to an affordable and sustainable amount.

However, FHA does not monitor the extent to which individual purchasers complied with the requirement to offer payment-lowering modifications to eligible borrowers. We found that while the majority of the modifications offered to borrowers whose loans were sold in 2015 or later decreased monthly payments by more than 20 percent, about 8 percent of modifications increased or did not result in a change in payment.[63] Not all borrowers are eligible for a payment-lowering modification, and, according to FHA officials, some modifications could increase monthly payments for borrowers with a large number of missed payments. As discussed later, our analysis found that outcomes can vary greatly by

[61]Department of the Treasury, Department of Housing and Urban Development, and Federal Housing Finance Agency, *Guiding Principles for the Future of Loss Mitigation: How the Lessons Learned from the Financial Crisis Can Influence the Path Forward* (Washington, D.C.: July 25, 2016).

[62]GAO, *Foreclosure Mitigation: Agencies Could Improve Effectiveness of Federal Efforts with Additional Data Collection and Analysis*, GAO-12-296 (Washington, D.C.: June 28, 2012).

[63]Some loans we reviewed received more than one postsale modification. We included all unique modifications by loan in our analysis, and calculated the change in payment for each modification based on the original, presale monthly payment and the postmodification payment.

purchaser, and purchasers may not offer comparable modification options. See appendix IV for information on the types of modifications purchasers have used.

Furthermore, FHA may not have the data it needs to evaluate whether payment-lowering modifications offered by purchasers remain sustainable. In the second 2016 sale, FHA began requiring that modified interest rates be fixed for at least 5 years and thereafter that they not increase by more than 1 percent per year. FHA also began requiring purchasers to report data related to interest rates for modified loans, including the modified interest rate and the number of years it would remain fixed. However, based on our review of reported modification information, none of the purchasers from this sale reported these data.[64] Additionally, about 22 percent of the modifications offered to borrowers whose loans were sold in the 2015 sale or later included a deferment.[65] Under deferment, borrowers are allowed to temporarily stop making payments toward some or all of their principal balance, interest, or other indebtedness, and deferment may result in a balloon payment at a later date. Other than type of deferment, FHA does not require purchasers to report details of the deferment or the effect on payments following the deferral period. As a result, we could not determine the long-term effect on monthly payments for many modifications offered by purchasers.[66] Some advocacy group representatives we spoke with expressed concerns about purchasers offering unsustainable modifications. For example, one advocacy group representative told us that some purchasers may offer modifications that initially lower monthly payments but later adjust to levels that are higher than what they were prior to modification.

FHA requires purchasers to report some information that would allow it to determine the types of modifications offered by individual purchasers as well as the sustainability of these modifications. As mentioned previously, FHA officials said they expect all loans eligible for sale to be foreclosed

[64]We received four quarterly reports for four out of five purchasers generally through the first quarter of 2018.

[65]See app. IV for more information on the modification actions reported by purchasers.

[66]Our analysis of modification data is limited to modifications that were reported using modification characteristic codes introduced in 2016, about 95 percent of reported modifications in 2013–2016. The FHA contractor that processes postsale reported data told us that many purchasers began reporting with the new characteristic code for prior modifications. For a detailed explanation of our methodology, see app. I.

and consider any nonforeclosure outcome achieved by purchasers to be an improvement. This expectation may deter FHA from evaluating the modifications offered by individual purchasers or the sustainability of modifications. Federal internal control standards state that management should use quality information to achieve its objectives, which includes identifying information requirements needed to achieve the objectives, evaluating the data it receives from internal and external sources to ensure they are sufficiently reliable for use in making informed decisions, and using the data for effective monitoring.[67] Without monitoring individual purchasers' modifications or collecting key data elements, FHA cannot determine whether purchasers are meeting the postsale requirements or the extent to which eligible homeowners obtain sustainable modifications.

Sold Loans Were More Likely to Experience Foreclosure Than Unsold Loans in the Aggregate, but Not for Later Sales and Some Purchasers

Our analysis showed that sold loans were more likely to experience foreclosure than similar, unsold loans overall within a 48-month period after servicing transfer (see fig. 7). In the aggregate, the probability of experiencing foreclosure was greater overall for sold loans compared to unsold loans. For example, the probability of foreclosure 24 months after the servicing transfer date was 43 percent for sold loans and about 36 percent for unsold loans, a statistically significant difference.[68] Additionally, we analyzed the probability that a borrower reperformed, received a temporary action such as forbearance or a trial modification, or received a short sale or deed-in-lieu of foreclosure—foreclosure avoidance outcomes. In the aggregate, the probability that sold loans avoided foreclosure ranged from about 15 to 24 percent at various times within a 3-year period beginning 12 months after the servicing transfer

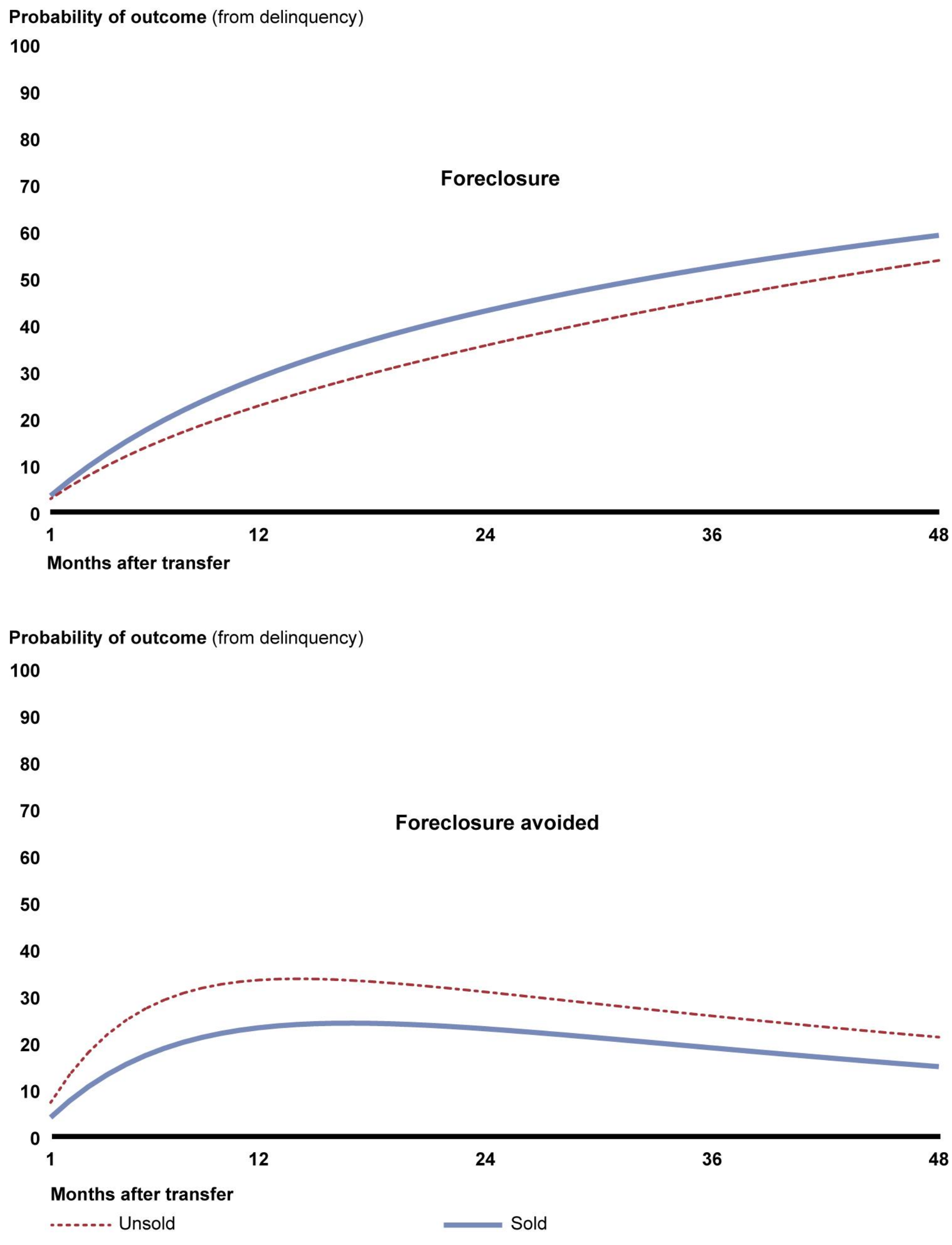
[67]GAO-14-704G.

[68]See app. VI for additional estimated outcome probabilities for sold loans and unsold loans, in addition to measures of statistical uncertainty.

date.[69] Foreclosure avoidance rates for unsold loans were higher, ranging from 21 to about 34 percent during this period.

[69]Our analysis showed that over time, the probability of reperforming and receiving a temporary action increased initially and then declined for both sold and unsold loans. Our analysis did not seek to conduct a definitive evaluation of the causal impacts on outcomes of being sold through DASP. Instead, we sought to improve on simple comparisons of outcomes between sold and unsold loans by constructing a comparison group of unsold loans that were similar to sold loans on loan-level characteristics known to affect the likelihood of foreclosure.

Figure 7: Foreclosure and Foreclosure Avoidance Outcomes for Loans Sold through Distressed Asset Stabilization Program Sales and Similar, Unsold Loans, Fiscal Years 2013–2016



Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

Notes: Graphs represent the estimated probabilities of transitioning from delinquency at the servicing transfer date to a given outcome at a future follow-up time, as estimated by statistical models. Foreclosure avoidance estimates are based on loans that were reperforming, received a temporary action, or ended in a short sale or deed-in-lieu of foreclosure. Foreclosure and foreclosure avoidance estimates do not include loans that were unresolved or paid-in-full and some loans with statuses that we could not compare across sold and unsold loans.

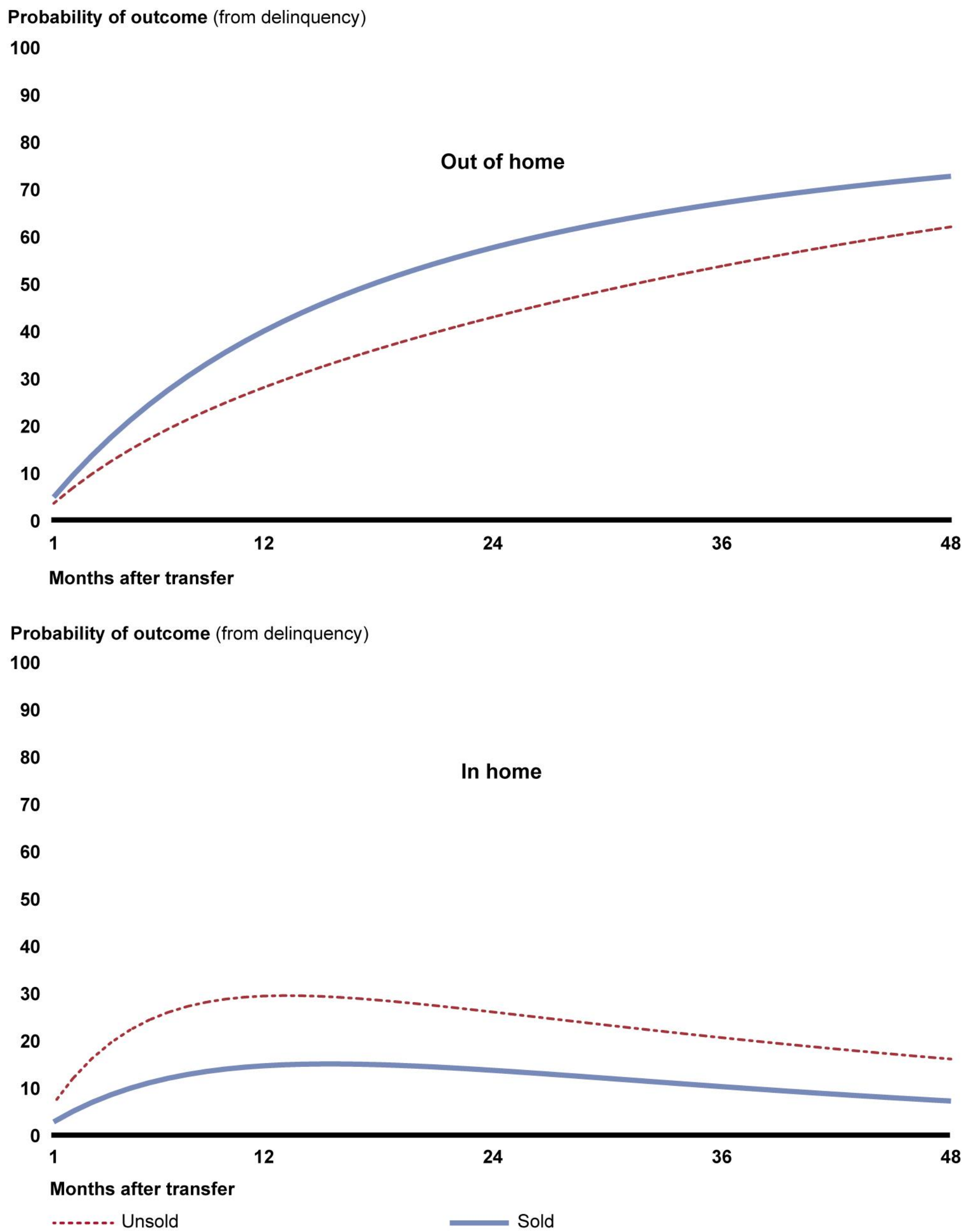
We found that sold loans were less likely to result in owners staying in their homes compared to unsold loans due to out-of-home actions (see fig. 8).[70] The probability of reperforming was greater overall for unsold loans compared to sold loans. Additionally, unsold loans were more likely to receive an in-home temporary action.[71] In contrast, sold loans were more likely to result in a short sale or a deed-in-lieu of foreclosure, through which borrowers avoid foreclosure but lose the title to their homes. See appendix VI for a comparison of reperforming, short sale or deed-in-lieu of foreclosure, and temporary action outcomes between sold loans and unsold loans.[72]

[70]We based out-of-home outcome estimates on loans that were foreclosed or that ended in a short sale or deed-in-lieu of foreclosure. We based in-home outcome estimates on loans that were reperforming or that had received a temporary action.

[71]FHA's Servicing Handbook requires servicers to offer forbearance to eligible borrowers before evaluating them for a modification. The Servicing Handbook also requires borrowers to make at least three consecutive monthly payments under a trial payment plan before implementing a modification.

[72]We also show selected outcomes by loan-level characteristics in app. VI.

Figure 8: Out-of-Home and In-Home Outcomes for Loans Sold through Distressed Asset Stabilization Program Sales and Similar, Unsold Loans, Fiscal Years 2013–2016



Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

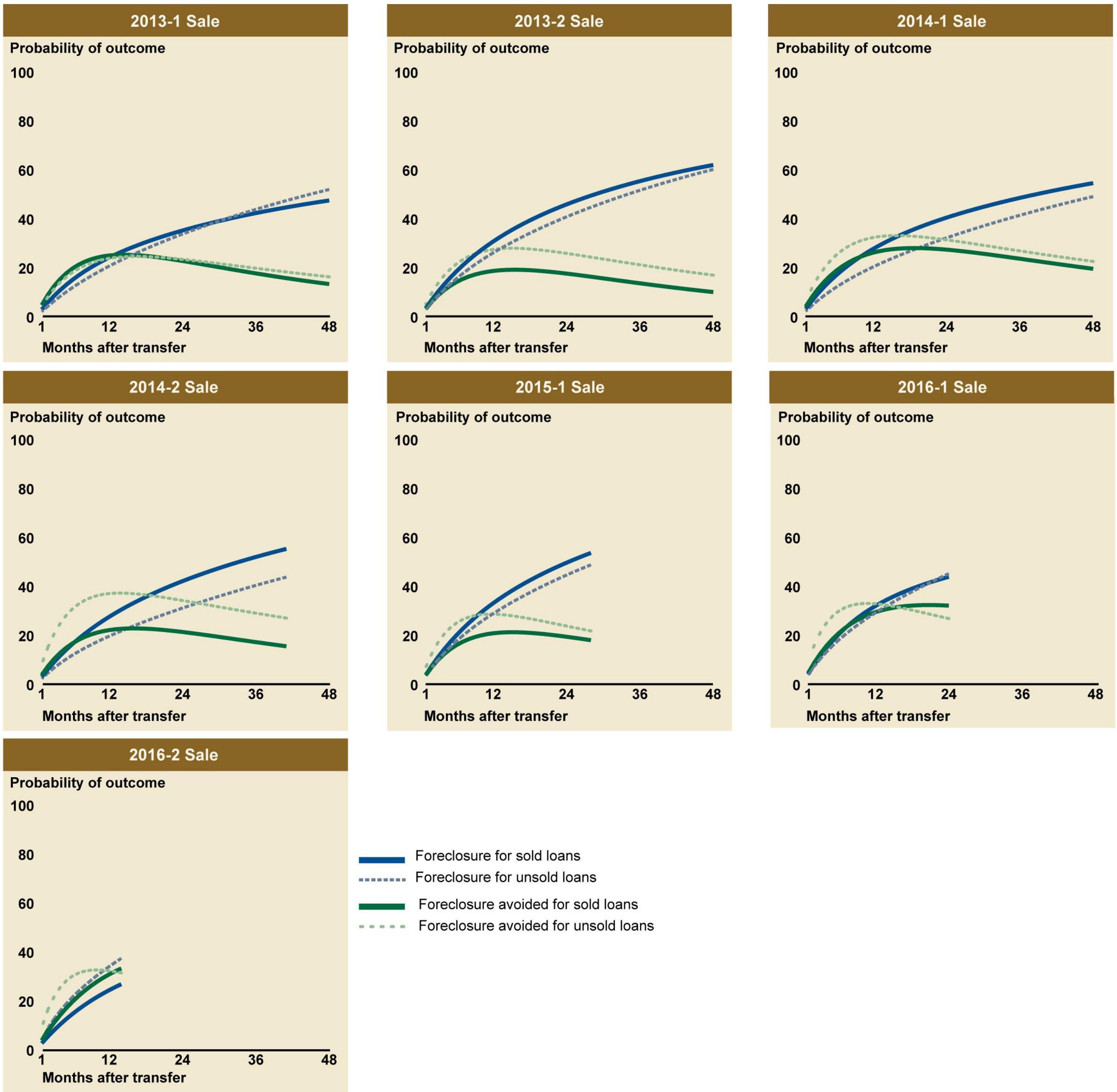
Notes: Graphs represent the estimated probabilities of transitioning from delinquency at the servicing transfer date to a given outcome at a future follow-up time, as estimated by statistical models. Out-of-home estimates are based on loans that were foreclosed or that ended in a short sale or deed-in-lieu of foreclosure. In-home estimates are based on loans that were reperforming or that received a temporary action. Out-of-home and in-home estimates do not include loans that were unresolved or paid-in-full and some loans with statuses that we could not compare across sold and unsold loans.

Although we found that sold loans were more likely to experience foreclosure in aggregate, for later sales, after about 12 months, rates of avoiding foreclosure were similar or greater for sold loans compared to unsold loans, and for some purchasers rates of foreclosure were similar or smaller for sold loans compared to unsold loans.[73] For the second 2013 sale through the 2015 sale, we found that sold loans were less likely to avoid foreclosure compared to unsold loans (see fig. 9).[74] In the 2016 sales, however, after about 12 months the sold loans were more likely to avoid foreclosure compared to similar unsold loans. Further, after an additional 12 months—24 months after the servicing transfer date—loans sold in the first sale in 2016 avoided foreclosure at a rate that was 5 percentage points greater than unsold loans. Loans sold in the second sale in 2016 were also consistently less likely to foreclose compared to unsold loans. We discuss potential explanations for these differences among sales in the section that follows.

[73] Our analysis did not account for loan characteristics that could vary across sales and purchasers, such as delinquency or loan-to-value ratio. See apps. I and V for additional information on our methodology and its limitations.

[74] In the two sales in 2016, a purchaser with higher reperforming and lower foreclosure outcomes compared to other purchasers bought 82 and 56 percent of the loans sold, as discussed later.

Figure 9: Foreclosure and Foreclosure Avoidance Outcomes by Distressed Asset Stabilization Program Sale and Similar, Unsold Loans, Fiscal Years 2013–2016



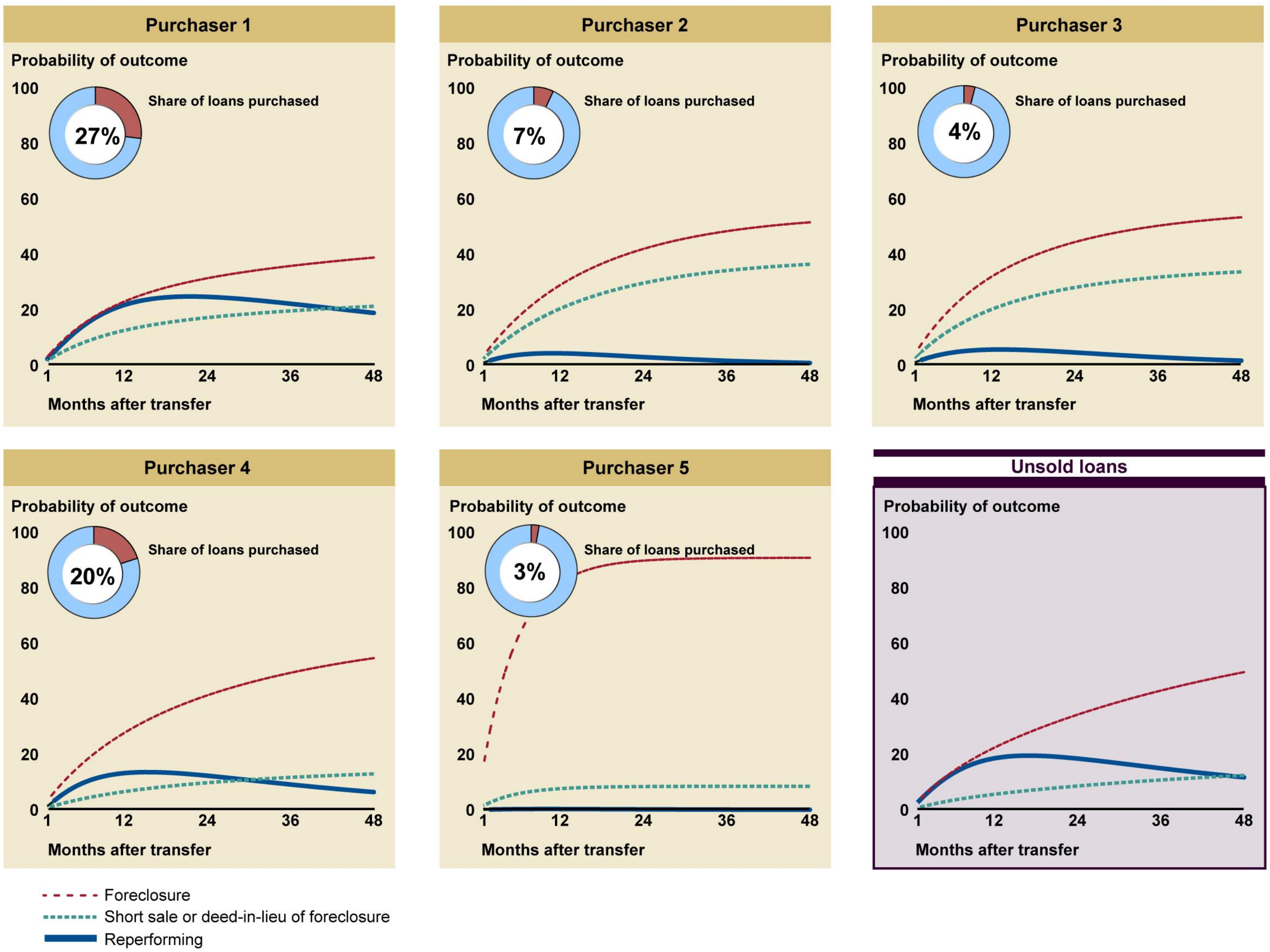
Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

Notes: Graphs represent the estimated probabilities of transitioning from delinquency at the servicing transfer date to a given outcome at a future follow-up time, as estimated by statistical models. Foreclosure avoidance estimates are based on loans that were reperforming, received a temporary action, or ended in a short sale or deed-in-lieu of foreclosure. Foreclosure and foreclosure avoidance estimates do not include loans that were unresolved or paid-in-full and some loans with statuses that we could not compare across sold and unsold loans.

We also found differences in the rates of foreclosure and some outcomes that avoid foreclosure achieved by different purchasers (see fig. 10).[75] For example, the probability of a loan reperforming 24 months after the servicing transfer date ranged from about 0.2 to about 25 percent for selected DASP purchasers. While most of these purchasers fell below the reperforming estimate of 18 percent for similar, unsold loans, one purchaser exceeded this rate. Foreclosure and short sale or deed-in-lieu of foreclosure probabilities 24 months after the servicing transfer date also differed among these purchasers, ranging from 31 to about 90 percent and from 8 to about 30 percent, respectively. These rates generally exceeded the foreclosure and short sale or deed-in-lieu of foreclosure estimates for similar, unsold loans (34 and about 9 percent, respectively).

[75]We selected individual purchasers' outcomes to highlight based on a number of criteria, including the amount of total unpaid principal balance purchased at bid time and other factors. These purchasers held about 61 percent of the loans purchased.

Figure 10: Sold Loan Outcomes by Selected Purchasers in Distressed Asset Stabilization Program Sales Compared with Similar Unsold Loans, Fiscal Years 2013–2016



Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

Note: Graphs represent the estimated probabilities of transitioning from delinquency at the servicing transfer date to a given outcome at a future follow-up time, as estimated by statistical models.

Purchasers told us that the outcome they pursue for a loan depends in part on the borrower's preference. According to purchasers, for borrowers who want to keep their homes, the best option is to try to modify the loan and achieve reperformance status. Purchasers also said that for borrowers who do not want a modification or for whom a modification is not possible, they may pursue a short sale or deed-in-lieu of foreclosure, which have a less negative effect on borrowers' credit than a foreclosure. Representatives of a consumer advocacy group and a research organization told us that foreclosure has the most negative effect on the borrower's credit. A Fair Isaac Corporation (FICO) study found that, in some cases, foreclosure had a more negative effect on comparable borrowers' credit profiles than a short sale or deed-in-lieu of foreclosure.[76]

FHA officials, purchasers, and servicers said that purchasers have more flexibility and are in a better position than FHA servicers to provide more generous mitigation options. A senior FHA official emphasized that purchasers have more financial flexibility because they generally buy the defaulted loans at a discount from FHA (that is, less than the unpaid principal balance). According to different DASP stakeholders, purchasers can

- forgive a portion of the principal,
- offer a deferment that is greater than 30 percent of unpaid principal balance,
- extend the term of a loan beyond 30 years,
- reduce the interest rate below the current market rate,
- offer more than one modification in a 2-year period, and
- offer more generous terms for deeds-in-lieu of foreclosure and short sales.

In contrast, FHA is restricted in the loss mitigation options it can offer. FHA officials told us that it does not offer debt forgiveness, but may defer

[76]The FICO study simulated various types of mortgage delinquencies on three representative credit bureau profiles of consumers scoring 680, 720, and 780, and found that foreclosure had a more negative effect on all three credit profiles than a short sale or deed-in-lieu of foreclosure for which the sale price was greater than or equal to the unpaid mortgage balance (Fair Isaac Corporation, "Research Looks at How Mortgage Delinquencies Affect Scores," *FICO Blog*, accessed November 9, 2018, https://www.fico.com/blogs/risk-compliance/research-looks-at-how-mortgage-delinquencies-affect-scores/). Furthermore, borrowers must generally wait 7 years before they are eligible for a new loan sellable to Fannie Mae following a foreclosure, versus 4 years following a short sale or deed-in-lieu of foreclosure.

a limited amount of principal through a partial claim.[77] FHA officials also said they generally set loan term ranges to meet requirements for securitization in the secondary mortgage market, including a fixed interest rate and a 30-year term. In addition, FHA's loss mitigation alternatives to foreclosure, such as short sales and deeds-in-lieu of foreclosure, are restricted or approved by FHA based on their chance of success and the associated financial effect on the MMI Fund.

However, representatives of some advocacy groups told us that borrowers generally benefit from their loans remaining insured and unsold because FHA's loss mitigation process is more transparent. They said that information on the loss mitigation process under FHA is publicly available, while it can be difficult to access information about some purchasers' loss mitigation processes. Also, starting in 2012, FHA policies attempted to provide a more consistent loss mitigation process for borrowers across all FHA servicers. In contrast, purchasers can have varying processes for offering loss mitigation options.

Various Factors May Contribute to Differences in Outcomes by DASP Sale and Purchaser

A number of factors may contribute to differences in outcomes between sold and unsold loans by DASP sale and purchaser, such as increased postsale servicing and reporting requirements, variations in purchaser participation across sales, and differences in the modifications offered by purchasers.[78]

[77]Under a partial claim, servicers may advance funds on behalf of a borrower to reinstate a loan. FHA reimburses the servicer for the partial claim and executes an interest-free subordinate lien for the amount, which is payable when the property is sold or the first mortgage is paid off. The amount of the subordinate lien cannot exceed 30 percent of the unpaid principal balance. See 12 U.S.C. § 1715u(b). FHA may elect to forgive the partial claim mortgage debt depending on certain circumstances.

[78]While we can provide examples of possible qualitative explanations for why the association between loan sales and outcomes varied by sale and purchaser, we did not seek to estimate the causal effect of these factors. Since the factors may be correlated—for instance, increased postsale requirements and changes in purchaser participation—our qualitative analysis cannot determine the exact cause. See app. I for a discussion of the limitations.

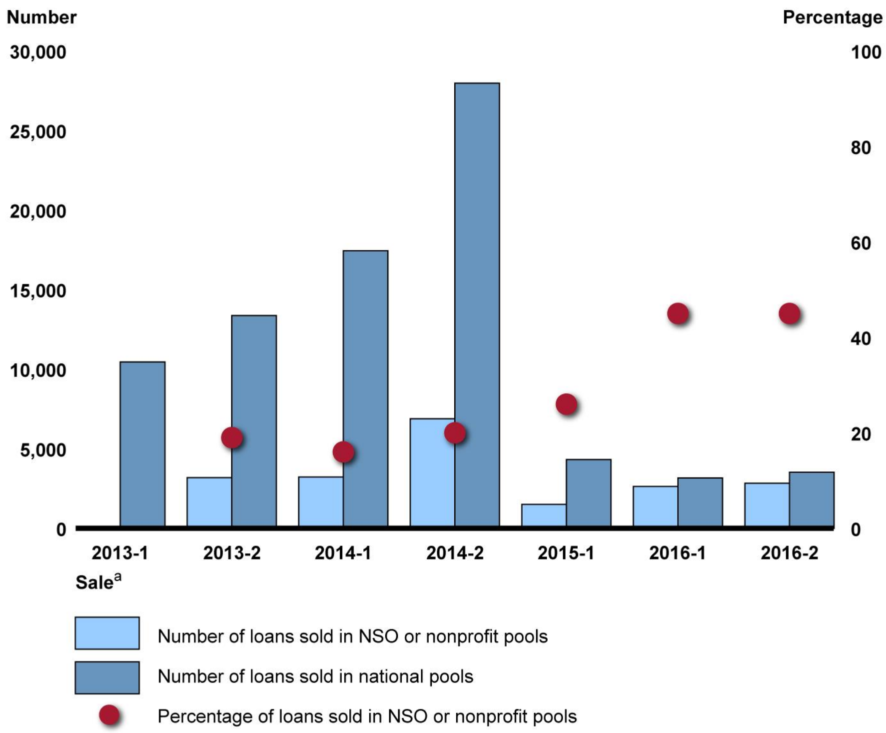
FHA Has Expanded Postsale Requirements and Use of NSO Pools

Changes in postsale servicing requirements may account for higher reperforming rates for sold loans in the 2016 sales. As discussed previously, FHA introduced additional servicing requirements in 2015 aimed at offering additional protections to borrowers whose loans were sold through DASP. For example, FHA began requiring purchasers to evaluate borrowers for HAMP or substantially similar modifications aimed at lowering borrowers' monthly payments and offer these modifications to eligible borrowers.

Further, the share of loans sold through NSO pools relative to national pools has increased, which may also account for higher reperforming rates for sold loans in the 2016 sales. As noted previously, NSO and nonprofit pools have additional postsale outcome requirements. We compared outcomes for loans sold in NSO pools to outcomes for loans sold in national pools and found that loans sold in NSO pools were more likely to reperform, possibly due to higher occupancy rates in NSO pools compared with national pools.[79] As shown in figure 11, the share of loans sold through NSO and nonprofit pools relative to loans sold through national pools increased between 2013 and 2016, from about 12 percent of the total loans in our scope for the 2013 sales to about 45 percent of loans in the 2016 sales.

[79]A modification is easier to accomplish when the property is occupied. We found a moderate negative correlation between national pools and occupancy. FHA's stated pool occupancy for NSO and nonprofit pools since 2015 was 100 percent; in earlier sales this occupancy ranged from 45 to 100 percent.

Figure 11: Number of Loans Sold through Neighborhood Stabilization Outcome (NSO) and Nonprofit Pools Relative to National Pools in Distressed Asset Stabilization Program Sales, Fiscal Years 2013–2016



Source: GAO analysis of Federal Housing Administration (FHA) Postsale Reporting data. | GAO-19-228

Note: The figure includes the sold loans in the scope of our analysis of outcomes for sold and similar, unsold loans.

[a]Sale refers to the fiscal year and the sale number.

In addition, FHA introduced a reporting requirement in 2015 that purchasers continue reporting the outcome status of loans even after selling them to new buyers, as opposed to reporting the loans as resold with no further outcome updates. Purchasers may have returned these loans to performing status before selling them because performing loans are more profitable, but the performing status would not have been reported before 2015. The use of resales as a status was substantially lower in the second sale in 2016 compared to the first sale in 2013—0.04 percent of reported statuses compared to 29 percent of reported statuses.[80] This change could be reflected in the higher reperforming outcomes we observed for sold loans in 2016.[81]

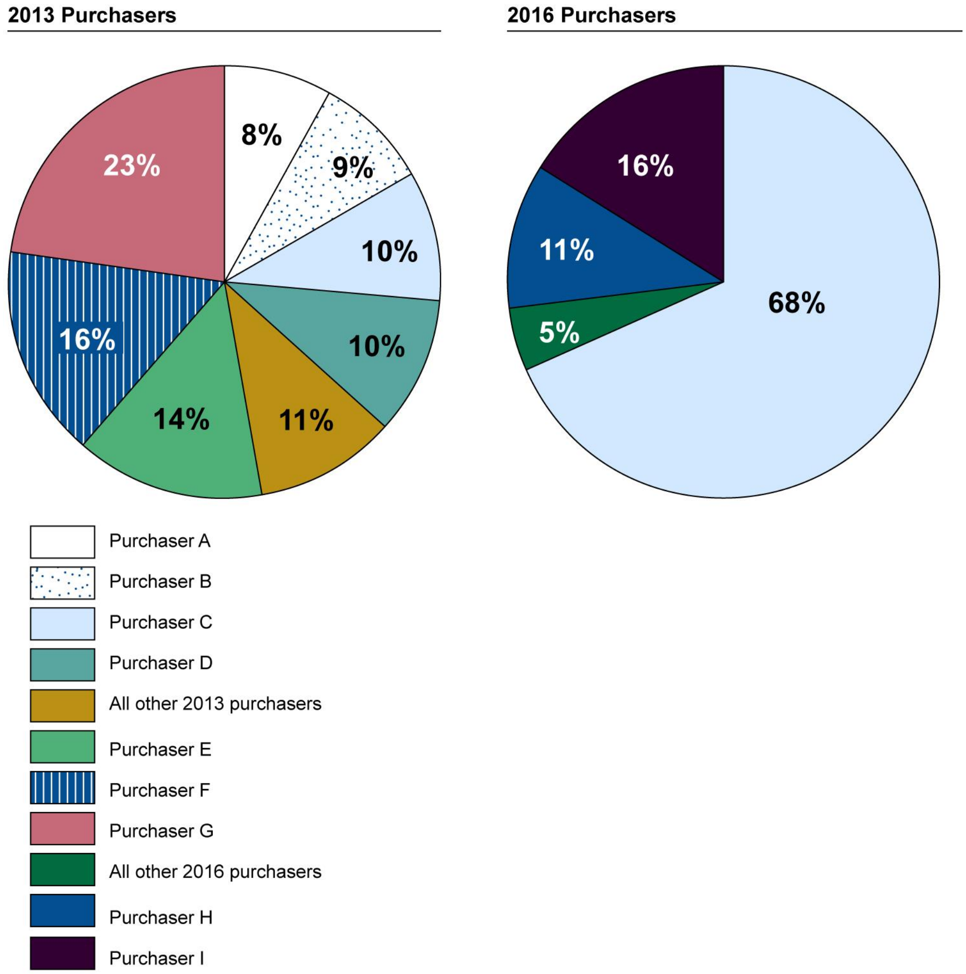
Purchasers Varied across Individual Sales and May Not Have Offered Comparable Modifications

Our analysis indicated that individual purchasers did not consistently buy loans across sales and the share of loans bought by individual purchasers varied. For example, about 42 percent of the purchasers in our scope bought loans in one sale, while about 27 percent of purchasers bought loans in three or more sales. The share of loans bought by individual purchasers has also varied by sale (fig. 12). For example, one purchaser bought about 4 percent of the loans sold in the second sale in 2013 but about 82 percent of the loans sold in the first sale in 2016. This purchaser had higher reperforming and lower foreclosure outcomes compared to other purchasers.

[80] The use of resales as a status was also higher in the 2014 sales.

[81] Additionally, our results could undercount reperforming sold loans for earlier sales because we categorized loans sold by the purchaser as “other.”

Figure 12: Share of Sold Loans Bought by Distressed Asset Stabilization Program Purchasers, Fiscal Years 2013 and 2016



Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

Note: All other purchasers include purchasers who bought less than 4 percent of loans in either the 2013 or the 2016 sales. The figure includes the sold loans in the scope of our analysis of outcomes for sold and similar, unsold loans.

In addition, purchasers may not consistently offer modification options. Approximately 18 percent of the sold loans in our scope received one or more modifications. However, individual purchasers offered modifications at varying rates, from no modifications to 46 percent of the loans they purchased.[82] Our analysis also indicates that the type of modifications

[82]Overall purchasers offer modifications at an average rate of 15 percent.

offered may differ by purchaser. For example, we found that about 88 percent of the modifications that had decreased monthly payments by 30 percent or more were offered by two of the 25 purchasers that reported modifying loans. In addition, the share of modifications offered by individual purchasers that resulted in no payment change or an increase in payment varied. For example, eight purchasers reported either no change or an increase in payment in 51 to 75 percent of the modifications they offered. In contrast, three other purchasers reported either no change in payment or an increase in payment in less than 10 percent of their modifications.

Purchasers' investment goals and expertise could affect borrower outcomes. DASP purchasers include investment firms, rental housing companies, and nonprofit organizations with varying investment goals.[83] In interviews, purchasers cited various goals for purchased loans. For example, an executive of a nonprofit organization said its primary goal was to help borrowers avoid foreclosure, while representatives of an investment firm told us that their goal was to maximize the return for each purchased loan. A representative of one advocacy group told us that purchasers' different areas of expertise could make different foreclosure and foreclosure avoidance options more or less profitable for them. For example, purchasers with an extensive background in loan servicing may be able to offer modifications at a lower cost, while rental companies may consider DASP as a source for inventory for properties to rent if loss mitigation fails.

Additionally, purchasers can have varying levels of success in contacting borrowers to discuss modifications or disposition options for the loans they purchased. Most purchasers noted that it was often difficult to make contact with borrowers because houses were vacant or borrowers avoided contact. For example, one purchaser said it was unable to reach about 25 percent of borrowers for the loans it purchased. Another purchaser said it was unable to reach about half of the borrowers. Furthermore, while several purchasers said they primarily contacted borrowers via the notice of servicing transfer and by phone, one purchaser also said that a more successful outreach method involved in-person visits to borrowers' homes, but that such visits may not always be feasible due to resource constraints.

[83]Three nonprofit organizations purchased loans for the DASP sales and pools included in the scope of our comparison analysis of outcomes. These nonprofits purchased less than 1 percent of the loans in our scope.

FHA's Current Practices May Not Optimize Savings to the MMI Fund, and the Effect of Some Changes Is Unclear

FHA May Be Recovering Less for the MMI Fund Than It Could Due to Its Scheduling and Reserve Pricing Practices

Scheduling

FHA announces bid dates in the Federal Register and industry publications but does not communicate long-range notice of upcoming sales. FHA held multiple sales in 2011, 2012, 2013, 2014, and 2016, but the sales were not held at set intervals or at set dates throughout the years. FHA has not held any DASP sales since September 2016, and officials stated that they do not know when FHA will hold another sale.[84]

Our interviews indicate that communicating long-range notice of sales could help keep participation robust and increase bid amounts. One purchaser told us that it was eager for FHA to restart DASP sales. However, purchasers would like to receive additional notice of sales. One purchaser told us that additional notice of FHA sales would allow it the time to plan or raise additional capital needed to participate in a DASP sale. Another purchaser said that, without knowledge of when another sale will occur, it will invest elsewhere. Losing bidders to other entities' sales could affect bid amounts in DASP sales. According to economic literature, increasing the number of bidders in an auction generally should increase bid amounts—a financial objective for the program.

Federal internal control standards state that management should externally communicate the necessary quality information so that external parties can help the entity achieve its objectives and address related risks.[85] For example, although Fannie Mae does not publish an annual schedule, market participants know when to expect Fannie Mae sales

[84]As previously noted, FHA continues to insure defaulted mortgages that would meet eligibility if FHA decided to hold a sale.

[85]GAO-14-704G.

because it has held them multiple times a year. In contrast, FHA does not hold regular sales or signal to the market when it will hold its next sale through its outreach because DASP remains a pilot program. FHA officials said they change program parameters with each sale, so it is difficult to schedule sales in advance. We previously noted that, even implementing DASP as a pilot program, FHA could use performance data to establish criteria for the timing of sales and to help optimize the use of the program to achieve its objectives. Similarly, by communicating long-range notice of upcoming sales to market participants, FHA could encourage bidder participation and potentially help meet its objective of maximizing recoveries to the MMI Fund. As discussed in appendix VII, characteristics of successful auctions include attracting sufficient interest in the auction and in designing the auction to meet its objectives. Without communicating long-range notice, FHA may be recovering less than it could for the MMI Fund.

Reserve Pricing

FHA sets reserve prices—a minimum amount that it is willing to accept as the winning bid—to help ensure that the MMI Fund is minimally affected by the sale. FHA generates a reserve price for each loan and adds those prices together to generate a pool reserve price. If FHA does not receive a bid on a pool that is at or above its reserve price, FHA may choose not to sell the pool.[86] Any amount of the bid above the reserve price represents additional potential proceeds to the MMI Fund.

FHA officials stated that they expect that all DASP loans would be foreclosed and the properties placed in its REO inventory had they not been sold. FHA officials stated that they establish each loan's reserve price considering the percentage of the unpaid balance FHA expects to recover through foreclosure and REO disposition. A recent HUD OIG report found that for loans sold in 2015 and 2016, FHA experienced a 3 percent lower loss rate compared with similar loans that were foreclosed and the associated property placed into FHA's REO inventory.[87] Loss estimates have varied over time and by location of the property

[86]FHA reserve prices are not provided to bidders.

[87]A lower loss rate for REO dispositions aligns with a comparison of FHA's national data on loss severity for REO and loan sale dispositions for the overall period related to FHA's 2015 and 2016 sales. However, the loss severities for sales exceeded those of REO dispositions in some quarters including some associated with the 2016 sales and FHA's earlier sales.

associated with the loan, but generally an REO disposition results in the greatest loss to the MMI Fund. For example, FHA's Office of Risk estimated that from fiscal year 2013 through the first quarter of 2017, FHA lost 61 percent (recovering about 39 percent) of the unpaid balance on REO dispositions compared to about 46 percent (recovering 54 percent) of the unpaid balance on other nonloan sale dispositions.[88]

FHA officials stated that unsold defaulted loans would likely result in foreclosure and being placed in the REO inventory. However, our analysis of outcomes showed that comparable unsold loans resulted in a range of outcomes, not just foreclosure and REO disposition. Specifically, our analysis of outcomes in sales between 2013 and 2016 showed that about 66 percent of unsold loans with characteristics similar to sold loans resulted in foreclosure or remained unresolved.[89] The remaining 34 percent of these unsold loans resulted in a range of nonforeclosure outcomes (including returning the loan to performing status), all of which could produce smaller losses to the MMI Fund compared with REO disposition. Further, our analysis found that about 14 percent of the loans returned to performing status or were terminated as paid in full, thereby generating very little to no loss to the MMI Fund.

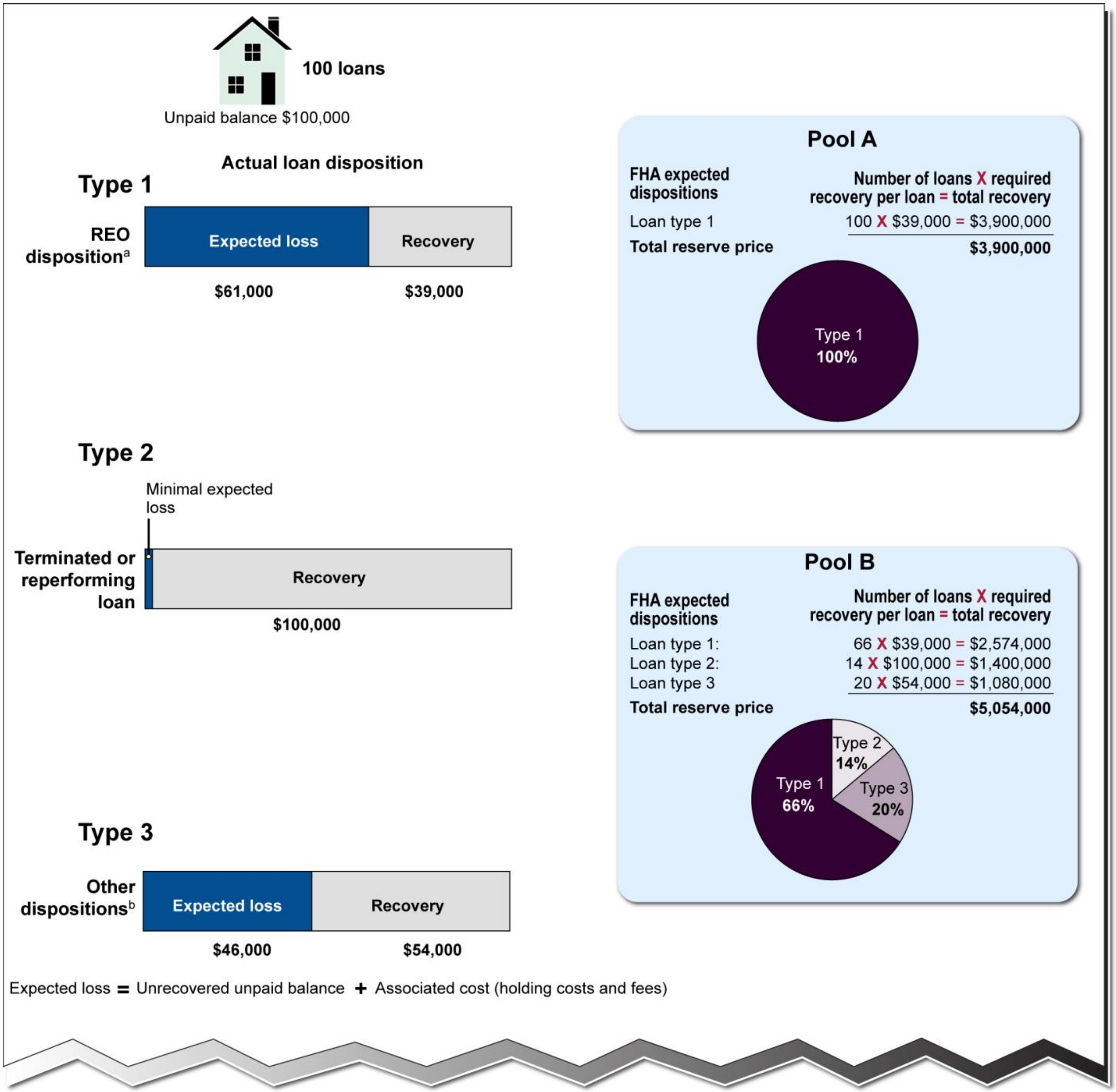
FHA may be setting its reserve prices too low in some cases. FHA sets a loan's reserve price considering the percentage of the unpaid balance it expects to recover through an REO disposition to guarantee the minimum recovery proceeds to the MMI Fund. However, when the expected losses to the MMI Fund for some loans are smaller—such as in the case of a different disposition method or a terminated loan—the reserve price would need to be higher to guarantee the minimum recovery proceeds to the MMI Fund. If FHA could recover more of the unpaid loan balance through a non-REO disposition method, setting the reserve price at the expected recovery of the unpaid balance from an REO disposition would

[88]FHA's Office of Risk determines loss severity for its different loan disposition methods, including REO dispositions, third-party sales that occur after foreclosure, and preforeclosure sales (short sales). These estimates are calculated as a percentage of the unpaid loan balance. FHA's recovery percentage can be calculated by subtracting the loss percentage from 100 percent. We report the estimated data from quarters in which FHA also had termination claims from loan sales.

[89]This analysis is based on the probability of change from default to another outcome at 48 months. We chose this time frame to minimize the probability of loans remaining in a nonterminating outcome.

be too low. See figure 13 for an illustrative example of how reserve prices could be affected based on different expectations of loan dispositions.

Figure 13: Illustrative Example of Pool Reserve Prices for FHA Loans Based on Different Expected Loan Dispositions



Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

Note: This figure provides a simplified example that does not consider the variation in recovery by geography and may not reflect the proportions of outcomes in future sales.

[a]Real estate owned (REO) disposition refers to a property disposition after entering the Department of Housing and Urban Development's inventory of REO properties.

[b]Other dispositions include third-party sales and short sales.

The extent to which the MMI Fund could be negatively affected depends on how reserve prices compare to the actual winning bids.[90] In figure 13, if FHA set the reserve price of pool A at $3,900,000, FHA would sell the pool to the highest bidder that bid at least $3,900,000. If the highest bid was less than $3,900,000, FHA may not sell the pool. If the highest bid for the pool was at least $3,900,000 but less than $5,054,000, the MMI Fund would be negatively affected because FHA could have recovered more by not selling the pool. If the highest bid was at least $5,054,000, the MMI Fund may not be negatively affected by the sale. Using a simplified method to calculate reserve prices that does not consider differences in local housing markets, we estimate that 31 percent of the loan pools FHA sold in its 2013–2016 sales had winning bids greater than FHA reserve prices but less than our calculated reserve prices.[91] For about 14 percent of the pools, our calculated reserve price was 10 percent or more below the winning bid, and for 7 percent of the pools, our calculated reserve price was 25 percent or more below the winning bid.

Federal internal control standards state that management should use quality information to achieve the entity's objectives.[92] This includes designing a process that uses the entity's objectives and related risks to identify the information requirements needed to achieve the objectives and address the risks. However, FHA is not considering information on the range of potential outcomes for loans in setting its reserve pricing because it expects all sold loans to result in foreclosure and REO disposition. Without considering other disposition methods in its reserve

[90]In this analysis we assume that the winning bid would not be affected by the reserve price. Low reserve prices do not necessarily imply low winning bids. Bid amounts depend, among other factors, on the number of bids that are attracted and the preferences of the bidder. For example, if lower-valued homes were a preference of bidders, a low reserve price that in part relies on property value could result in more bids and bid amounts could be higher.

[91]Over the period, the aggregate winning bid amounts exceeded our aggregate calculated reserve prices. All sales except 2014-1 part 1 included pools with bid amounts below our calculated reserve prices, and two sales had aggregate winning bid amounts below our calculated reserve prices.

[92]GAO-14-704G.

pricing, FHA risks recovering less for the MMI Fund in loan sales than if the loans had not been sold and risks not meeting its objective.

FHA Does Not Analyze Key Information before Setting Eligibility Criteria

FHA's eligibility criteria specify the characteristics of the loans that can be selected for a loan sale, but FHA does not analyze its portfolio to identify loan characteristics for which DASP would be the lowest-cost disposition method or consider market information before setting the criteria. FHA has analyzed bid amounts from previous sales and made changes to eligibility criteria related to length of delinquency and LTV ratio, in part, intended to increase MMI Fund recoveries. For example, using analysis of its 2014 sales, FHA determined the LTV ratios that produced the highest loan-level recoveries relative to REO dispositions and changed the loan eligibility criteria for the minimum LTV ratios by state for its 2015 sale.[93] According to FHA, this change was intended to make more loans eligible for disposition through DASP sales in certain states that had long foreclosure processes.

However, FHA does not analyze its portfolio of defaulted loans to identify characteristics of loans that, if sold, would minimize the loss to the MMI Fund relative to all other disposition methods to inform eligibility criteria for sales. FHA may have missed an opportunity to evaluate when loan sales would be the most effective disposition method to maximize recoveries to the MMI Fund—a financial objective of the program. FHA contracted with CoreLogic in 2016 to develop a tool to determine the lowest-cost disposition for defaulted loans in FHA's portfolio but did not include loan sales as a potential disposition method. The tool is intended to generate estimates of property values and holding costs and determine the lowest cost disposition method for a given loan at a given time. Used broadly, this information could help FHA identify loan criteria for which DASP sales would be the most effective disposition method and set loan eligibility criteria for DASP loans. However, FHA excluded DASP because, according to the contractor, the data on DASP had been too inconsistent to be reliably included in the CoreLogic tool. Therefore, FHA

[93]FHA officials said that loan-level recoveries relative to REO recoveries are higher on loans with higher LTV ratios. FHA set LTV ratio minimums by state to 70, 85, or 100 percent. Our pool-level analysis did not indicate an association between LTV ratio and number of bidders.

cannot use the tool to identify loan characteristics for which DASP could be the lowest-cost disposition method or to inform its decisions in setting loan eligibility criteria.

Further, FHA determines eligibility criteria before considering current market information. FHA's transaction specialist gathers market information before the sale, but FHA does not consider it before setting eligibility criteria and soliciting eligible loans from servicers. The transaction specialist analyzes the market and develops a sales strategy report using the loans submitted by the servicers. The report contains information on available capital for key purchasers, the number and type of loans purchasers are interested in buying, other entities' upcoming sales, and potential pooling strategies for the loans submitted. FHA uses the information to develop pools intended to maximize the sale proceeds, but not to identify characteristics of loans meeting purchasers' preferences and inform decisions in setting eligibility criteria.

FHA's current approach risks setting criteria that may not maximize recovery to the MMI Fund because it may be selling loans that could result in a smaller loss to the MMI Fund than if they had remained under FHA insurance. FHA generally analyzes how to maximize sales proceeds after setting loan eligibility criteria and reviewing the servicers' submitted loans because servicers select the loans, voluntarily participate, and may not submit all eligible loans. Further, setting loan eligibility criteria that increase servicers' cost to identify loans may reduce servicer participation. In addition, FHA does not use current market information because, according to officials, they use data from past sales to determine market preferences and their primary concern is the effect on the MMI Fund. However, FHA has not held a sale since 2016, so market preferences may have changed. Additionally, purchaser participation may decline if loans do not match their preferences. Generally, fewer bidders indicate less interest in the pools and could result in decreased prices, which would reduce returns to the MMI Fund.

By implementing DASP, HUD intended to maximize recoveries to the MMI Fund. Without analyzing its loan portfolio to identify when loan sales would be the most cost-effective disposition method and considering market information before setting loan eligibility criteria, FHA cannot appropriately calibrate its loan eligibility criteria to maximize recovery to the MMI Fund.

The Effects on the MMI Fund of Changes to Auction Structure and Pooling Strategies Are Unclear

Auction Structure

Based on our analysis of comparable mortgage industry auctions, FHA's auction structure mirrors the industry standards of pooled, highest bidder, sealed bid auctions.[94] Other auction structures we examined, such as single loan sales and adding a winner-take-all option, would involve tradeoffs. For example, an analysis by DebtX, a loan sale advisor, showed that FHA would have earned higher proceeds in a prior DASP sale if it had awarded based on single-loan bids rather than the pool-level bids.[95] However, our interviews with FHA officials and purchasers revealed uncertainty in how proceeds from single-loan bids would compare to bids for pooled loans. For example, FHA officials said they benefit from economies of scale when offering larger pools and that administrative costs associated with servicing transfers would be higher if FHA sold loans individually. Furthermore, purchasers may decline to bid on individual loans. Purchasers we interviewed expressed interest in sets of loans rather than individual loans, in part to manage risk.[96] When asked about smaller pools, FHA officials stated that they have used small pools to attract nonprofit bidders, but we found that these pools had a low number of bidders and many were not traded.[97]

The effect on the MMI Fund of adding a winner-take-all option to FHA's auction structure is uncertain. Such a structure could result in increased bid amounts. In a winner-take-all option, each bidder would choose to

[94]Pooled refers to multiple items grouped into pools where purchasers win all the items in the pool. Highest bidder refers to auctions where the bidder who submitted the highest bid is awarded the object being sold and pays a price equal to the amount he or she bid. In sealed bid auctions, bidders do not know the bid amount of the other bidders.

[95]DebtX, *Bidding on Individual Assets with Bidder-Defined Minimum & Maximum Purchase Constraints: Maximizing Recoveries & Eliminating the Conflict between Fiduciary and Mission-Based Goals* (July 2016).

[96]Diversity of loans by number, location, or other factors mitigate risk compared with no diversity.

[97]FHA may choose to not sell (trade) loan pools when bids are below their reserve price.

either participate at the sale level or pool level in the winner-take-all option. In either case, the bidder would place loan-level bids that would be rolled up to the pool or sale level. If a winner-take-all bid exceeds the aggregate of the highest pool-level bid for each pool, all pools are awarded to the winner-take-all bidder. By definition, if a winner-take-all bidder won the auction, the resulting bid would increase FHA's overall sale proceeds.

However, a winner-take-all structure could discourage bidder participation, which could lead to reduced bid amounts. Smaller entities and larger nonwinning bidders may be less likely to participate in future sales because of the costs associated with participating. According to auction theory, the higher the cost of performing due diligence and qualifying for and participating in the auction, the more bidder participation will be discouraged.[98] Although the extent of purchasers' due diligence checks differed, all the purchasers we interviewed told us that they expend funds to purchase property valuations on at least a sample of loans to check whether the valuations listed in the servicer data were reasonable. Some purchasers also expend funds to examine servicing records or perform legal searches related to the loans. Additionally, bidders are required to submit deposits with their bids that FHA will return if the bidder is not awarded the pool or pools. One purchaser told us it was reluctant to spend the money on due diligence if it did not have a reasonable chance at winning the pool or pools. According to economic literature, having fewer bidders in an auction generally results in decreased prices and an increased opportunity for bidders to form strategic partnerships that would decrease competition.

See appendix VII for more information on auction structures.

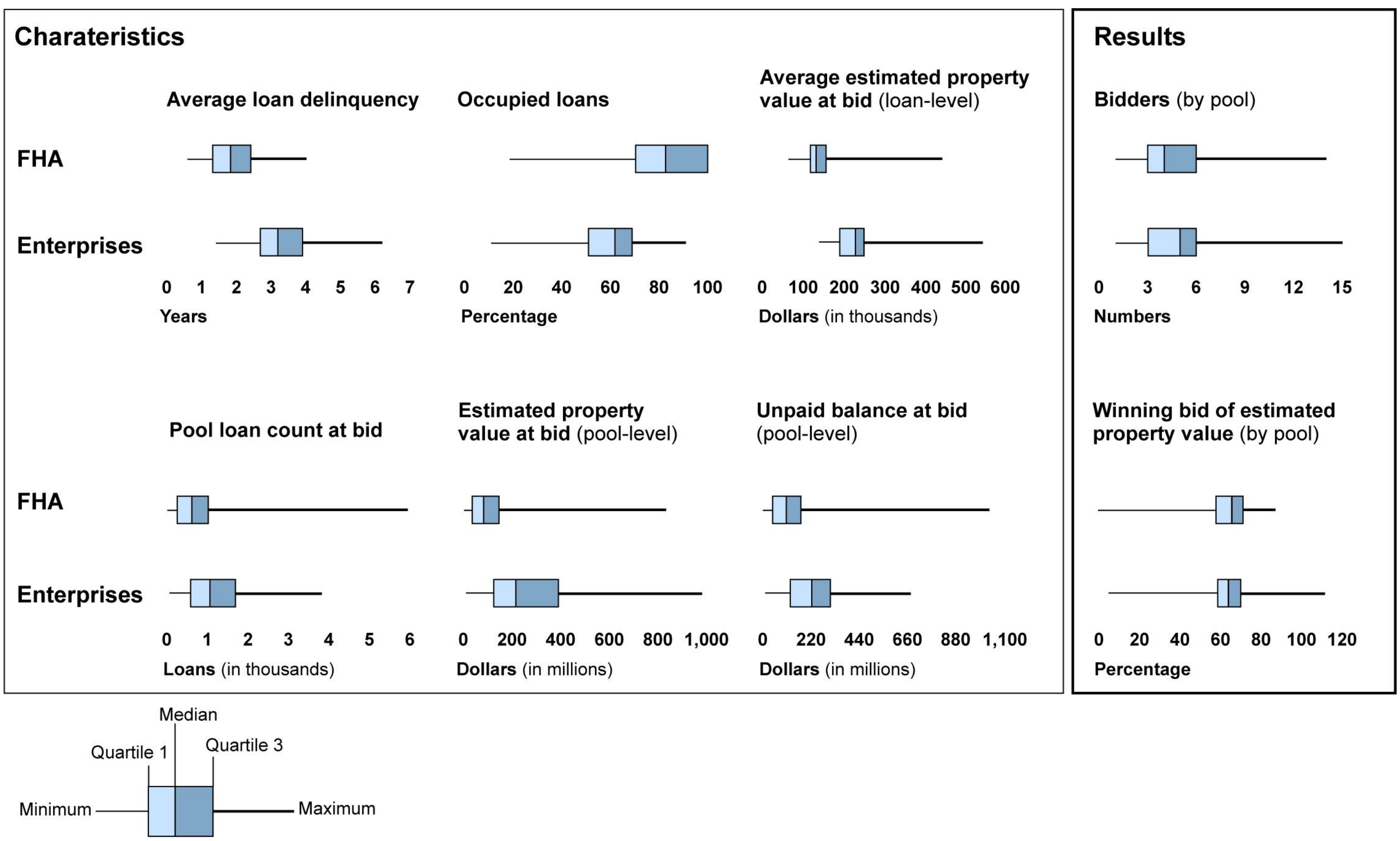
Pooling Strategy

It is unclear whether changes to FHA's pooling strategy—that is, its approach for selecting loans to include in its loan sale pools—would result in more bidders or higher bid amounts. We compared the pooling practices and pool-level data of FHA with those of Freddie Mac and Fannie Mae (the enterprises) to determine whether pooling strategy affected the number of bids. The enterprises started selling defaulted loans in 2015—much later than FHA—and have continued to do so, with

[98]Brad Miller and Samita Sareen, *An Auction Primer in the Context of the Credit Crisis*, white paper (Boston, Mass.: CRA International, 2008), 3.

Freddie Mac and Fannie Mae both holding sales in October 2018. FHA held three DASP sales in fiscal years 2015 and 2016 that overlapped with the time frame of the enterprises' sales. FHA and enterprise pools had different financial characteristics—loans in FHA pools were less delinquent, the properties were more likely to be occupied, and the loans had lower underlying property values compared to loans in enterprise pools (see fig. 14). Nonetheless, FHA received similar numbers of bids and bid amounts relative to the estimated property values as the enterprises. Generally, the number of bidders for FHA and the enterprises was between three and six, and bid amounts were typically between 58 and 71 percent of the underlying estimated property value. Many of the purchasers of FHA's DASP loan pools also purchased the enterprises' pools of defaulted loans.

Figure 14: Comparison of Defaulted Loan Pool Characteristics and Sale Results for FHA Sales, Fiscal Years 2011–2016, and Enterprise Sales, Calendar Years 2015–2017



Source: GAO analysis of Federal Housing Administration (FHA) and Freddie Mac and Fannie Mae (enterprises) data. | GAO-19-228

It is unclear whether adjusting the pooling strategy to focus on specific loan characteristics would increase the number of bidders for FHA. Enterprise officials told us that they pool by geography, occupancy, and LTV ratio and also try to create loan pools such that all loans have the same servicer. Unlike the enterprises, FHA does not pool loans by similar characteristics, and pools frequently have loans from more than one servicer. FHA officials told us they primarily use geography and pool size to pool loans.[99] However, FHA officials also told us they try to include loans to make the pools attractive to different types of purchasers. Loans may be valued differently by bidders with unique strengths—such as strong default servicing infrastructures or experience rehabilitating properties—that would make the loans more profitable to them compared to other bidders. FHA officials stated that they encourage higher, outlier bids by structuring pools to attract different types of bidders.[100]

We found differences in the extent to which loan-pool characteristics were associated with bidder participation for FHA's and the enterprises' defaulted loan sales. Our multiple variable regression analyses of how loan-pool characteristics predict the number of bidders showed the following:

- Pools with a higher percentage of occupied properties were associated with an increase in the number of bidders in FHA pools but a decrease in the number of bidders in enterprise pools.[101]
- Average LTV ratio was not associated with the number of bidders for FHA or the enterprises.
- National pools were associated with more bidders for FHA.[102] This result may be due to fewer FHA postsale requirements for national pools.

[99]Although FHA added an LTV ratio minimum to its loan eligibility criteria, it does not pool by LTV ratio.

[100]FHA officials told us that FHA receives bids on pools that are grouped together, perhaps due to similar software that bidders use to evaluate the loan pools. However, purchasers with unique strengths may bid higher because the combination of the loans and their unique strength may make the loans more profitable to them compared to other bidders.

[101]In these analyses we consider the 95 percent confidence level to be statistically significant. In our models, a 10 percent increase in percentage of occupied properties increases the predicted number of bidders by 0.3 of a bidder for FHA pools and decreases the predicted number by 0.4 of a bidder for enterprise pools.

- For FHA pools, more servicers was associated with fewer bidders, possibly due to higher transaction costs.[103] Although 86 percent of FHA pools had fewer than five servicers, the number of servicers for FHA pools ranged from one to 21. In contrast, all enterprise pools were single-servicer pools, except for four out of 101 pools (about 4 percent) that each had two servicers.[104]

See appendix I for a detailed description of these analyses.

Setting aside pools for nonprofit organizations has not significantly expanded bidder participation in FHA loan sales. FHA performs market outreach to educate potential purchasers about the DASP process, but barriers to entry exist in terms of qualifications and the underlying capital required. In its 2015 sale, FHA began offering nonprofit-only pools. In 2016, FHA established a goal of selling 10 percent of assets to nonprofits and local governments. In 2015–2016, FHA offered nine pools exclusively to nonprofits, of which five (about 56 percent) received bids at or above FHA's reserve price and were traded. Each pool received between one and three bids. Despite heavy marketing, all traded pools were awarded to two organizations, including one first-time purchaser. In comparison, from 2010–2016, FHA offered 191 national and NSO pools, and 185 (about 97 percent) received bids at or above FHA's reserve price and were traded. Several stakeholders told us that most nonprofit organizations do not have the capacity to service delinquent loans, but they may be able to participate in the program in a different capacity. For example, two purchasers partnered with nonprofit organizations to perform outreach to borrowers.

Conclusions

Since 2002, FHA has used loan sales intermittently to reduce its backlog of defaulted mortgages and preserve the financial health of the MMI Fund. In addition, some homeowners have received additional opportunities to modify their loans and retain their homes through the

[102] In our FHA model, national pools were associated with an increase of about 2.5 bidders.

[103] In our FHA model, each additional servicer was associated with a decrease of 0.1 bidders.

[104] All Fannie Mae pools were single-servicer. Freddie Mac's four multiple-servicer pools each had two servicers.

program. Yet, our review found several areas where FHA can improve its management of DASP through more formalized procedures and analyses, as follows.

Improving controls. By evaluating eligibility at various points throughout the 3-month period prior to the sales, including after the servicer update, FHA could better prevent the sale of ineligible loans. Additionally, as FHA finalizes its comprehensive procedures, it can better ensure that it is considering the effects of previous changes on the program by including procedures for reviewing and documenting program changes in a timely manner.

Using performance data. FHA has not developed key performance measures for DASP. Without measurable targets related to clear program objectives, FHA is not well-positioned to assess the effectiveness of DASP—which is still considered a pilot program—in achieving its objectives. Furthermore, by using performance data to determine the optimal timing of DASP sales, FHA could help the program achieve higher recoveries.

Evaluating outcomes. FHA has not conducted an analysis that compares the extent to which sold loans help avoid foreclosure, as compared to similar, unsold loans. Such an analysis would help assess DASP's effectiveness in meeting a program objective.

Monitoring and evaluating purchasers' modifications. FHA does not monitor purchasers of defaulted loans to ensure they are complying with FHA's requirement to offer payment-lowering modifications to eligible borrowers. Additionally, FHA may not collect the data it needs to evaluate whether modifications offered by purchasers remain sustainable. With better monitoring, FHA could determine whether individual purchasers are meeting these requirements.

Maximizing benefits of loan sales. FHA has opportunities to make changes in how loan sales are held and structured that could enhance bidder participation and better meet the DASP objective of maximizing recoveries to the MMI Fund—which are two characteristics of successful auctions. Providing better advance notice to prospective bidders, setting reserve prices based on realistic expectations, and setting loan eligibility requirements that encourage more bidding could improve the results of DASP sales and thereby reduce losses to the MMI Fund.

Recommendations for Executive Action

We are making the following nine recommendations to FHA:

The Commissioner of FHA should ensure that its eligibility checks are conducted throughout the DASP sale process, such as by establishing a schedule to check for eligibility at certain milestones. (Recommendation 1)

In formalizing procedures for DASP, the Commissioner of FHA should document processes for timely consideration and review of program changes. (Recommendation 2)

The Commissioner of FHA should clearly define DASP objectives and develop measurable targets for all program objectives. (Recommendation 3)

The Commissioner of FHA should use performance data to develop criteria for when to hold DASP sales. (Recommendation 4)

The Commissioner of FHA should evaluate loan outcomes under DASP compared to outcomes for similar, unsold loans. (Recommendation 5)

The Commissioner of FHA should monitor individual purchasers' compliance with FHA's modification requirements and ensure the purchasers submit the data needed to evaluate the sustainability of modifications. (Recommendation 6)

The Commissioner of FHA should communicate long-range notice to prospective bidders of upcoming DASP sales. (Recommendation 7)

The Commissioner of FHA should develop a methodology to assess the range of possible outcomes for loans when setting DASP reserve prices. (Recommendation 8)

The Commissioner of FHA should analyze FHA's loan portfolio and market information before setting loan eligibility criteria. (Recommendation 9)

Agency Comments and Our Evaluation

We provided a draft of this report for review and comment to HUD and FHFA. HUD provided written comments, which have been reproduced in appendix VIII, that communicate FHA's response to the report. Both HUD and FHFA provided technical comments, which we have incorporated, as appropriate.

In its written response, FHA's management generally agreed that opportunities exist for improvement to single-family loans through more formalized procedures and analyses, as the defaulted loan disposition option transitions to a permanent disposition alternative. FHA generally agreed with seven recommendations and did not explicitly agree or disagree with two recommendations.

FHA neither agreed nor disagreed with our recommendation that FHA should ensure that its eligibility checks are conducted throughout the DASP sale process, such as by establishing a schedule to check for eligibility at certain milestones. FHA stated that it works with the servicers and relies on them to determine eligibility throughout the DASP sale process. FHA also stated that its management agrees to include a schedule of eligibility checks in its procedures. We acknowledge that servicers check loan eligibility throughout the process, as stated in the report. However, we maintain that FHA and its contractors should also space their own checks throughout the process, specifically scheduling some closer to the bid date, and not rely exclusively on the servicers for this function at the end of the sale process.

FHA neither agreed nor disagreed with our recommendation that FHA should clearly define DASP objectives and develop measurable targets for all program objectives. FHA management stated that it believes it already has clear objectives and performance management in place for its DASP objective to maximize recoveries to the MMI Fund and that it measures whether it is meeting this objective. We acknowledge that FHA's objective to maximize recoveries to the MMI Fund is clear and that it has a measureable target. However, as stated in the report, agency documents and program changes reflect additional program objectives related to preserving homeownership, helping to stabilize neighborhoods, and offering borrowers a second chance at avoiding foreclosure that do not have measurable targets. We maintain that FHA should clarify its program's objectives in agency documents, whether that be one objective or several, and ensure that each objective has a measurable target.

FHA also took issue with aspects of our comparison of sold and unsold loans in its written response and technical comments.

- In its written response, FHA noted that the unsold loans in our analysis are invalid for comparison to sold loans because these unsold loans had not been deemed by servicers as having completed all applicable loss mitigation activities prior to being included in the analysis the way sold loans had. We attempted to minimize differences between the sold and unsold loans by matching loans across several variables that could affect the likelihood of foreclosure or foreclosure avoidance. We found a high rate of similarity between the two groups and indirectly controlled for any differences in the extent of loss mitigation by including length of delinquency as one of the matching variables. According to the FHA servicing handbook, servicers are generally required to either use a loss mitigation option for which a borrower qualifies or initiate foreclosure within 6 months of the default date.
- In its technical comments, FHA also noted that our matching of comparison loans omitted important variables. In particular, FHA noted that the analysis did not hold constant several factors related to the risk of foreclosure, including default risk as measured by FICO scores, debt-to-income ratios, home price appreciation, and loan amount and term. However, we indirectly controlled for loan term and home prices by matching loans by origination years and indirectly controlled for loan amount and home prices by matching on categories of LTV ratios. We did not control for debt-to-income ratios or FICO scores, but FHA's data systems did not contain them for unsold loans and FHA does not include them as criteria for DASP eligibility. Further, these variables may not be substantially different between the sold and unsold loans because the loans in both groups are severely delinquent. We revised the report to clarify that we estimated the LTV ratio at the time of the DASP sale. We calculated the LTV ratio using the outstanding loan amount and estimating current property values by adjusting the original sale values for regional changes in home prices over time.
- In addition, FHA stated in technical comments that our comparison group is invalid because 100 percent of loans in DASP sales would end in foreclosure if they were not included in a sale. FHA stated that the only loans eligible for sale are those for which the only alternative remaining to the borrower is foreclosure. However, we disagree that all sold loans would have ended in foreclosure had they not been sold. As discussed in the report, unsold loans with characteristics similar to sold loans experience a range of outcomes, including up to

34 percent experiencing outcomes other than foreclosure following sales. In addition, the status of delinquent loans can be very fluid throughout the sale process, even after purchasers place bids on them, and borrowers who previously did not qualify for a loss mitigation option could become eligible to be evaluated again (and their loan could become ineligible for sale) if their circumstances change. For example, our analysis of FHA data found that from 2010 through 2016 about 23 percent of loans were removed from sales between the bid and claims dates due to, among other things, loans entering into loss mitigation. Furthermore, we found that for five individual loan pools, more than half of the loans were removed from the sales between the bid and claims dates. These results argue against the validity of FHA's presumption that all loans selected for sales would have ended in foreclosure.

Although our matching process does not capture all potential foreclosure risk characteristics and our results should be interpreted accordingly, our analysis supports our assumption that the pools of sold and unsold loans are generally comparable and describes relationships between DASP participation and loan outcomes. We maintain that our approach is reasonable using the available data and forms a sound basis for the findings and recommendations in the report. As FHA considers actions in response to our recommendations about evaluating loan outcomes and assessing its methodology for setting reserve prices, we encourage it to further enhance the robustness of these analytical methods.

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As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to the appropriate congressional committees, the Secretary of HUD, the Director of FHFA, and other interested parties. In addition, this report will be available at no charge on the GAO website at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-8678 or garciadiazd@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Key contributors to this report are listed in appendix IX.

Sincerely yours,

Daniel Garcia-Diaz
Director, Financial Markets
and Community Investment

Appendix I: Objectives, Scope, and Methodology

The objectives of our report were to examine (1) the changes the Federal Housing Administration (FHA) has made to the Distressed Asset Stabilization Program (DASP) over time; (2) certain DASP procedures, including those associated with loan eligibility, and documentation; (3) FHA's evaluation of the identified outcomes for loans that have been sold through DASP and how these compare with similar, unsold loans; and (4) the potential effects that changes to DASP might have on the Mutual Mortgage Insurance Fund (MMI Fund).

Databases Used in Analyses throughout the Report

To conduct the data analyses discussed in the sections below, we used the FHA data sets listed in table 2. (We discuss the use and reliability of these data sets in the sections that follow this table.)

Table 2: Federal Housing Administration (FHA) Data Sets That We Used to Assess the Distressed Asset Stabilization Program (DASP)

Data set	Description	Used in the following analyses:
Single Family Default Monitoring System (default monitoring system)	This system contains information on each FHA mortgage loan that is 30 days or more delinquent, and FHA uses it to track servicing activities for defaulted loans. FHA servicers must report on each delinquent loan on a monthly basis.	• Identifying and describing loans sold through DASP • Analysis of procedures concerning loan eligibility • Comparison analysis of outcomes • Effect of pool characteristics on sale participation
Integrated database	The integrated database contains the current case-level data on every insured loan in the FHA portfolio. It comprises selected data from multiple databases, including the Geocoding Service Center (A15); the Single Family Insurance System (A43); the Single Family Insurance Claims System (A43C); the Computerized Homes Underwriting Management System (F17); the Consolidated Statistical System (F42); and the Lender Electronic Assessment Portal (P278).	• Identifying and describing loans sold through DASP • Comparison analysis of outcomes
Aggregate Loan Database (submitted loan database)	The database contains the sale loan list analyzed by bidders to submit bids. Servicers submit the loan-level information, which includes property, loan, and borrower characteristics.	• Modifications analysis • Effect of pool characteristics on sale participation

Data set	Description	Used in the following analyses:
Postsale reporting data	Information on sold loans submitted quarterly to FHA by purchasers for 4 years after the transfer date. Includes information on the outcome status of loans as well as the modifications offered by purchasers, if applicable.	• Comparison analysis of outcomes • Modifications analysis
Bid-day pool-level data	Data that we requested from FHA on bid-day pool levels, including the numbers of loans offered and delivered, and the numbers of servicers and bidders.	• Interviewee selection • Effect of pool characteristics on sale participation

Source: FHA and GAO. | GAO-19-228

Document Review and Interviews

To address all the objectives, we reviewed relevant laws, agency documents, and agreements. We reviewed the National Housing Act, Department of Housing and Urban Development (HUD) program evaluation policy and sale notices in the Federal Register, and Office of Management and Budget (OMB) Circular A-11.[1] We reviewed HUD's contractual agreements with servicers and purchasers for each DASP sale from 2010 to 2016, which are called, respectively, Participating Servicer Agreements (servicer agreements) and Conveyance, Assignment, and Assumption Agreements (purchaser agreements). We also reviewed other agency documents, including HUD's Fiscal Year 2017 Annual Performance Report, FHA's DASP sale results, FHA's Actuarial Reports, HUD's Reports to the Commissioner on Post Sale Reporting, and the Federal Housing Finance Agency's (FHFA) Enterprise

[1]§204(a)(1)(A), (g) of the National Housing Act, codified as amended at 12 U.S.C. §1710(a)(1)(A), (g); Single Family Housing Handbook 4000.1 (FHA Single Family Housing Policy Handbook); 81 Fed. Reg. 87,949 (Dec. 6, 2016) (HUD Program Evaluation Policy—Policy Statement); and OMB Circular A-11, §185.8.

Non-performing Loan Sales Reports.[2] We also reviewed prior GAO work on related topics.[3]

We interviewed officials from multiple offices within HUD, including the Offices of Asset Sales, Single Family Asset Management, Risk Management and Assessment, Finance and Budget, and the National Servicing Center. We also interviewed HUD's three primary contractors for DASP at the time of our review—transaction specialist: Verdi Consulting; compliance analytics: SP Group; and program financial adviser: NOVAD Management Consulting.[4] We interviewed officials from FHFA and the government-sponsored enterprises (enterprises)—Freddie Mac and Fannie Mae—as they also auction defaulted loans. We interviewed and reviewed reports from selected consumer advocacy organizations and industry stakeholders that included five servicers,

[2]Department of Housing and Urban Development, *Fiscal Year 2017 Annual Performance Report*; *Single Family Loan Sale 2016-2 (SFLS 2016-2) Sales Results Summary* (Sept. 14, 2016);Pinnacle Actuarial Resources, Inc., *Fiscal Year 2017 Independent Actuarial Review of the Mutual Mortgage Insurance Fund: Cash Flow Net Present Value From Forward Mortgage Insurance-In-Force* (Bloomington, Ill.: Nov. 10, 2017); and Department of Housing and Urban Development, *Report to the Commissioner on Post Sale Reporting Distressed Asset Stabilization Program* (June 2018). Federal Housing and Finance Agency, *Enterprise Non-Performing Loan Sales Report* (June 2018).

[3]GAO, *Federal Housing Administration: Capital Requirements and Stress Testing Practices Need Strengthening*, GAO-18-92 (Washington, D.C.: Nov. 9, 2017); *Program Evaluation: Annual Agency-Wide Plans Could Enhance Leadership Support for Program Evaluations*, GAO-17-743 (Washington, D.C.: Sept. 29, 2017); *Nonbank Mortgage Servicers: Existing Regulatory Oversight Could Be Strengthened*, GAO-16-278 (Washington, D.C.: Mar. 10, 2016); *Rural Housing Service: Actions Needed to Strengthen Management of the Single Family Mortgage Guarantee Program*, GAO-16-193 (Washington, D.C.: Mar. 31, 2016); *Foreclosure Review: Regulators Could Strengthen Oversight and Improve Transparency of the Process*, GAO-14-376 (Washington, D.C.: Apr. 29, 2014); *Overview of GAO's Past Work on FHA's Single-Family Mortgage Insurance Programs*, GAO-13-400R (Washington, D.C.: Mar. 7, 2013); *Foreclosure Mitigation: Agencies Could Improve Effectiveness of Federal Efforts with Additional Data Collection and Analysis*, GAO-12-296 (Washington, D.C.: June 28, 2012); *Designing Evaluations: 2012 Revision*, GAO-12-208G (Washington, D.C.: Jan. 31, 2012); *Tax Administration: IRS Needs to Further Refine Its Tax Filing Season Performance Measures*, GAO-03-143 (Washington, D.C.: Nov. 22, 2002); and *Agency Performance Plans: Examples of Practices That Can Improve Usefulness to Decisionmakers*, GAO/GGD/AIMD-99-69 (Washington, D.C.: Feb. 26, 1999).

[4]FHA replaced NOVAD with IDEO-Genics as its program financial advisor in March 2018. As FHA has not held any sales since 2016, we reviewed the contract but chose not to interview IDEO-Genics.

seven purchasers, and two loan-sale advisory firms.[5] In interviews, we generally discussed with participants the following topics: changes to DASP over time; what works well and what could be improved in DASP; foreclosure avoidance options that purchasers offer; the effectiveness of FHA's 2015 and 2016 DASP reforms; communication to borrowers whose loans are selected for a DASP sale; and the auction process and effect of alternative auction structures on the MMI Fund.

To select servicers and purchasers to interview, we analyzed the bid day pool-level data and postsale data, respectively. We selected and interviewed five servicers from a universe of 56 servicers based on high and low participation in terms of number of sales, loans sold, and the unpaid balance of the loans and type of institution (bank and nonbank).[6] We selected and interviewed seven purchasers from a universe of 29 purchasers based on participation, postsale foreclosure rate, and type of institution (for-profit and nonprofit).[7] The views and practices of the servicers and purchasers we selected may not represent those of the servicers or purchasers not selected.

[5]Laurie Goodman, *HUD's Recent Changes to the Distressed Asset Stabilization Program: A Positive Development*, (Washington, D.C.: Urban Institute, 2016); Laurie Goodman and Dan Magder, *Selling HUD's Nonperforming loans: A Win-Win for Borrowers, Investors, and HUD* (Washington, D.C.: Urban Institute, 2016), accessed Feb. 3, 2017; Sarah Edelman, Julia Gordon, and Aashna Desai, *Is the FHA Distressed Asset Stabilization Program Meeting Its Goals?* (Washington, D.C.: Center for American Progress, 2014); Sarah Edelman, Michela Zonta, and Shiv Rawal, *Protecting Communities on the Road to Recovery: Why Strong Standards Are Critical for the Distressed Asset Stabilization Program* (Washington, D.C.: Center for American Progress, 2016); Geoff Walsh, *Opportunity Denied: How HUD's Note Sale Program Deprives Homeowners of the Basic Benefits of Their Government-Insured Loans* (Boston, Mass.: National Consumer Law Center, 2016); The Debt Exchange, "Bidding on Individual Assets with Bidder-Defined Minimum and Maximum Purchase Constraints," white paper, July 2016. Four of the 56 servicers also were among the 29 purchasers, including two organizations interviewed as purchasers.

[6]One servicer chose to provide written answers rather than be interviewed. Low participation was determined based on participation in one pool sale with the highest number of loans sold and unpaid principal balance.

[7]We based our definition of high participation among purchasers on those with the largest number of pools purchased, largest number of loans purchased, or largest amount of unpaid principal balance. We also took into consideration the types of pools purchased, most national pools, and most Neighborhood Stabilization Outcome pools. Purchasers chosen based on high participation parameters generally qualified under multiple criteria.

Identifying and Mapping Loans Sold through DASP

To identify a complete list of the loans sold through DASP (sold loans), as described in the background section of the report and used in analyses throughout, we obtained and analyzed postsale reporting data. Per the purchaser agreements, purchasers are required to report the outcome status of sold loans on a quarterly basis for 4 years following the transfer of loan servicing responsibilities.[8] The quarterly postsale reports did not always include data for every purchased loan. We therefore compared the number of loans included in each quarterly postsale report for each pool and used the quarterly reports with the highest loan count to develop a complete list of the loans sold through DASP.

To develop the map showing the concentration of sold loans by state, we used data from the Single Family Default Monitoring System (default monitoring system) to calculate the ratio of loans sold through DASP to FHA-insured, defaulted loans with six or more missed payments in July of each year. We then categorized states into five ratio categories based on the distribution of ratios across states. We limited our review of participants and characteristics to the loans included in our comparison analysis of outcomes to provide descriptive context for this analysis.

To assess the reliability of the data sources above, we interviewed FHA officials about how the data were collected, processed, and accessed. We also identified the sold loans that were not reported in the default monitoring system at the time servicers submitted the loans to FHA for sale. We found that less than 0.1 percent of the sold loans in our scope were not reported as delinquent by servicers and determined that, due to their small percentage, excluding these loans would not bias our results. Based on our interviews and review of unreported loans, we concluded that servicers generally reported sold loans in the default monitoring system, and we found the data to be sufficiently reliable for the purpose of identifying and describing sold loans.

[8]FHA required semiannual reporting for 3 years for loans sold prior to 2013.

Examining DASP's Current Process and How It Changed over Time

To describe the DASP process and changes to the program over time, we reviewed FHA documentation, legislation, and other reports. To describe how DASP currently works, we analyzed the 2016 servicer and purchaser agreements and interviewed FHA officials and servicers. To describe how the program changed over time and the type of changes that FHA made, we reviewed HUD's authorizing legislation to accept assignment and sell loans, program requirements under OMB Circular No. A-11, and HUD press releases that announced the program's initiation and changes. To identify changes in servicer agreements and purchaser agreements since 2010, we performed a content analysis identifying differences from sale-to-sale (one servicer agreement and one purchaser agreement for each sale between 2010 and 2016).[9] One analyst performed the review, and a second analyst verified the selected content. To gather additional background information on the program and the changes over time, we reviewed reports issued by the HUD Office of Inspector General (OIG) and consumer advocacy and other research organizations such as the National Consumer Law Center, Center for American Progress, and Urban Institute.[10] To corroborate our information on the program and changes, we asked FHA to provide us a list of changes to the program between 2010 and 2016, and we interviewed FHA officials in HUD headquarters and at the National Servicing Center. We further corroborated our understanding of DASP through interviews with the servicers and purchasers.

Evaluation of Certain DASP Procedures and Documentation

To identify FHA's procedures for monitoring loan eligibility, we examined procedures identified in the servicer agreements and contracts and statements of work for entities assisting in oversight of DASP sales. We assessed the extent to which these procedures existed and were working

[9] Purchaser agreements include the postsale reporting requirements.

[10] Department of Housing and Urban Development, Office of Inspector General, *Distressed Asset Stabilization Program*, 2017-KC-0006 (Denver, Colo.: July 14, 2017); *Distressed Asset Stabilization Program,* 2017-KC-0010 (Kansas City, Mo.: Sept. 29, 2017); *Distressed Asset Stabilization Program*, 2018-KC-0003 (Kansas City, Mo.: Sept. 6, 2018).

effectively by reviewing status codes from FHA's default monitoring system and examining relevant findings from HUD OIG audit reports. We found limited information in agency documentation on steps conducted to verify loan eligibility and had to rely on discussions with FHA staff and contractors on monitoring processes. We also interviewed servicers on their process for selecting loans and certifying loan eligibility for DASP. We further corroborated this information by providing a combined list of steps to FHA officials to verify accuracy.

To assess whether FHA's procedures for assessing loan eligibility were working, we determined the extent to which FHA's sold loans appeared to be ineligible in its 2016 sales. To identify the ineligible loans, we compared the eligibility criteria listed in the 2016 servicer agreements to the data in the default monitoring system. We obtained the default information for sold loans for the period 2 months prior to the bid date—the period when servicers generally submit loans for sale—and at the bid date. We limited our analysis to loans sold in 2016 because FHA's loan eligibility criteria changed from sale to sale and 2016 was the most recent year a sale occurred. We selected a nongeneralizable sample of 10 loans with ineligible default codes in the default monitoring system as of the bid date. To determine why FHA sold loans that appeared to be ineligible, we provided list of sold loans with ineligible codes to FHA staff for them to research and provide their explanations.

We followed up in interviews with officials from FHA's Office of Asset Sales to further clarify their responses. We also interviewed FHA officials regarding data reliability and to ensure that our understanding of the default codes and their corresponding eligibility or ineligibility for sale was accurate. We also performed electronic checks for consistency and validity and found the data to be sufficiently reliable for the purpose of determining default status, length of delinquency, and the extent to which loans that FHA sold in 2016 appeared to be ineligible.

Analysis of Loan Modifications

To assess whether DASP purchasers offered borrowers payment-lowering modifications, we evaluated the loan modifications offered by individual purchasers by comparing borrowers' monthly mortgage payments prior to being modified to their monthly payments after being modified. We obtained postmodification payment data from the postsale reports and premodification payment data from the submitted loan database. Using the most recent postsale record for each modified loan, we calculated the change in payment resulting from the modifications offered by DASP purchasers. To confirm that we used the appropriate data sources and variables for our analysis, we contacted FHA's Program Financial Advisor, who collects postsale reporting data and reports some information on modifications. Our analysis included all loans sold in DASP sales that occurred between 2013 and 2016, with some exceptions, in line with the scope of our comparison analysis of outcomes. We selected this scope because it represented the period for which FHA was generally able to provide consistent postsale quarterly reports.

In addition, to assess the sustainability of the modifications offered by DASP purchasers, we used data on modification type from the postsale reports to calculate the number of modifications that included a deferment. We identified loan modification characteristics from prior GAO work.[11] We also reviewed the purchaser agreements and postsale reports to examine the information available on modified interest rates. Our analysis was limited to modifications that were reported using the more expansive list of characteristic codes introduced in 2016, which accounted for about 95 percent of the modifications in our scope.

To assess the reliability of the modification data, we checked for missing or invalid data entries across different modification fields, including modification date, modification type, and monthly payment before and after a modification. We found that purchasers generally reported consistent information on modifications for loans sold in DASP sales that occurred between 2013 and 2016 and determined the data to be sufficiently reliable for the purpose of calculating payment change and assessing the sustainability of modifications.

Comparison Analysis of Outcomes for Sold Loans and Unsold Loans

Scope of the Data

We used multiple FHA data sources to match sold loans to similar unsold loans and compare outcomes across the groups. We used data from FHA's default monitoring system and integrated database to obtain information on loan-level characteristics for both sold and unsold loans, such as length of delinquency. However, FHA data did not contain loans'

[11] GAO-12-296.

current property value or current loan-to-value (LTV) ratio. To calculate the current property value, we generated property values for sold and unsold loans based on data in the integrated database, including property value at origination, date of origination, and location information. We then aged the property values to the matching month and year using FHFA's House Price Index data, which considers geography. We calculated the LTV ratio for sold and unsold loans by dividing the current unpaid principal balance obtained from the default monitoring system by the calculated current property value.[12] To identify the loans sold through DASP and to determine their outcomes, we used postsale reporting data reported by DASP purchasers. To determine monthly outcome statuses for unsold loans, we used FHA's default monitoring system and integrated database.

Our analysis generally included loans sold in DASP sales that occurred between 2013 and 2016, but we excluded some sales and pools for various reasons. We excluded loans sold in the DASP sales that occurred from 2010 through 2012 because FHA could not provide semiannual or quarterly postsale reports for these loans. We excluded loans sold in Neighborhood Stabilization Outcome (NSO) pools in the first sale in 2013 because FHA had not yet implemented reporting requirements for more detailed information on loan status for NSO pools. We excluded Direct Sales, through which FHA directly transfers loans to government entities, as well as Aged Delinquent Portfolio Loan Sales, because these sales do not follow normal DASP procedures. Lastly, we excluded loans in pools that were offered for sale but not traded and loans that dropped out before transfer and were never sold. FHA was generally able to provide quarterly reports for the remaining sales and pools within the required reporting time frame.

Data Preparation and Reliability

We took a number of steps to prepare and ensure the reliability of the data used to match sold loans to similar, unsold loans and compare outcomes. We generated seven datasets corresponding to the seven DASP sales in our scope. Each dataset was made up of the records in the default monitoring system 2 months prior to the bid date for the corresponding DASP sale—the time servicers submit eligible loans for

[12]For loans that had been refinanced using FHA's streamline refinance option, property value at origination was not included in the data as no property appraisal was required under the program. For these loans, we categorized the LTV ratio as unknown.

sale to FHA, according to FHA officials. We eliminated duplicate case numbers as well as erroneous submissions, and we added sale and pool variables to identify sold loans based on the master list of sold loans. We also excluded unsold loans that were ineligible for sale at the time of matching.[13] Specifically, we reviewed FHA's servicer agreements and developed criteria for excluding unsold loans from matching based on sale eligibility requirements outlined in these agreements. We interviewed FHA officials to ensure that our understanding of the default status codes and their corresponding ineligibility for sale was accurate. We then used this information to identify and exclude ineligible loans.

We performed a variety of electronic checks to test the completeness, consistency, and logic of outcome statuses for sold and unsold loans as reported by servicers. We excluded or corrected, where possible, a small percentage of sold and unsold loans (2 percent excluded and about 11 percent corrected) that had invalid or illogical reported statuses. We also excluded loans with invalid case numbers, loans erroneously reported as sold by purchasers, and other problem records. These exclusions accounted for less than 1 percent of the sold loans in our scope.

We found that three pools were missing more than half of the expected number of postsale reports. Because these pools accounted for less than 2 percent of the sold loans in our scope, we decided to keep these pools in our analysis as they provided additional data points for estimating outcome probabilities, and including them would not significantly bias our results.

Finally, when assessing data reliability, we consulted relevant documentation on the default monitoring system, integrated database, and postsale reporting systems and the specific fields used from these systems. We also interviewed officials knowledgeable about how data from these systems were collected, maintained, and accessed. Based on these steps, we determined that the data were sufficiently reliable for the purpose of matching sold loans to similar, unsold loans and comparing outcomes.

[13] We excluded some unsold loans from our analysis that were eligible for sale but were subject to a moratorium on foreclosure. Not excluding these loans may have limited the comparability of our comparison group of unsold loans to sold loans.

Matching Analysis

We used statistical matching methods to identify a comparison group of unsold loans that closely resembled sold loans on loan characteristics that could affect the likelihood of foreclosure. Unsold loans were matched to sold loans for each sale, resulting in seven groups of unsold loans corresponding to loans sold in the seven DASP sales that occurred in 2013–2016. We matched unsold to sold loans 2 months prior to the bid date across the following characteristics:

- **Length of delinquency**. Number of missed payments at matching.
- **Occupancy status**. Whether property was occupied or vacant at matching.
- **Location**. Location of the property, based on latitude and longitude.
- **Servicer**. FHA-approved, mortgage servicer.
- **Loan-to-Value (LTV) ratio category**. Value of the property relative to the outstanding unpaid balance on the loan at matching.[14]
- **Loan origination**. Year of the loan's origination.

We excluded modification status from the matching criteria. While there is some indication that loans that have been modified once are more likely to redefault in the future, this is largely dependent on the quality of the modification. However, modification quality could not be determined based on the FHA data we received.

Our analysis did not seek to conduct a definitive evaluation of the causal effects on outcomes of being sold through DASP. Instead we sought to improve on simple comparisons of outcomes between sold and unsold loans by constructing a comparison group of unsold loans that were similar to sold loans on loan-level characteristics known to affect the likelihood of foreclosure. For example, matching sold and unsold loans by location minimized variation in neighborhood characteristics and local housing markets that could be associated with a higher or lower likelihood of foreclosure. We selected these factors based on our previous work on

[14]We calculated the LTV ratio for sold and unsold loans by dividing Current Unpaid Principal Balance by the Current Property Value and assigned individual loans to one of five LTV categories used by FHA and FHFA. These categories are as follows: (1) LTV ratio ≤70 percent, (2) LTV ratio >70 percent to ≤90 percent, (3) LTV ratio >90 percent to ≤110 percent, (4) LTV ratio >110 percent to ≤130 percent, (5) LTV ratio >130 percent, and (6) Unknown LTV ratio.

foreclosure mitigation and on consultations with subject-matter experts within GAO.[15] See appendix V for more information on our statistical matching analysis.

Outcome Analysis

To compare outcomes for sold and unsold loans, we identified outcomes using postsale reporting data dictionaries in FHA's purchaser agreements as well as FHA's status codes used in its default monitoring system and integrated database data dictionaries. We grouped the outcomes into six outcome categories. To assign sold loans to a category, we used FHA's postsale reporting data, and to assign unsold loans to a category, we used FHA's default monitoring system and integrated database data. The outcome categories were as follows:

- **Foreclosure**. Loans terminated with foreclosure.
- **Reperforming**. Loans restored to performing status either under the original mortgage terms or through a permanent modification. In this outcome, the borrower retains ownership of the home.
- **Temporary Action**. Loans with temporary action that allow the borrower to retain ownership of the home—for example, an agreement for paying the loan balance or restoring it to performing status has been reached but has not met FHA's time requirement to meet FHA's definition of performing. This category may also include other interventions that have the intent of keeping the borrower in the home, such as forbearance.
- **Short sale/deed-in-lieu of foreclosure**. Loans that avoid foreclosure through short sales and deeds-in-lieu of foreclosure. In this outcome the borrower loses ownership of the home.
- **Unresolved**. Loans remaining in default status and whose outcomes were unresolved.
- **Other**. Loans whose outcomes do not fit into these other categories.[16]

[15]GAO-12-296.

[16]For unsold loans, the Other category consisted of loans with the following default status codes: Paid-in-full, Property Redeemed, Charge-Off, Assignment Completed, Government Seizure, and Refinance Started. For sold loans, the Other category consisted of loans with the following postsale reporting statuses: Paid-in-full, Charge-Off, Repurchase, and Whole Loan Sale.

A number of sold loans were reported by purchasers as resold, with no further outcome updates, and we decided to categorize these separately. Purchasers had the option of reporting on loans as resold until 2015, when FHA introduced a reporting requirement that purchasers continue reporting the outcome status of loans even after selling them to new buyers. For the loans in our scope, the percentage of postsale reports that included a status of resold ranged from 7 to 35 percent for the 2013 and 2014 sales, before dropping to less than 1 percent beginning with the 2015 sale. Purchasers may have returned resold loans to performing status before selling them because performing loans are more profitable, and, by categorizing these loans separately, we may have undercounted performing loans for the earlier DASP sales. While we considered classifying loans reported as resold as performing, our review of status sequences for loans with at least one resold status showed that purchasers reported a range of nonperforming outcomes before and after the resold status, indicating that not all resold loans were performing. We therefore determined that categorizing resold loans separately would result in more reliable estimates for sold loans.

Using data from the default monitoring system to classify outcomes for the matched, unsold loans in our analysis required us to make some assumptions that may have resulted in overcounting performing, unsold loans. Because the default monitoring system only contains data on delinquent loans and does not include status information on performing loans, our classification of performing, unsold loans was based on whether or not a servicer reported the loan in the default monitoring system in a given month. As a result, we assumed that unreported loans were performing. However, a missing report could also be the result of a reporting omission by the servicer, rather than an indication of a performing status. To mitigate the risk of overcounting performing, unsold loans, we used a variable indicating the length of a loan’s current default episode to help us distinguish between performing loans and servicer omissions. Specifically, we counted unsold loans as performing only if the default episode length in the most recent default monitoring system report was less than the reported episode length in the default monitoring system report preceding the period of no reporting. We assumed that a lower default episode length in the most recent default monitoring system report meant that the borrower was making payments during the period of no reporting. Otherwise, we classified periods of no reporting as missing.[17]

We compared monthly outcomes for sold loans and unsold loans after servicing transferred to the purchaser. We set the origin of the observation period to the latest servicing transfer date in each pool of sold loans and their associated matched unsold loans. Because the latest servicing transfer date varied across these groups, the number of observations and the associated dates varied across pools and sales. We measured outcomes for up to a maximum of 48 months, from January 2013 through December 2017, the most recent full quarter of postsale reporting data available at the time of our review. The follow-up periods ranged from the full, 4-year reporting period required by FHA for loans sold in the 2013 sales to 1 year for loans sold in the second sale in 2016. See appendix V for more information on our statistical analysis of outcomes for sold loans and unsold loans.

Potential Effects of Changes to DASP on the MMI Fund

Association of Pool-Level Characteristics with Bidder Participation

To examine the extent to which loan-pool characteristics were associated with bidder participation for FHA loan sales and the enterprises' nonperforming loan sales, we built regression models. We identified from interviews key characteristics (independent variables) that may make loan pools attractive to certain bidders, such as having a single servicer or low vacancy. We obtained bid-day data from FHA and the enterprises that included the number of bidders (dependent variable) and the winning bid amounts, as well as the timing of the sale. We generated FHA pool characteristics from the loan level data in FHA's submitted loan database and supplemented it with FHA default status data (see table 2 above for further information about FHA's data sets). For the enterprises, we obtained pool characteristics from a published FHFA report. This report provided a range of characteristics to compare to those of FHA's pools.

See table 3 for our regression estimates of the relationship between pool characteristics and the number of bidders in FHA's DASP sales and the

[17]While we were able to use the default episode length to distinguish a performing status from a servicer omission when loans were reported again in the default monitoring system after a period of nonreporting, this was not possible when the period of nonreporting was not followed by any additional default monitoring system reporting.

enterprises' sales. The associated p-values are presented in parentheses, and *, **, and *** denote significance at 10 percent, 5 percent, and 1 percent or better, respectively. In the report body we use the 95 percent confidence level as indicating significance of the regression estimates.

Table 3: Robust Regression Estimates for Number of Bidders for FHA Loan Pools, Fiscal Years 2011–2016, and Enterprise Loan Pools, Calendar Years 2015–2017

n/a	Dependent variable—number of bidders	
Pool characteristics	**FHA**	**Enterprises**
Number of servicers	-0.133***	Not in model
Number of servicers	(0.007)	
Ln(loan count)	-0.130	-1.120***
Ln(loan count)	(0.372)	(0.001)
Average years delinquent	-0.259	-0.732***
Average years delinquent	(0.252)	(0.004)
Average loan-to-value ratio	-0.012	0.015*
Average loan-to-value ratio	(0.118)	(0.071)
Percentage of loans occupied	0.031***	-0.043***
Percentage of loans occupied	(0.007)	(0.001)
National pool	2.505***	1.532
National pool	(0.000)	(0.148)
Sold in fiscal year 2011	-1.038*	Not in model
Sold in fiscal year 2011	(0.082)	
Sold in fiscal year 2012	-2.071***	Not in model
Sold in fiscal year 2012	(0.000)	
Sold in fiscal year 2013	-1.534***	Not in model
Sold in fiscal year 2013	(0.000)	
Sold in fiscal year 2015	-2.830***	Not in model
Sold in fiscal year 2015	(0.000)	
Sold in fiscal year 2016	-4.323***	-2.975***
Sold in fiscal year 2016	(0.000)	(0.000)
Sold in fiscal year 2017	Not in model	-2.990***
Sold in fiscal year 2017		(0.000)
Constant	5.676***	17.044***
Constant	(0.001)	(0.000)
Probability greater than F	0.000	0.000
Observations	191	93

n/a	Dependent variable—number of bidders	
Pool characteristics	**FHA**	**Enterprises**
R-squared	0.634	0.413
Adjusted R-squared	0.612	0.364

Legend: * = significance at the 10 percent level or better; ** = significance at the 5 percent level or better; *** = significance at the 1 percent level or better

Source: GAO analysis of data from the Federal Housing Administration (FHA) and the government-sponsored enterprises (enterprises) Fannie Mae and Freddie Mac. | GAO-19-228

Notes: The values in parentheses are the p-values. We use a series of indicator variables for fiscal year as a proxy for nationwide market conditions. In our FHA model, we used 2014 as the reference year. As such, the fiscal year results are relative to 2014.

To assess the reliability of the FHA data, we performed reasonableness checks that resulted in the removal of FHA's 2010 sale due to a large number of invalid case numbers and two additional pools from later sales, we also removed pools based on missing or invalid date—in total 4 percent of FHA's pools. We did not independently verify the data in the FHFA reports, but we interviewed the FHFA staff that generated the report about the reliability of the data. Some limitations stem from the differences between FHA's and the enterprises' pools and the underlying loans as well as the data available on the pools. For example, we use data from FHA sales from 2011–2016 and from sales in 2015–2017 for the enterprises.[18] We use the time variables to control for housing market differences as well as the defaulted loan sale market. Additionally, we included FHA's nontraded pools but not the enterprises' nontraded pools because the FHFA reports did not present data on these pools. We showed the differences and similarities across the entities in figure 14 in the report. We determined that data for the remaining pools were sufficiently reliable for examining the association of pool characteristics with bidder participation and for comparison between the enterprises' and FHA's sales.

To calculate pool reserve prices, we obtained FHA data on quarterly loss severity by disposition method for 2013–2016. Using our results from the outcomes comparison analysis, we calculated pool-level reserve prices and compared them to winning pool-level bids.

[18] The enterprises started selling defaulted loans in 2015. We used sales through 2017 based on the data available in the FHFA June 2018 report.

Auction Structure Analysis

To assess the effect that changing FHA's auction design could have on the MMI Fund and to identify elements of a successful auction structure, we reviewed economic literature on auction structures and auction descriptions in business and commercial literature. To compare the DASP auction structure with the enterprises as well as mortgage auctions in the private market, we analyzed agency and enterprise documents and interviewed market participants. We developed a detailed description of FHA's and the enterprises' current auction structures, including information about the nature of the loan pools being auctioned; about sellers, purchasers, and other auction stakeholders; and about the benefits and drawbacks of the auction design.

In interviews, we received suggestions about aspects of FHA auctions that, if changed, may increase bidder participation. To examine these aspects, we interviewed purchasers on their potential interest in these changes and examined FHA sale data following an instance of a single purchaser winning all the pools in a sale. To assess the DASP auction structure, we compared it to selected characteristics of successful auctions and determined the extent to which the characteristics were used by FHA.

We conducted this performance audit from January 2017 to July 2019 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 objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: DASP Servicers, Purchasers, and Characteristics of Sold Loans

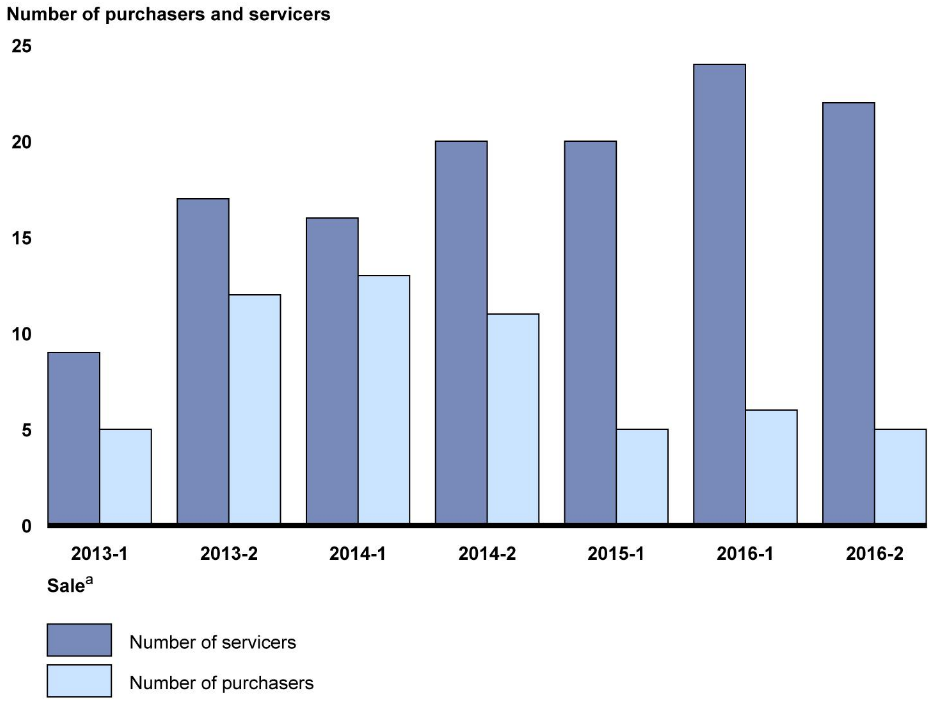
This appendix includes descriptive information about the Federal Housing Administration's (FHA) Distressed Asset Stabilization Program (DASP) servicers, purchasers, and sold loans. The information presented is generally based on loans sold in DASP sales that occurred between 2013 and 2016.[1]

DASP Servicers and Purchasers

Thirty-two servicers participated in DASP sales between fiscal years 2013 and 2016, with the largest participating servicer offering 48 percent (more than 44,000) of the loans sold. As seen in figure 15, the number of servicers increased from nine in the first sale in 2013 to 22 in the second sale in 2016. During this same period, 26 purchasers participated in the DASP sales, with the largest participating purchaser buying 27 percent (about 25,000) of the loans sold.

[1]The information we present in this section on sold loans are based on data we used to compare outcomes for sold loans to unsold loans. We used these data because they were the most complete and available data at the time of our review.

Figure 15: Number of Distressed Asset Stabilization Program (DASP) Servicers and Purchasers, Fiscal Years 2013–2016



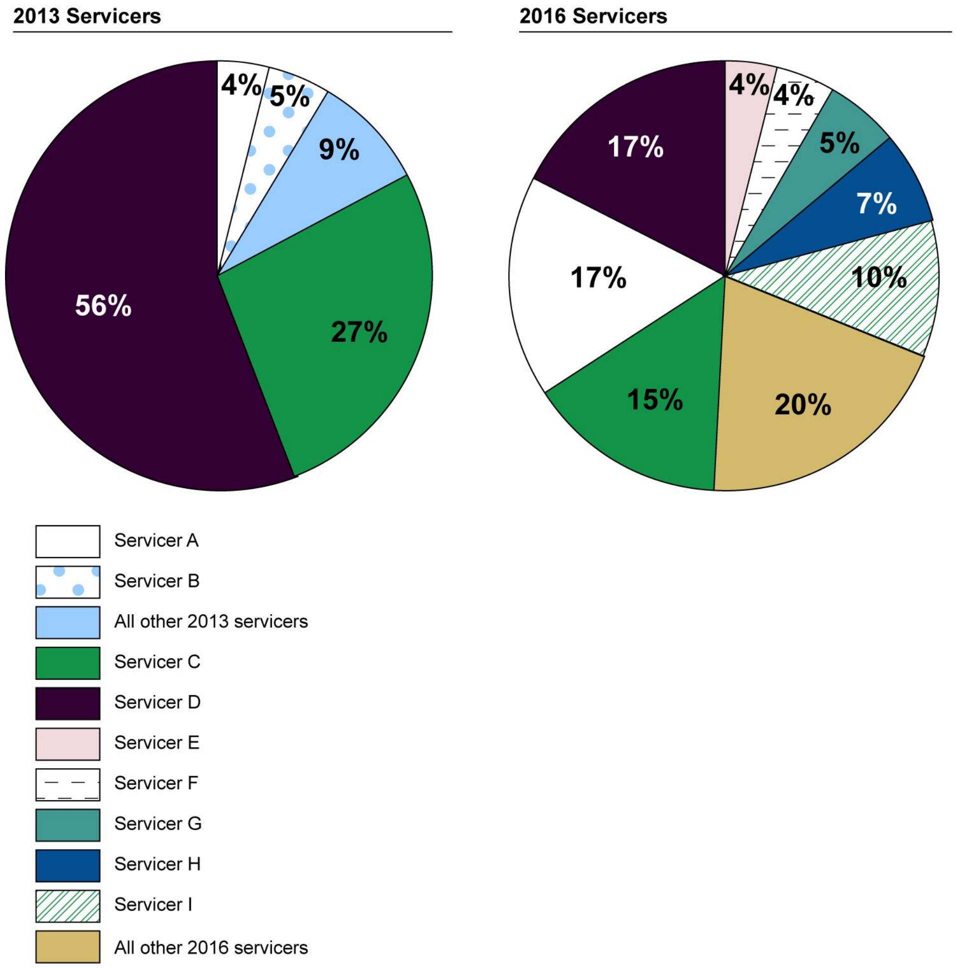
Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

Note: During this time frame, the number of loans sold by FHA under DASP increased between the 2013-1 to 2014-2 sales, then decreased substantially for the 2015 sale.

[a]Sale refers to the fiscal year and the sale number.

The share of loans offered by individual servicers also varied over time and by sale. One or two servicers offered the majority of sold loans in earlier sales, but more servicers offered a greater share of the loans sold in later sales (see fig. 16). For example, one servicer offered 89 percent of the loans sold in the first sale in 2013, about 51 percent of the loans sold in the second sale in 2014, and about 8 percent of the loans sold in the second sale in 2016. During this time, new servicers began offering loans for sale, and servicers that had offered a smaller share of the loans sold in earlier sales began offering a larger share of loans for sale.

Figure 16: Share of Sold Loans Offered by Distressed Asset Stabilization Program Servicers, Fiscal Years 2013 and 2016 Sales



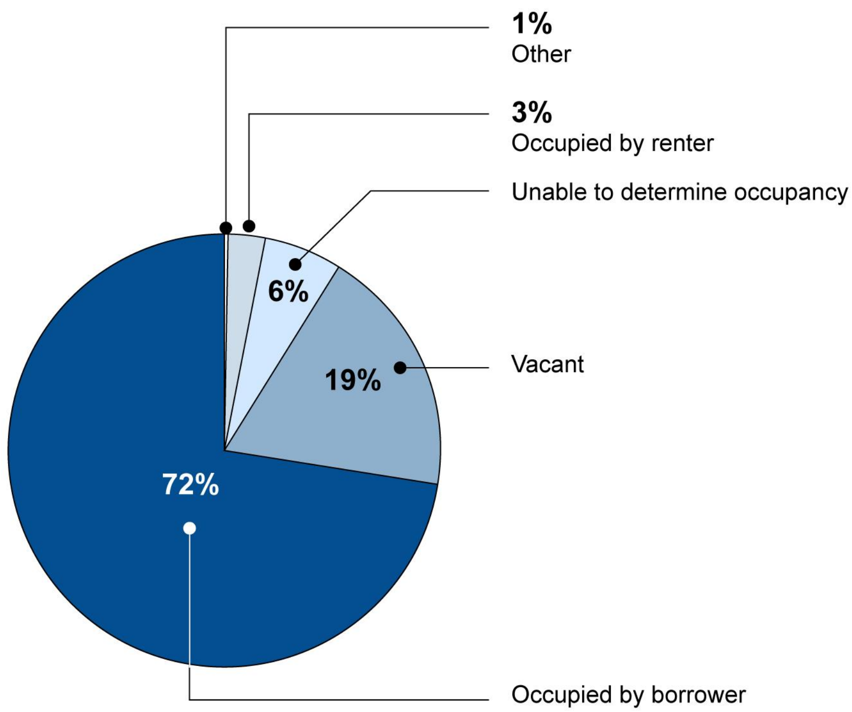
Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

Note: All other servicers include servicers who offered less than 4 percent of the loans sold in either the 2013 or the 2016 sales. The figure includes only the loans in the scope of our analysis of sold loans and similar, unsold loans.

Characteristics of Loans Sold through DASP

Occupancy status. The majority of properties sold through DASP were occupied by the borrower, with a smaller portion having been vacated (see fig. 17). DASP purchasers told us that their ability to contact and engage borrowers is one determinant in whether they are able to offer loss mitigation options to avoid foreclosure. One purchaser noted that in cases where it is unable to contact the borrower, which may indicate that the property is vacant, it tries to foreclose as quickly as possible.

Figure 17: Occupancy Status of Loans Sold through the Distressed Asset Stabilization Program, Fiscal Years 2013–2016

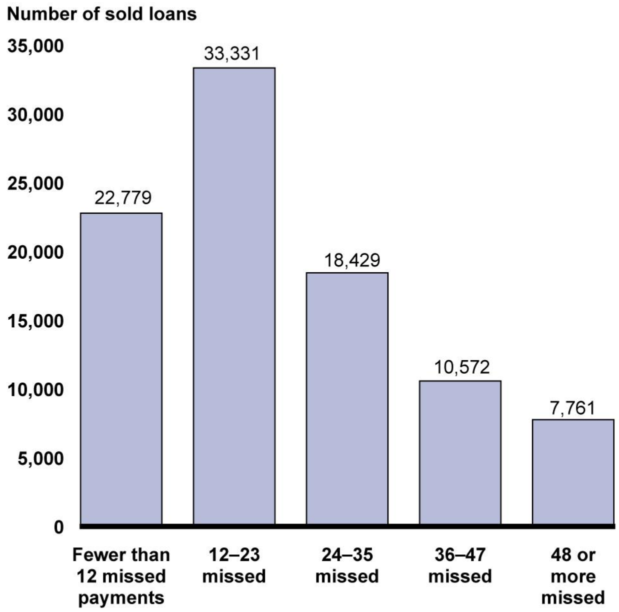


Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

Delinquency. The majority of loans sold through DASP had missed 12 or more payments (see fig. 18). As discussed earlier, a loan becomes delinquent after a borrower misses a single payment, and goes into default after it is two payments past due. Generally, servicers must utilize a loss-mitigation option or initiate foreclosure within 6 months of default. As we previously reported, serious delinquency is among the factors associated with an increased likelihood of foreclosure.[2]

[2]GAO, *Foreclosure Mitigation: Agencies Could Improve Effectiveness of Federal Efforts with Additional Data Collection and Analysis*, GAO-12-296 (Washington, D.C.: June 28, 2012).

Figure 18: Length of Delinquency for Loans Sold through the Distressed Asset Stabilization Program, Fiscal Years 2013–2016

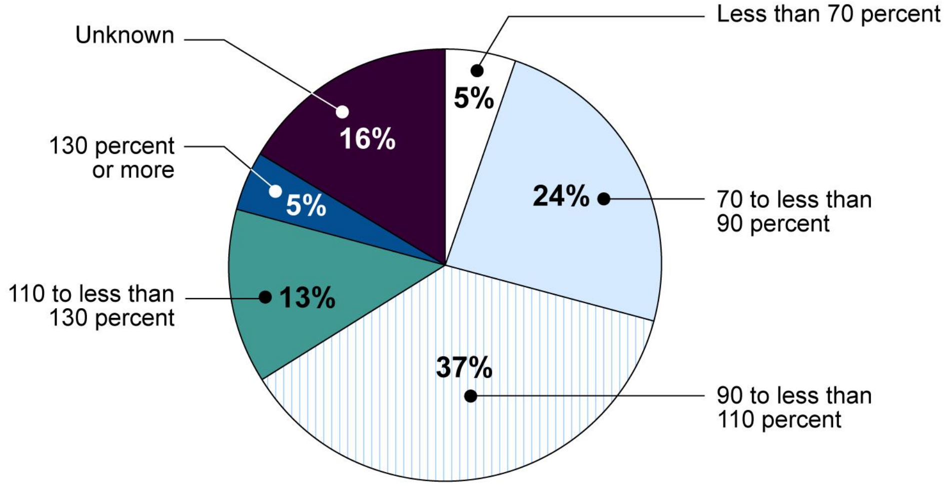


Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

Loan-to-Value (LTV) ratio. About 18 percent of sold loans had an LTV ratio of 110 or greater (see fig. 19). The LTV ratio represents the unpaid principal balance of a loan as a percentage of the current property value. As we previously reported, negative equity or a high LTV ratio is among the factors associated with an increased likelihood of foreclosure.[3]

[3]GAO-12-296.

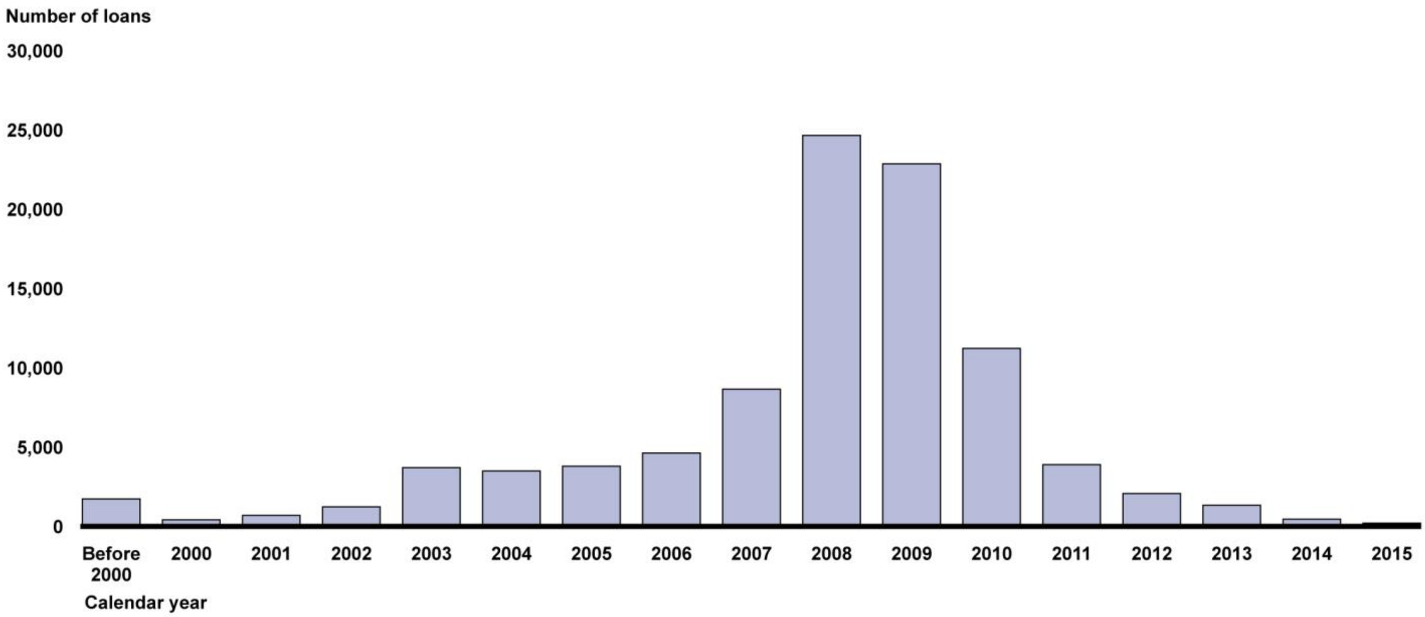
Figure 19: Loan-to-Value Ratio of Loans Sold through the Distressed Asset Stabilization Program, Fiscal Years 2013–2016



Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

Origination. As figure 20 shows, sold loans were more likely to have originated at the peak of the housing crisis in 2008 and 2009. FHA officials told us that they used DASP to reduce the significant backlog of defaulted loans they were faced with following the housing crisis.

Figure 20: Origination Years of Loans Sold through the Distressed Asset Stabilization Program, Fiscal Years 2013–2016



Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

Appendix III: Federal Housing Administration Documents Guiding the Distressed Asset Stabilization Program

In this appendix, we describe the documents the Federal Housing Administration (FHA) uses to guide the Distressed Asset Stabilization Program. The documents listed in table 4 represent the current written procedures and guidance that FHA planned, as of May 2018, to incorporate into a single document—the Asset Sales Handbook—to centralize the information for internal and external stakeholders.

Table 4: List of Federal Housing Administration (FHA) Documents Guiding the Distressed Asset Stabilization Program

Document name	Description of document or list of documents included
Participating Servicer Agreement	Contractual arrangement between FHA and the participating servicer providing specific requirements and directions for the servicer regarding putting loans in the loan sales process.
Conveyance, Assignment, and Assumption	Contractual agreement between FHA and the purchaser of a pool of FHA loans providing specific requirements and directions to the purchaser regarding the process and reporting requirements, if any, following the purchase of a pool of loans.
Standardized Bidder (purchaser) Qualifications	Outlines the qualifications of the bidder, such as net worth, to participate in the sale.
Bidder Information Package	Information provided to all qualified bidders includes the following information at a minimum: • Summary timetables for completing bid application • Bid instructions and conditions • Due diligence information on assets • Closing instructions • Postsale servicing requirements • Loan eligibility guidelines • Mortgage loan pool stratifications • Aggregate loan data • Bidders' checklists • Bid terms acknowledgments forms

Document name	Description of document or list of documents included
Standardized Bid-Day Procedures	Instructions to manage all aspects of bid day required for each loan sale contain the following information at a minimum: • Trial Run and Pre-Bid Day System Testing, Readiness, and Approval • Bidder Documentation Validation Procedures • Non-Conforming Document/Bid Procedures • Bidding Procedures • Bid Model Concurrence
Participating Servicer Desk Guide	Instructions for the servicer contain the following topics at a minimum: • Defaulted Loan Eligibility Criteria • Single Family Loan Sale Claim Identification • Post Claim Servicing • Document Transfer • Communications Protocol • Single Family Loan Sale Claim Submission Report • Self-Certification Form • Single Family Loan Sale Claim Identification Report • Broker Price Opinion Requirements • Preparation of Assignments and Lost Note Affidavits • Mortgagee Curtailment Date Instructions for Item 31 • Required Servicing Transfer Data
Interim Servicing Agreement	Contractual agreement that lays out the role of the participating servicer during the transfer of information between the confirmation of the winner and the final transfer of all documentation related to each loan.

Source: FHA. | GAO-19-228

Appendix IV: Reported Postsale Modification Actions

We examined the different types of actions purchasers have used to modify loans they purchased through the Distressed Asset Stabilization Program (DASP) and the expected effect of each type of action on borrowers' payments. Table 5 summarizes our findings on postsale modification actions. Our analysis was limited to modifications reported using reporting codes introduced in the purchaser agreement for the first sale in 2016, and included loans sold between fiscal years 2013 and 2016. We found that the Federal Housing Administration (FHA) may not have the data it needs to determine whether payment-lowering modifications offered by purchasers were sustainable—for example, a modification in which a low payment was later adjusted to higher than what it was prior to modification. Therefore, we could not determine the long-term effect on payment for many modifications offered by purchasers, as noted by "unclear" in the last column of table 5.

Table 5: Postsale Modification Actions for Loans Sold in the Distressed Asset Stabilization Program and Expected Effect on Monthly Payment, Fiscal Years 2013–2016

Modification action	Description	Percentage of postsale modifications that included the modification action[a]	Expected effect on monthly payment in the short term	Expected effect on monthly payment in the long term
Forgiveness of Principal	Some portion of the principal balance at the time of purchase is forgiven	38	decrease in monthly payment	decrease in monthly payment
Deferment of Principal (Non-Interest-Bearing)	A portion of the principal is deferred, and that principal amount does not bear interest during the period of deferment	17	decrease in monthly payment	Unclear
Deferment of Principal (Interest-Bearing)	A portion of the principal is deferred, and that principal amount bears interest during the period of deferment	<1	decrease in monthly payment	increase in monthly payment
Forgiveness of Interest	Some accrued interest is forgiven	4	decrease in monthly payment	decrease in monthly payment
Deferment of Interest (Non-Interest-Bearing)	Some or all accrued interest is deferred and does not bear interest during the period of deferment	35	decrease in monthly payment	Unclear

Modification action	Description	Percentage of postsale modifications that included the modification action[a]	Expected effect on monthly payment in the short term	Expected effect on monthly payment in the long term
Deferment of Interest (Interest-Bearing)	Some or all accrued interest is deferred and bears interest during the period of deferment	<1	decrease in monthly payment	increase in monthly payment
Forgiveness of Other Indebtedness	Some or all accrued advances or fees, or both, are forgiven	8	decrease in monthly payment	decrease in monthly payment
Deferment of Other Indebtedness (Non-Interest-Bearing)	Some or all accrued advances or fees, or both, are deferred and do not bear interest during the period of deferment	32	decrease in monthly payment	Unclear
Deferment of Other Indebtedness (Interest-Bearing)	Some or all accrued advances or fees, or both, are deferred and bear interest during the period of deferment	<1	decrease in monthly payment	increase in monthly payment
Capitalization of Interest	Accrued interest is added to the principal balance at the time of modification	65	increase in monthly payment	Unclear
Capitalization of Other Indebtedness	Other accrued advances or fees, or both, are added to the principal balance at the time of modification	63	increase in monthly payment	Unclear
Rate Reduction	The rate at which the loan is bearing interest is reduced over the remaining term	73	decrease in monthly payment	decrease in monthly payment
Term Extension	The length of the term of the loan is extended	69	decrease in monthly payment	decrease in monthly payment
Interest Only	Loan payment is interest only for a period of time	None	decrease in monthly payment	Unclear
Other	Any other modification activity not captured in the modification actions above or a combination of these	1	Not applicable	Not applicable

Legend:
↓ = decrease in monthly payment
↑ = increase in monthly payment

Source: GAO Analysis of Federal Housing Administration (FHA) data and purchaser agreements. | GAO-19-228

[a]Percentages are based on the modifications that were reported using reporting codes introduced in 2016.

Appendix V: Additional Information on Matching and Outcomes Analysis

This appendix provides additional methodological details on our analysis to compare outcomes between loans sold through the Distressed Asset Stabilization Program (DASP) and a comparison group of similar unsold loans. The analysis consisted of two parts: (1) applying statistical methods for constructing matched comparison groups and (2) estimating a statistical model of loan outcomes using the matched sample of loans.

Additional Information on Matching Analysis

We matched one unsold loan to each sold loan, using exact and Mahalanobis distance matching methods. We matched exactly on occupancy status, state, and loan servicer, and we matched the distributions of loan delinquency period, loan-to-value ratio (divided into five categories), geographic coordinate, and origination year. Unsold loans could be matched multiple times in order to maximize the degree of similarity between the sold and unsold loans, given constrained sample sizes of potential comparison loans. (That is, we used one-to-one matching with replacement.) Matching occurred separately for each loan sale in order to measure the matching variables 2 months before each sale occurred. We assessed the quality of candidate matched samples by consulting univariate empirical-QQ plots, descriptive statistics, and multivariate Kolmogorov-Smirnov tests of equal distributions for each of the matching variables, as implemented in the “Matching” package for the statistical software, R, version 3.5.1.[1]

We attempted to match exactly within the smallest geographical area that sample sizes allowed. Location is important for the outcomes of Federal Housing Administration (FHA) loans and is potentially correlated with many unobserved variables, such as local housing market conditions.

[1]Jasjeet S. Sekhon, “Multivariate and Propensity Score Matching Software with Automated Balance Optimization: the Matching Package for R,” *Journal of Statistical Software*, vol. 42, no. 7 (2011): pp. 1–52.

After experimenting with multiple geographic areas, such as the census tract and county, we chose a strategy of matching exactly on state and matching in distribution on latitude, longitude, and product. This ensured that the comparison loans were in the same states as the sold loans, which held constant differences in foreclosure processes and other political and legal differences. Although the matched loans were potentially in different counties or municipalities than the sold loans, generally they were still close to each other, as measured by the geographic coordinates.

We obtained a similar matched sample of comparison loans for each loan sale, as summarized in table 6 and figures 21 and 22. Although we conducted the matching separately for each sale (exactly matched), we combined the sales and their matched comparison loans for the purpose of summarizing their similarity across the matching variables.

Table 6: Descriptive Statistics on Continuous Covariates in Unmatched and Matched Samples

Variable matched	Group	Mean	Standard deviation	1st Quantile	10th Quantile	25th Quantile	Median	75th Quantile	90th Quantile	99th Quantile
Months delinquent	Matched: Sold	23.3	14.8	4	8	12	19	32	46	66
Months delinquent	Matched: Unsold	22.7	15.0	1	7	11	19	31	45	65
Months delinquent	Unmatched: Sold	23.3	14.8	4	8	12	19	32	46	66
Months delinquent	Unmatched: Unsold	8.5	14.2	1	1	1	2	9	27	66
Origination year	Matched: Sold	2007.8	2.7	1,998	2,004	2,007	2,008	2,009	2,010	2,013
Origination year	Matched: Unsold	2007.8	2.7	1,998	2,004	2,007	2,008	2,009	2,010	2,013
Origination year	Unmatched: Sold	2007.8	2.7	1,998	2,004	2,007	2,008	2,009	2,010	2,013
Origination year	Unmatched: Unsold	2006.9	5.0	1,989	2,000	2,004	2,008	2,010	2,012	2,015
Latitude	Matched: Sold	38.206	4.911	25.964	29.912	35.250	39.849	41.488	42.809	47.399
Latitude	Matched: Unsold	38.212	4.906	25.992	29.847	35.253	39.885	41.481	42.830	47.376
Latitude	Unmatched: Sold	38.208	4.910	25.964	29.919	35.252	39.848	41.489	42.812	47.400
Latitude	Unmatched: Unsold	36.819	5.634	18.366	29.636	33.468	38.156	40.829	42.606	47.410

Variable matched	Group	Mean	Standard deviation	1st Quantile	10th Quantile	25th Quantile	Median	75th Quantile	90th Quantile	99th Quantile
Longitude	Matched: Sold	-85.461	13.237	-122.860	-110.854	-88.151	-81.931	-75.348	-74.069	-70.981
Longitude	Matched: Unsold	-85.437	13.241	-122.838	-110.948	-88.115	-81.926	-75.338	-74.076	-71.008
Longitude	Unmatched: Sold	-85.468	13.244	-122.859	-110.880	-88.155	-81.935	-75.348	-74.065	-70.971
Longitude	Unmatched: Unsold	-88.470	13.832	-122.695	-111.985	-95.535	-84.880	-78.810	-74.338	-66.107
Latitude* Longitude[a]	Matched: Sold	-3266.886	699.253	-5781.295	-4006.234	-3538.630	-3057.141	-2965.318	-2479.525	-2083.885
Latitude* Longitude[a]	Matched: Unsold	-3266.534	699.321	-5781.737	-4005.268	-3537.880	-3049.930	-2970.723	-2474.853	-2086.262
Latitude* Longitude[a]	Unmatched: Sold	-3267.327	699.292	-5781.290	-4007.378	-3539.797	-3057.256	-2965.524	-2480.316	-2083.881
Latitude* Longitude[a]	Unmatched: Unsold	-3263.236	744.242	-5767.228	-4138.752	-3566.889	-3126.866	-2893.092	-2678.305	-1212.473
Loan-to-value less than 70 percent	Matched: Sold	0.053	0.224	0	0	0	0	0	0	1
Loan-to-value less than 70 percent	Matched: Unsold	0.053	0.224	0	0	0	0	0	0	1
Loan-to-value less than 70 percent	Unmatched: Sold	0.053	0.224	0	0	0	0	0	0	1
Loan-to-value less than 70 percent	Unmatched: Unsold	0.203	0.402	0	0	0	0	0	1	1
Loan-to-value 70–89 percent	Matched: Sold	0.241	0.428	0	0	0	0	0	1	1
Loan-to-value 70–89 percent	Matched: Unsold	0.243	0.429	0	0	0	0	0	1	1
Loan-to-value 70–89 percent	Unmatched: Sold	0.241	0.428	0	0	0	0	0	1	1
Loan-to-value 70–89 percent	Unmatched: Unsold	0.331	0.471	0	0	0	0	1	1	1
Loan-to-value 90–109 percent	Matched: Sold	0.368	0.482	0	0	0	0	1	1	1
Loan-to-value 90–109 percent	Matched: Unsold	0.369	0.483	0	0	0	0	1	1	1
Loan-to-value 90–109 percent	Unmatched: Sold	0.367	0.482	0	0	0	0	1	1	1

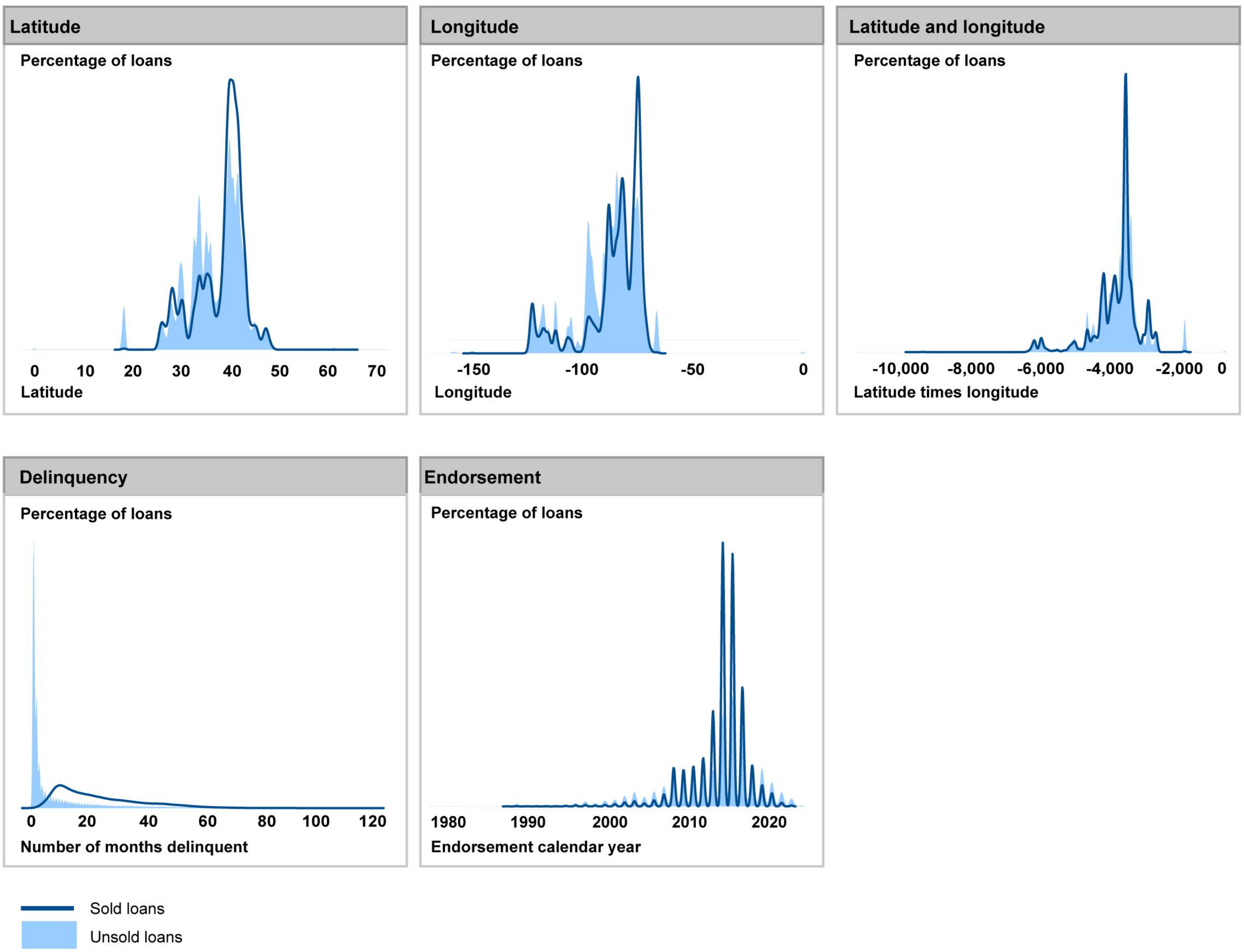
Variable matched	Group	Mean	Standard deviation	1st Quantile	10th Quantile	25th Quantile	Median	75th Quantile	90th Quantile	99th Quantile
Loan-to-value 90–109 percent	Unmatched: Unsold	0.236	0.425	0	0	0	0	0	1	1
Loan-to-value 110–129 percent	Matched: Sold	0.130	0.337	0	0	0	0	0	1	1
Loan-to-value 110–129 percent	Matched: Unsold	0.129	0.335	0	0	0	0	0	1	1
Loan-to-value 110–129 percent	Unmatched: Sold	0.130	0.337	0	0	0	0	0	1	1
Loan-to-value 110–129 percent	Unmatched: Unsold	0.048	0.214	0	0	0	0	0	0	1
Loan-to-value greater than 130 percent	Matched: Sold	0.045	0.208	0	0	0	0	0	0	1
Loan-to-value greater than 130 percent	Matched: Unsold	0.044	0.206	0	0	0	0	0	0	1
Loan-to-value greater than 130 percent	Unmatched: Sold	0.045	0.208	0	0	0	0	0	0	1
Loan-to-value greater than 130 percent	Unmatched: Unsold	0.015	0.121	0	0	0	0	0	0	1
Loan-to-value missing	Matched: Sold	0.162	0.369	0	0	0	0	0	1	1
Loan-to-value missing	Matched: Unsold	0.162	0.369	0	0	0	0	0	1	1
Loan-to-value missing	Unmatched: Sold	0.163	0.370	0	0	0	0	0	1	1
Loan-to-value missing	Unmatched: Unsold	0.167	0.373	0	0	0	0	0	1	1
Occupied	Matched: Sold	0.751	0.432	0	0	1	1	1	1	1
Occupied	Matched: Unsold	0.751	0.432	0	0	1	1	1	1	1
Occupied	Unmatched: Sold	0.750	0.433	0	0	1	1	1	1	1
Occupied	Unmatched: Unsold	0.797	0.402	0	0	1	1	1	1	1

Source: GAO analysis of Federal Housing Administration data. | GAO-19-228

Note: Entries are descriptive statistics for sold and unsold loans eligible for analysis, before and after applying multivariate matching methods to construct comparison samples for each sale of loans. Sales are combined for the purpose of calculating these statistics. n(unmatched, sold) = 92,862. n(unmatched, unsold) = 3,079,678. n(matched, sold) = 92,603. n(matched, unsold) = 92,603.

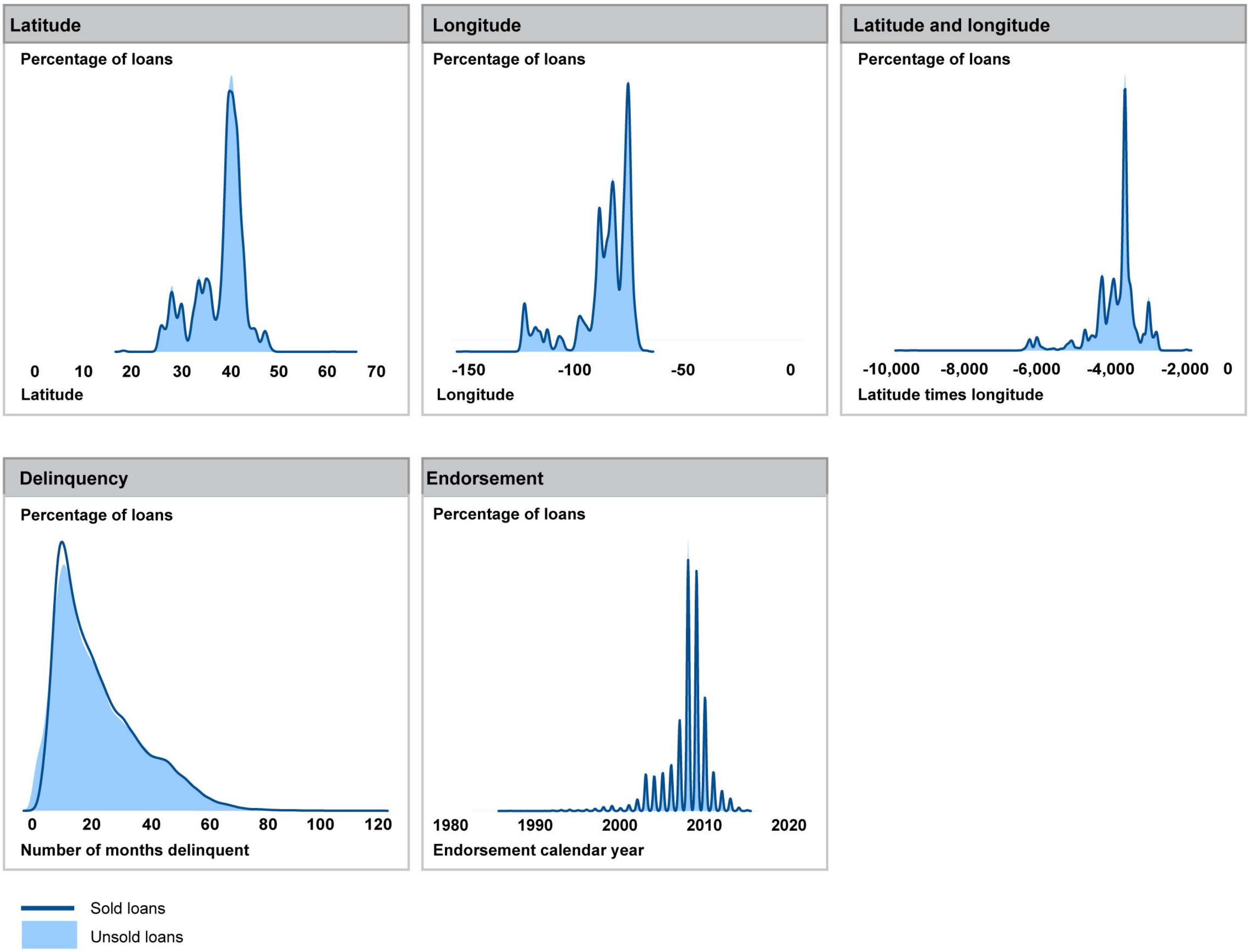
[a]The product of latitude and longitude.

Figure 21: Covariate Distributions in Unmatched Sample



Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

Figure 22: Covariate Distributions in Matched Sample



Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

Additional Information on Outcome Analysis

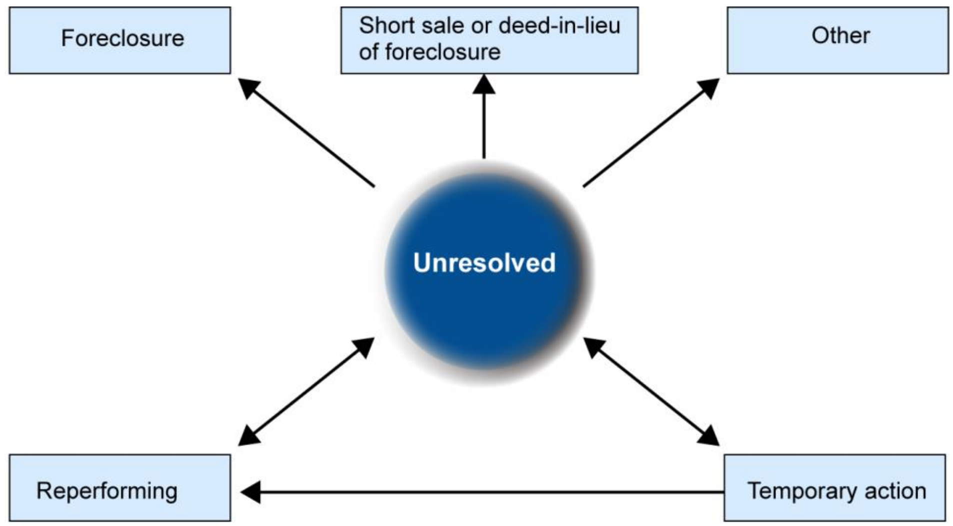
We used statistical modeling methods designed for longitudinal time-to-event or "duration" data to compare outcomes for sold and matched unsold loans. Conventional duration methods, such as "competing risks" models, would estimate the probability that a loan experienced one or more terminal outcomes by a certain follow-up time.[2] These methods assume that event times are observed exactly, and that no outcome can occur more than once. These assumptions were not realistic for our analysis. Loans could transition among several nonterminal outcomes over time, such as reperforming or temporary action, before experiencing a terminal outcome, such as foreclosure. Our data sources measured the status of unsold loans monthly and sold loans quarterly. However, events could occur on any date, in continuous time, so the status of each loan was unknown between pairs of reporting times (or interval-censored).

We used Multi-State Markov models to account for these features of the data.[3] Our models assumed a directed graphical structure for how loans could transition among events between observed follow-up times, as described in figure 23. We developed our model of possible transitions based on FHA's typical process for managing unsold delinquent loans and DASP program rules for managing sold delinquent loans. To simplify the model, we did not allow paths for transitions that were infrequently observed, illogical, or inconsistent with prior knowledge about loan management. These unusual transitions in the data may reflect misclassified outcomes or transitions through unobserved outcomes between observation times. Table 7 gives the sample counts of the transitions in the matched sample of loan-month observations.

[2]Ardo Van den Hout, *Multi-State Survival Models for Interval-Censored Data* (Boca Raton, Fla.: Chapman and Hall, 2017), 96.

[3]Van den Hout, *Multi-State Survival Models*, 96.

Figure 23: Model of Loan Outcome Transitions



Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

Table 7: Transitions between Outcomes in the Matched Analysis Sample

From	To					
n/a	Unresolved	Short sale or deed-in-lieu of foreclosure	Foreclosure	Other	Reperforming	Temporary action
Unresolved	1,132,562	19,915	62,318	8,372	40,210	45,563
Reperforming	27,667	353	43	2,975	326,977	4,287
Temporary action	26,131	90	422	244	24,478	179,092

Source: GAO analysis of Federal Housing Administration data. | GAO-19-228

Note: Entries are counts of transitions from outcomes listed in the rows at one time in the follow-up observation period to outcomes listed in the columns at the subsequent time.

The graphical version of our model implied a matrix of modeled transitions among outcomes, with transition probabilities set to 0 for paths between outcomes not shown in the graph. Specifically, we defined the loan outcomes at time t, Y_t, as a stochastic process, taking values according to an underlying model of transition probabilities from time 0 to t:

$$\{Y_t | t \in (0, \infty)\}$$

$$p_{rs}(t) = \Pr(Y_t = r | Y_0 = s)$$

where r and s denoted two outcomes from the set of outcomes above in table 7, such as unresolved and reperforming. Consistent with existing literature, we assumed that the outcome process was a time-homogenous Markov chain. This assumption made the model mathematically tractable, but required the transition probability at any follow-up time to be independent of prior outcomes and constant over the observation period. (We estimated versions of the model that relaxed this assumption, as described below.) Under this assumption, we modeled the transition hazard rate from outcome *r* to *s* as:

$$q_{rs}(x) = \lim_{\delta \downarrow 0} \frac{\Pr(Y_{t+\delta} = s | Y_t = r)}{\delta} = q^0_{rs} \exp(x\beta_{rs})$$

where *x* and β_{rs} were vectors of covariates and transition-specific parameters (excluding an intercept) and q^0_{rs} was an unspecified proportional baseline hazard. All covariates were time-invariant characteristics of the loans measured at baseline, 2 months prior to the loan's bid date, used to create the matched sample. We estimated β_{rs} using maximum likelihood estimation methods, as implemented by the "msm" package in R 3.5.1.[4]

The body of this report provides estimated transition probabilities for various groups of loans, including loans that were sold or unsold. We estimated the probability of a loan's transitioning from unresolved at $t = 0$ to some other outcome at t using the estimated parameters and the matrix exponential $P(t) = \exp(tQ)$, where *P* and *Q* are the matrices of transition probabilities and hazards, respectively, for all outcomes *r* and *s*.[5] We used Monte Carlo simulation from the fitted multivariate normal distribution of the parameters to estimate 95 percent confidence intervals for the transition probabilities, using 1,000 draws. In appendix VI, we provide more detailed estimates of these transition probabilities and their confidence intervals for key findings discussed in the body of this report.

Our models estimated the difference in transition probabilities between sold and unsold loans in the matched sample by including an indicator for sold status in *x*. We estimated transition probabilities for certain subpopulations of loans, like specific purchasers or loan sales, by estimating separate models for each subpopulation. This approach allowed the models to be fully stratified and reduced computational

[4]Christopher H. Jackson, "Multi-State Models for Panel Data: The MSM Package for R," *Journal of Statistical Software*, vol. 38, no. 8: pp. 1–28.

[5]Van den Hout, *Multi-State Survival Models*, 57.

burdens associated with estimating many parameters using a sample of 1 million or more observed transitions, as a fully interactive specification between sold status and the subpopulation variables would have required. However, this approach prevented us from estimating the partial interactions between sold loan status and the subpopulation variables.

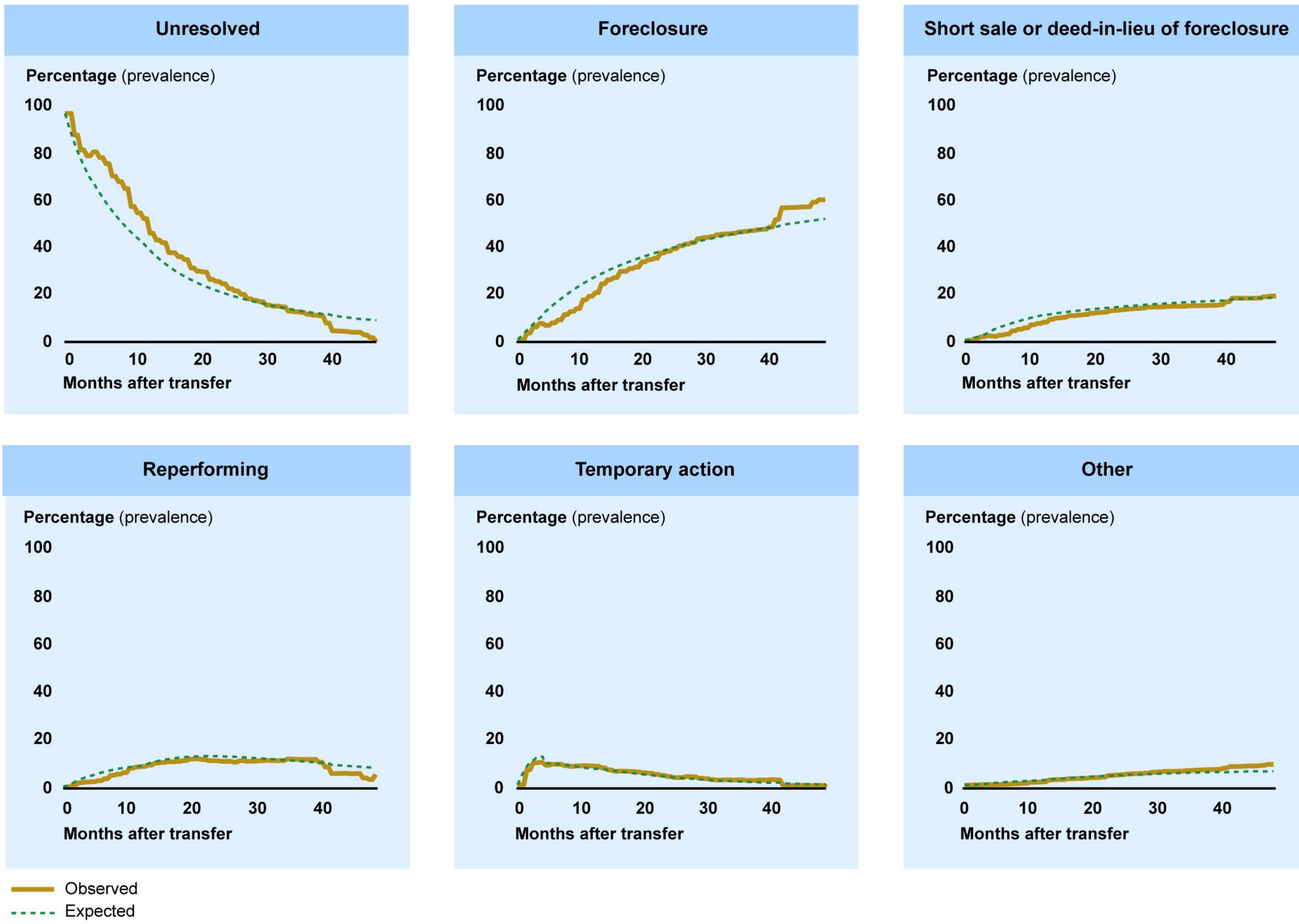
We conducted several validation and robustness checks of the analyses reported in the body of this report. These included the following:

- **Predictive fit**. We did not design our models to predict future outcomes but rather to make inferences about the difference in transition probabilities between sold and matched unsold loans. However, to identify substantial problems with model fit, we compared the observed prevalence of each outcome to the estimated prevalence expected under our models.[6] Figure 24 shows the predictive fit for models with a covariate in x for sold status and a piecewise-constant indicator for the period after month 12. The estimated and observed prevalence are generally close for most outcomes before month 40. After that month, the model underestimates the prevalence of foreclosure and overestimates the prevalence of unresolved. This lack of fit late in the observation period may reflect the substantial effect of sales cohort, which we modeled through separate models stratified by sale rather than as a covariate. In any case, the model fit was acceptable, given our nonpredictive use of the model and the limitations of using observed outcome prevalence rates to validate predictions of a process with interval censoring.[7]

[6] Jackson, "Multi-State Models for Panel Data," pp. 19–20.

[7] Van den Hout, *Multi-State Survival Models*, pp. 81–82.

Figure 24: Predictive Fit of Multi-State Markov Model



Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

- **Time-inhomogenous models**. We relaxed our assumption that the transition intensities were constant throughout the observation period by including indicators in x for whether the observation fell before or after 12 months. FHA changed DASP rules before the 2015 sales to extend the moratorium on foreclosures from 6 months to 12 months. Outcome transition estimates from a model including these time indicators plus a sold indicator appear in table 8, along with our base estimates from a time-homogenous model with only the sold indicator. Although Akaike Information Criterion values showed that the piecewise model improved the fit, the estimated transition probabilities generally supported the same substantive conclusions. The piecewise model estimated that sold loans were somewhat more likely to transition to a short sale or deed-in-lieu outcome, and somewhat less likely to transition to reperforming, but the direction of the association was the same as in the time-homogenous model. We used the time-homogenous model to provide results in the body of this report and in appendix VI, due to the considerable computing time required to estimate models with piecewise-constant covariates.

Table 8: Transition Estimates in Percentage Points from Models with and without Piecewise-Constant Time Covariates

Category	Time	Unresolved	Short sale or deed-in-lieu of foreclosure	Foreclosure	Reperforming
Time homogenous: Sold	12	39.8	11.1	28.5	11.9
Time homogenous: Sold	24	19.8	15.9	41.0	12.6
Time homogenous: Sold	36	11.6	18.6	47.8	10.2
Time homogenous: Sold	48	7.6	20.2	52.0	7.6
Time homogenous: Unsold	12	40.0	5.6	22.3	18.6
Time homogenous: Unsold	24	27.1	8.6	34.3	18.5
Time homogenous: Unsold	36	20.6	10.8	43.0	15.0
Time homogenous: Unsold	48	15.9	12.4	49.6	11.7
Time homogenous: Difference	12	-0.1	5.5	6.1	-6.7
Time homogenous: Difference	24	-7.3	7.4	6.7	-5.9
Time homogenous: Difference	36	-9.0	7.8	4.8	-4.8
Time homogenous: Difference	48	-8.3	7.8	2.3	-4.1
fPiecewise constant (before and after month 12): Sold	12	42.4	14.8	30.1	7.0
Piecewise constant (before and after month 12): Sold	24	18.7	18.5	42.5	11.5
Piecewise constant (before and after month 12): Sold	36	10.4	20.3	48.5	10.4
Piecewise constant (before and after month 12): Sold	48	6.8	21.4	52.2	8.2
Piecewise constant (before and after month 12): Unsold	12	44.8	7.5	24.4	10.8
Piecewise constant (before and after month 12): Unsold	24	23.8	9.6	35.6	20.2
Piecewise constant (before and after month 12): Unsold	36	17.9	10.9	42.9	18.1
Piecewise constant (before and after month 12): Unsold	48	14.3	12.0	48.7	14.9
Piecewise constant (before and after month 12): Difference	12	-2.4	7.3	5.8	-3.8

Category	Time	Unresolved	Short sale or deed-in-lieu of foreclosure	Foreclosure	Reperforming
Piecewise constant (before and after month 12): Difference	24	-5.1	8.9	6.9	-8.7
Piecewise constant (before and after month 12): Difference	36	-7.5	9.3	5.6	-7.7
Piecewise constant (before and after month 12): Difference	48	-7.5	9.3	3.5	-6.7

Source: GAO analysis of Federal Housing Administration data. | GAO-19-228

Note: Entries are estimated probabilities (in percentage points) of transitioning from unresolved to the outcomes listed in each column, as derived from a Multi-State Markov statistical model.

Appendix VI: Data for Selected Outcome Figures and Additional Outcome Estimates

In this appendix, we provide data for selected borrower outcome figures presented in this report. We also provide additional outcome figures and data, as well as outcome data for sold loans and unsold loans by some loan-level characteristics. These figures and data are based on the statistical matching and modeling analysis of loans sold through the Distressed Asset Stabilization Program (DASP) and similar, unsold loans described in appendix I and appendix V of this report.

Data for Outcome Figures

Tables 9–12 present data for selected outcome figures shown in the report. Table 9 presents estimates of foreclosure and foreclosure avoidance outcome rates for sold loans and similar, unsold loans, based on statistical models (fig. 7). Table 10 presents these estimates for out-of-home and in-home outcomes (fig. 8). Figure 9 in the body of this report shows the foreclosure and foreclosure avoidance outcomes by DASP sale, and tables 11 and 12 present these estimates for all outcomes by DASP sale, 12 and 24 months following the servicing transfer date, respectively.

Table 9: Foreclosure and Foreclosure Avoidance Outcomes for Loans Sold through Distressed Asset Stabilization Program Sales and Similar, Unsold Loans, Fiscal Years 2013–2016

n/a	n/a	Months after transfer			
Category	**Status**	**12**	**12**	**12**	**12**
Foreclosure	Sold	28.80	43.03	52.34	59.21
Foreclosure	Sold	(28.54, 29.06)	(42.68, 43.36)	(51.93, 52.70)	(58.76, 59.63)
Foreclosure	Unsold	22.76	35.65	45.66	53.84
Foreclosure	Unsold	(22.55, 23.00)	(35.32, 35.93)	(45.28, 46.05)	(53.44, 54.27)
Foreclosure avoided[a]	Sold	23.29	23.07	18.99	14.98
Foreclosure avoided[a]	Sold	(23.07, 23.50)	(22.80, 23.34)	(18.71, 19.27)	(14.69, 15.28)

n/a	n/a	Months after transfer			
Category	Status	12	12	12	12
Foreclosure avoided[a]	Unsold	33.48	30.94	25.81	21.28
Foreclosure avoided[a]	Unsold	(33.27, 33.70)	(30.68, 31.20)	(25.55, 26.07)	(21.01, 21.53)

Source: GAO analysis of Federal Housing Administration data. | GAO-19-228

Notes: Entries are estimated probabilities of transitioning from delinquency at the servicing transfer date to any given outcome at a future follow-up time, as estimated by statistical models. Ninety-five percent confidence intervals appear in parentheses. App. V describes these models in detail.

[a]Foreclosure avoidance outcomes include reperforming, temporary action, and short sale or deed-in-lieu of foreclosure.

Table 10: Out-of-Home and In-Home Outcomes for Loans Sold through Distressed Asset Stabilization Program Sales and Similar, Unsold Loans, Fiscal Years 2013–2016

n/a	n/a	Months after transfer			
Category	Status	12	12	12	12
Out-of-home[a]	Sold	40.03	57.68	67.09	72.76
Out-of-home[a]	Sold	(39.77, 40.30)	(57.36, 57.99)	(66.75, 67.42)	(72.42, 73.06)
Out-of-home[a]	Unsold	28.12	42.98	53.78	62.07
Out-of-home[a]	Unsold	(27.87, 28.35)	(42.63, 43.32)	(53.41, 54.14)	(61.70, 62.48)
In-home[b]	Sold	14.42	13.46	10.02	6.97
In-home[b]	Sold	(14.24, 14.58)	(13.25, 13.66)	(9.83, 10.22)	(6.81, 7.14)
In-home[b]	Unsold	29.17	25.79	20.36	15.85
In-home[b]	Unsold	(28.98, 29.37)	(25.56, 26.06)	(20.14, 20.58)	(15.61, 16.06)

Source: GAO analysis of Federal Housing Administration data. | GAO-19-228

Notes: Entries are estimated probabilities of transitioning from delinquency at the servicing transfer date to any given outcome at a future follow-up time, as estimated by statistical models. Ninety-five percent confidence intervals appear in parentheses. App. V describes these models in detail.

[a]Out-of-home outcomes include foreclosure and short sale or deed-in-lieu of foreclosure.

[b]In-home outcomes include reperforming and temporary action.

Table 11: Loan Outcomes 12 Months after Transfer by Distressed Asset Stabilization Program (DASP) Sale and Similar, Unsold Loans, Fiscal Years 2013–2016

n/a	n/a	DASP sale						
Category	Status	2013-1	2013-1	2013-1	2013-1	2013-1	2013-1	2013-1
Unresolved	Sold	35.02	39.71	36.90	42.39	39.59	30.41	41.33
Unresolved	Sold	(33.25, 36.70)	(39.11, 40.37)	(36.31, 37.46)	(41.98, 42.75)	(38.60, 40.65)	(29.36, 31.37)	(40.04, 42.69)
Unresolved	Unsold	50.21	42.92	42.11	39.02	37.25	34.18	31.86
Unresolved	Unsold	(48.94, 51.43)	(42.36, 43.44)	(41.65, 42.55)	(38.66, 39.35)	(36.27, 38.23)	(33.22, 35.15)	(30.66, 32.91)
Foreclosure	Sold	24.25	30.60	27.70	27.50	33.05	32.02	24.46

n/a	n/a				DASP sale			
Category	**Status**	**2013-1**	**2013-1**	**2013-1**	**2013-1**	**2013-1**	**2013-1**	**2013-1**
Foreclosure	Sold	(22.63, 25.97)	(29.97, 31.27)	(27.17, 28.28)	(27.14, 27.88)	(31.95, 34.09)	(30.95, 33.15)	(23.34, 25.60)
Foreclosure	Unsold	20.54	26.09	20.17	19.54	28.64	28.91	33.92
Foreclosure	Unsold	(19.40, 21.64)	(25.50, 26.66)	(19.75, 20.57)	(19.18, 19.87)	(27.58, 29.74)	(27.86, 30.03)	(32.67, 35.18)
Short sale or deed-in-lieu of foreclosure	Sold	7.50	12.65	14.07	8.79	11.43	12.51	13.04
Short sale or deed-in-lieu of foreclosure	Sold	(6.43, 8.59)	(12.19, 13.12)	(13.63, 14.50)	(8.55, 9.03)	(10.72, 12.18)	(11.76, 13.39)	(12.19, 13.97)
Short sale or deed-in-lieu of foreclosure	Unsold	5.96	5.76	6.93	4.83	5.39	5.57	4.46
Short sale or deed-in-lieu of foreclosure	Unsold	(5.37, 6.69)	(5.45, 6.08)	(6.66, 7.20)	(4.67, 5.03)	(4.90, 5.92)	(5.02, 6.14)	(3.93, 5.06)
Reperforming	Sold	14.10	6.16	10.96	13.19	10.67	18.18	18.49
Reperforming	Sold	(13.00, 15.35)	(5.87, 6.45)	(10.61, 11.30)	(12.93, 13.45)	(10.04, 11.38)	(17.32, 19.07)	(17.49, 19.59)
Reperforming	Unsold	8.66	13.69	15.75	21.66	18.25	21.61	23.05
Reperforming	Unsold	(8.07, 9.37)	(13.34, 14.06)	(15.45, 16.09)	(21.37, 21.95)	(17.46, 19.08)	(20.71, 22.55)	(21.75, 24.28)
Temporary action	Sold	4.63	2.64	2.71	1.90	1.29	0.32	0.76
Temporary action	Sold	(4.06, 5.26)	(2.46, 2.81)	(2.59, 2.83)	(1.83, 1.96)	(1.16, 1.43)	(0.23, 0.46)	(0.59, 0.97)
Temporary action	Unsold	11.76	9.29	11.88	11.90	7.13	7.92	5.47
Temporary action	Unsold	(11.08, 12.52)	(9.03, 9.55)	(11.62, 12.13)	(11.71, 12.11)	(6.72, 7.55)	(7.49, 8.33)	(5.10, 5.87)
Other[a]	Sold	14.50	8.24	7.66	6.24	3.97	6.56	1.91
Other[a]	Sold	(13.10, 15.86)	(7.84, 8.61)	(7.33, 8.02)	(6.02, 6.44)	(3.53, 4.41)	(6.00, 7.20)	(1.56, 2.33)
Other[a]	Unsold	2.87	2.25	3.16	3.05	3.35	1.81	1.23
Other[a]	Unsold	(2.40, 3.37)	(2.07, 2.45)	(2.97, 3.36)	(2.90, 3.20)	(2.95, 3.83)	(1.51, 2.16)	(0.96, 1.57)

Source: GAO analysis of Federal Housing Administration data. | GAO-19-228

Notes: Entries are estimated probabilities of transitioning from delinquency at the servicing transfer date to any given outcome at a future follow-up time, as estimated by statistical models. Ninety-five percent confidence intervals appear in parentheses. App. V describes these models in detail.

[a]For unsold loans, the Other category consisted of loans with the following Single Family Default Monitoring System default status codes: Paid in Full, Charge-Off, Assignment Completed, Property Redeemed, Government Seizure, and Refinance Started. For sold loans, the Other category

consisted of loans with the following postsale reporting statuses: Paid in Full, Charge-Off, Repurchase, and Whole Loan Sale.

Table 12: Loan Outcomes 24 Months after Transfer by Distressed Asset Stabilization Program (DASP) Sale and Similar, Unsold Loans, Fiscal Years 2013–2016

n/a	n/a	DASP Sale					
Category	**Status**	**2013-1**	**2013-1**	**2013-1**	**2013-1**	**2013-1**	**2013-1**
Unresolved	Sold	17.73	18.47	16.65	22.96	18.21	12.01
Unresolved	Sold	(16.41, 19.05)	(17.95, 18.96)	(16.22, 17.08)	(22.60, 23.31)	(17.29, 19.07)	(11.34, 12.69)
Unresolved	Unsold	34.53	26.95	28.35	28.02	23.56	22.46
Unresolved	Unsold	(33.01, 35.84)	(26.41, 27.50)	(27.91, 28.80)	(27.69, 28.36)	(22.69, 24.43)	(21.59, 23.33)
Foreclosure	Sold	34.40	43.67	38.87	40.61	47.13	42.75
Foreclosure	Sold	(32.31, 36.50)	(42.90, 44.53)	(38.16, 39.56)	(40.09, 41.11)	(45.84, 48.49)	(41.36, 44.05)
Foreclosure	Unsold	32.78	39.79	31.09	30.31	42.92	43.26
Foreclosure	Unsold	(31.16, 34.60)	(39.03, 40.61)	(30.47, 31.71)	(29.80, 30.82)	(41.62, 44.31)	(41.77, 44.78)
Short sale or deed-in-lieu of foreclosure	Sold	10.63	18.05	19.73	12.98	16.30	16.71
Short sale or deed-in-lieu of foreclosure	Sold	(9.18, 12.20)	(17.33, 18.66)	(19.12, 20.31)	(12.62, 13.35)	(15.28, 17.33)	(15.74, 17.84)
Short sale or deed-in-lieu of foreclosure	Unsold	9.50	8.79	10.69	7.50	8.07	8.34
Short sale or deed-in-lieu of foreclosure	Unsold	(8.54, 10.67)	(8.33, 9.22)	(10.26, 11.10)	(7.21, 7.77)	(7.34, 8.87)	(7.55, 9.26)
Reperforming	Sold	14.42	6.65	12.81	13.25	12.11	19.62
Reperforming	Sold	(13.14, 15.93)	(6.30, 7.02)	(12.39, 13.27)	(12.95, 13.57)	(11.25, 12.97)	(18.57, 20.74)
Reperforming	Unsold	9.50	15.14	16.66	21.17	16.14	18.37
Reperforming	Unsold	(8.75, 10.30)	(14.68, 15.57)	(16.21, 17.06)	(20.82, 21.54)	(15.09, 17.11)	(17.29, 19.42)
Temporary action	Sold	2.26	1.39	1.19	0.99	0.58	0.16
Temporary action	Sold	(1.94, 2.62)	(1.29, 1.51)	(1.13, 1.25)	(0.96, 1.03)	(0.52, 0.64)	(0.10, 0.23)
Temporary action	Unsold	9.10	5.91	8.35	8.28	4.29	4.87
Temporary action	Unsold	(8.43, 9.79)	(5.69, 6.11)	(8.13, 8.58)	(8.11, 8.45)	(4.01, 4.57)	(4.55, 5.18)
Other[a]	Sold	20.56	11.76	10.75	9.21	5.66	8.75
Other[a]	Sold	(18.71, 22.52)	(11.26, 12.31)	(10.30, 11.18)	(8.91, 9.51)	(5.07, 6.34)	(7.99, 9.53)
Other[a]	Unsold	4.58	3.43	4.87	4.73	5.02	2.70
Other[a]	Unsold	(3.87, 5.41)	(3.16, 3.73)	(4.60, 5.18)	(4.50, 4.96)	(4.44, 5.67)	(2.29, 3.24)

Source: GAO analysis of Federal Housing Administration data. | GAO-19-228

Notes: Entries are estimated probabilities of transitioning from delinquency at the servicing transfer date to any given outcome at a future follow-up time, as estimated by statistical models. Ninety-five percent confidence intervals appear in parentheses. App. V describes these models in detail. Outcome data 24 months following the servicing transfer date were not available for loans sold in the second sale in 2016 (2016-2) at the time of our review.

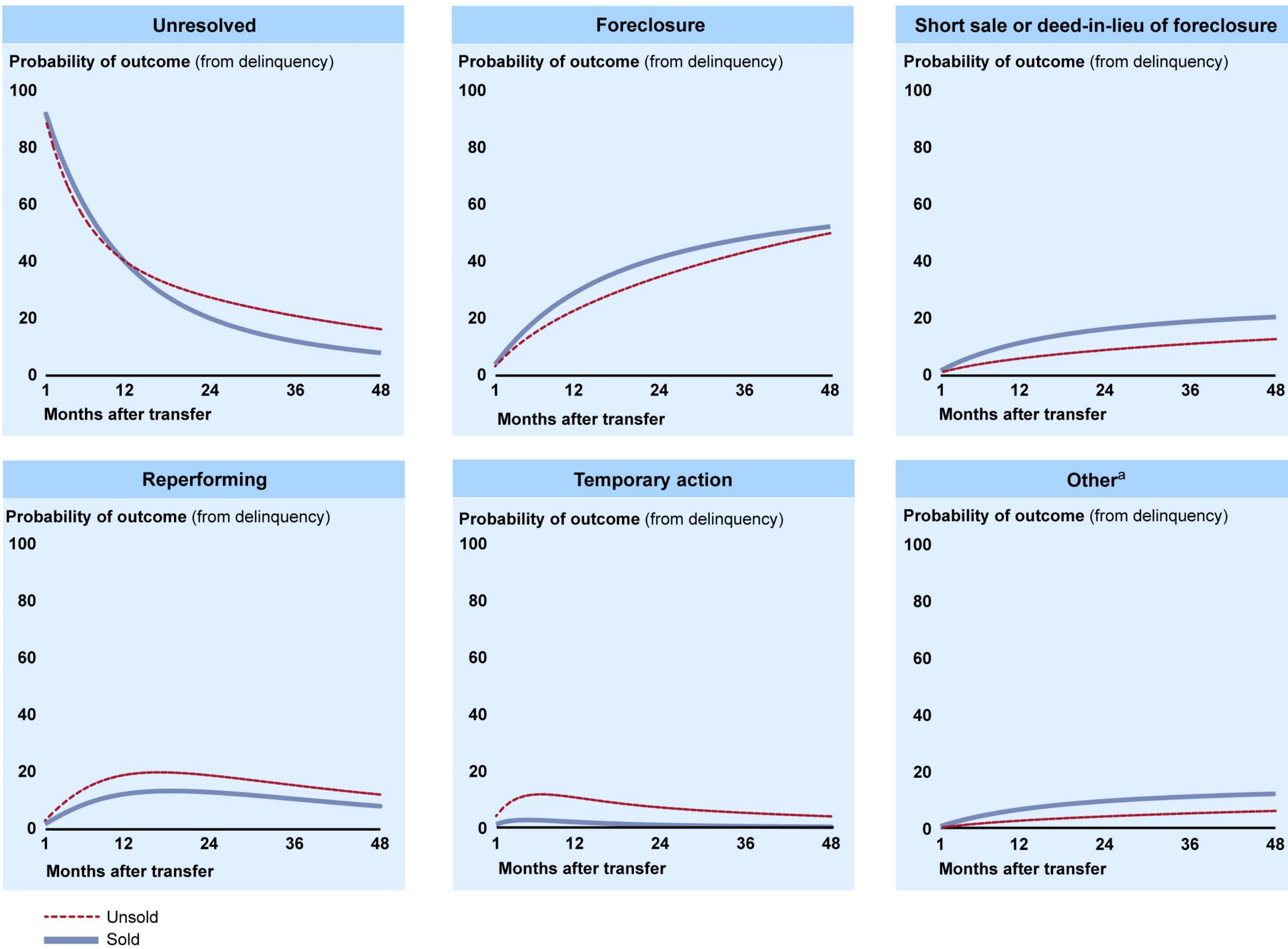
[a]For unsold loans, the Other category consisted of loans with the following Single Family Default Monitoring System default status codes: Paid in Full, Charge-Off, Assignment Completed, Property

Redeemed, Government Seizure, and Refinance Started. For sold loans, the Other category consisted of loans with the following postsale reporting statuses: Paid in Full, Charge-Off, Repurchase, and Whole Loan Sale.

Additional Outcomes

As discussed in appendix I, to compare foreclosure and foreclosure avoidance outcomes for sold and unsold loans, we assigned loans to one of six outcome categories. Figure 25 and table 13 present the outcome figures and associated data for sold and unsold loans across all six categories.

Figure 25: Additional Outcomes for Loans Sold through the Distressed Asset Stabilization Program and Similar, Unsold Loans, Fiscal Years 2013–2016



Source: GAO analysis of Federal Housing Administration (FHA) data. | GAO-19-228

Note: Graphs represent the estimated probabilities of transitioning from delinquency at the servicing transfer date to a given outcome at a future follow-up time, as estimated by statistical models.

[a]For unsold loans, the Other category consisted of loans with the following Single Family Default Monitoring System default status codes: Paid in Full, Charge-Off, Assignment Completed, Property Redeemed, Government Seizure, and Refinance Started. For sold loans, the Other category consisted of loans with the following postsale reporting statuses: Paid-in-Full, Charge-Off, Repurchase, and Whole Loan Sale.

Table 13: Data for Additional Outcomes for Loans Sold through the Distressed Asset Stabilization Program and Similar, Unsold Loans, Fiscal Years 2013–2016

n/a	n/a	Months after transfer			
Category	**Status**	**12**	**12**	**12**	**12**
Unresolved	Sold	39.81	19.77	11.62	7.58
Unresolved	Sold	(39.56, 40.07)	(19.54, 19.98)	(11.46, 11.80)	(7.46, 7.71)
Unresolved	Unsold	39.95	27.12	20.58	15.91
Unresolved	Unsold	(39.72, 40.16)	(26.89, 27.33)	(20.38, 20.79)	(15.73, 16.08)
Foreclosure	Sold	28.48	41.03	47.79	51.97
Foreclosure	Sold	(28.22, 28.73)	(40.70, 41.36)	(47.41, 48.14)	(51.60, 52.33)
Foreclosure	Unsold	22.35	34.30	42.98	49.65
Foreclosure	Unsold	(22.13, 22.59)	(33.97, 34.60)	(42.58, 43.31)	(49.28, 50.05)
Short sale or deed-in-lieu of foreclosure	Sold	11.07	15.94	18.57	20.19
Short sale or deed-in-lieu of foreclosure	Sold	(10.90, 11.24)	(15.69, 16.18)	(18.28, 18.86)	(19.87, 20.51)
Short sale or deed-in-lieu of foreclosure	Unsold	5.60	8.59	10.76	12.43
Short sale or deed-in-lieu of foreclosure	Unsold	(5.48, 5.72)	(8.41, 8.77)	(10.53, 11.00)	(12.14, 12.70)
Reperforming	Sold	11.86	12.58	10.19	7.63
Reperforming	Sold	(11.70, 12.04)	(12.38, 12.80)	(9.98, 10.39)	(7.44, 7.82)
Reperforming	Unsold	18.56	18.50	14.99	11.72
Reperforming	Unsold	(18.39, 18.74)	(18.28, 18.72)	(14.77, 15.21)	(11.52, 11.93)
Temporary action	Sold	2.07	1.00	0.57	0.36
Temporary action	Sold	(2.02, 2.12)	(0.98, 1.03)	(0.55, 0.58)	(0.35, 0.37)
Temporary action	Unsold	10.73	7.19	5.28	4.04
Temporary action	Unsold	(10.61, 10.85)	(7.09, 7.29)	(5.20, 5.36)	(3.97, 4.11)
Other[a]	Sold	6.72	9.68	11.27	12.26
Othera	Sold	(6.57, 6.86)	(9.47, 9.87)	(11.04, 11.50)	(12.01, 12.52)
Othera	Unsold	2.81	4.31	5.40	6.24
Othera	Unsold	(2.73, 2.90)	(4.19, 4.45)	(5.23, 5.58)	(6.05, 6.44)

Source: GAO analysis of Federal Housing Administration data. | GAO-19-228

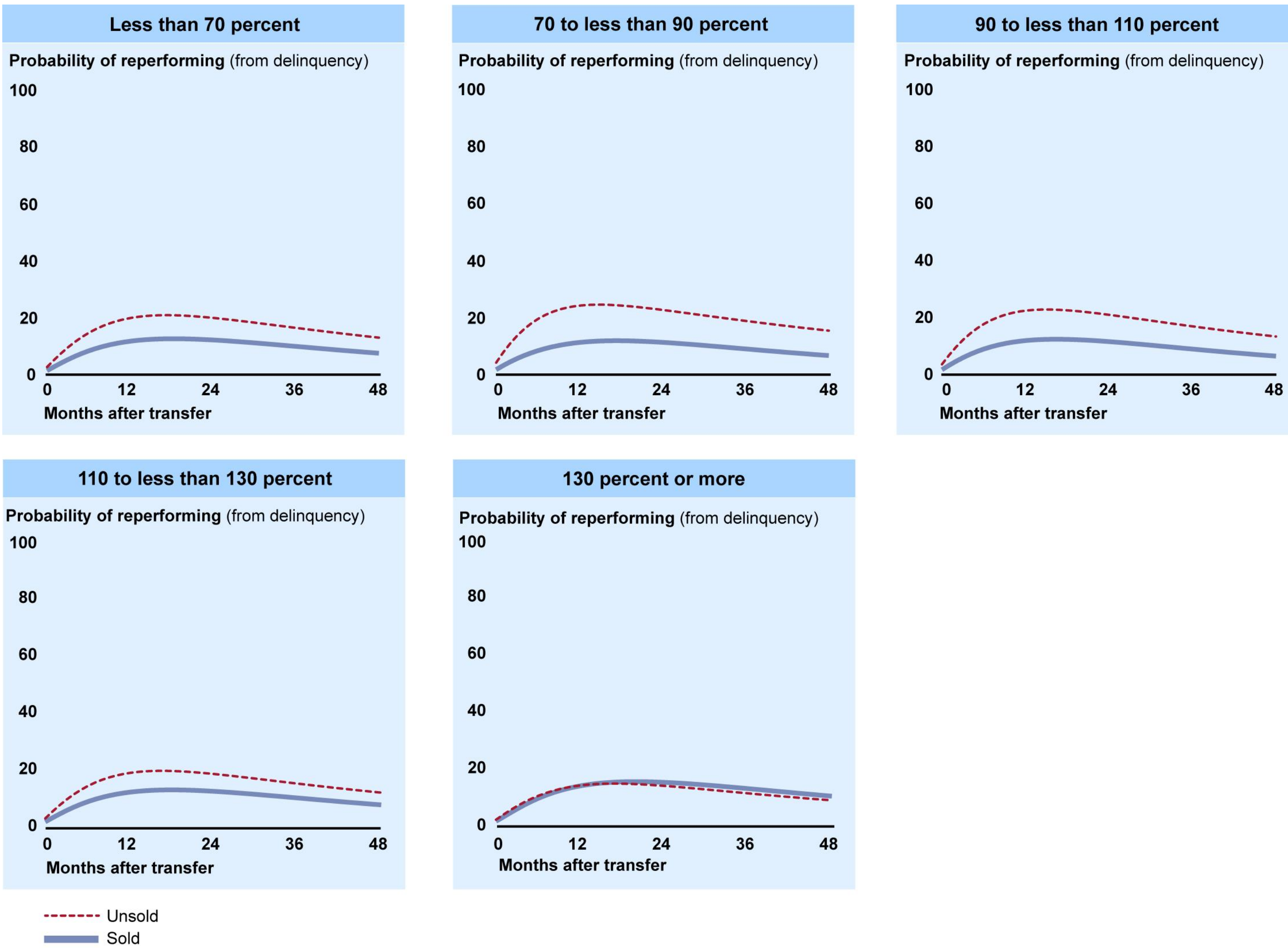
Notes: Entries are estimated probabilities of transitioning from delinquency at the servicing transfer date to any given outcome at a future follow-up time, as estimated by statistical models. Ninety-five percent confidence intervals appear in parentheses. App. V describes these models in detail.

[a]For unsold loans, the Other category consisted of loans with the following Single Family Default Monitoring System default status codes: Paid in Full, Charge-Off, Assignment Completed, Property Redeemed, Government Seizure, and Refinance Started. For sold loans, the Other category consisted of loans with the following postsale reporting statuses: Paid in Full, Charge-Off, Repurchase, and Whole Loan Sale.

Loan-Level Characteristics

Figures 26–29 compare specific outcomes for sold and unsold loans across different loan characteristics. We selected characteristics and outcomes that showed clear patterns or differences between sold and unsold loans. Our analysis showed that the loan-to-value (LTV) ratio was less strongly associated with reperforming rates for sold loans compared to similar, unsold loans (see fig. 26). For example, while the probability of reperforming varied across different LTV ratio categories for unsold loans, the probability varied less for sold loans.

Figure 26: Reperforming Outcomes by Loan-to-Value Ratio for Loans Sold through the Distressed Asset Stabilization Program and Similar, Unsold Loans, Fiscal Years 2013–2016

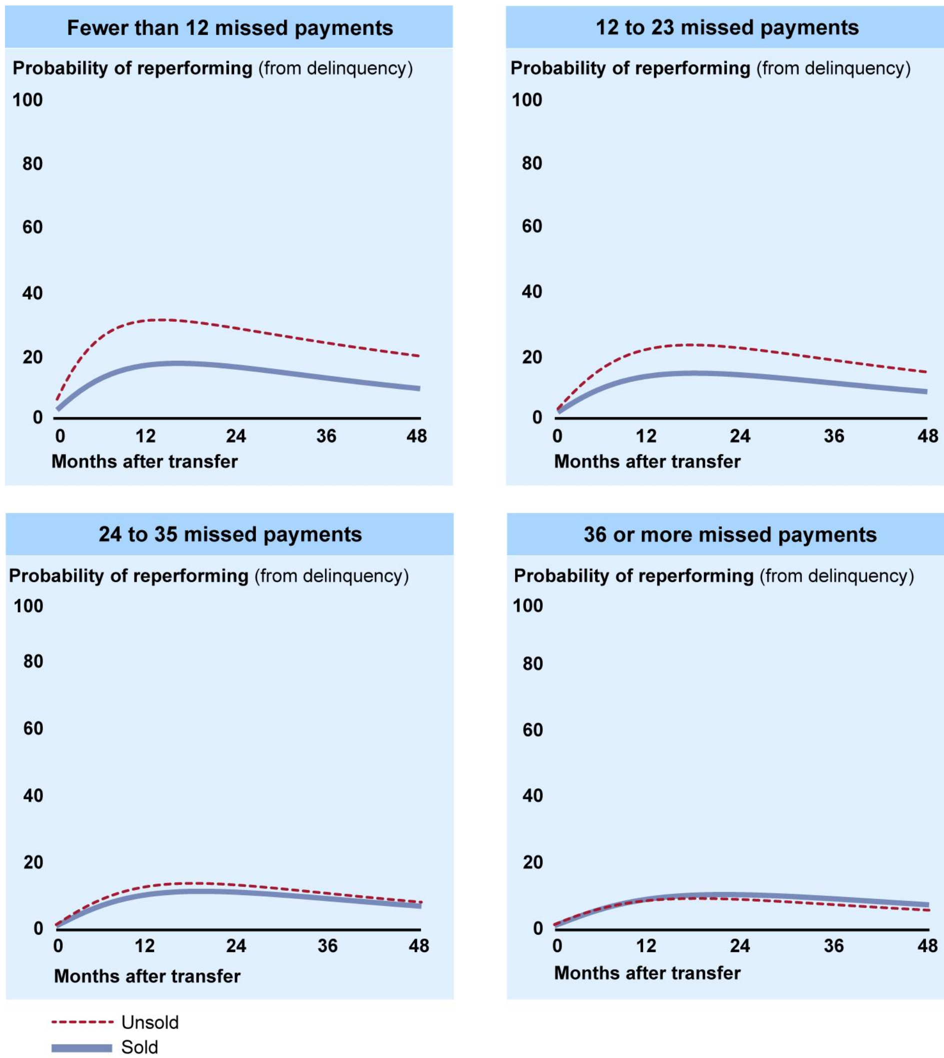


Source: GAO analysis of Federal Housing Administration data. | GAO-19-228

Notes: Graphs represent the estimated probabilities of transitioning from delinquency at the servicing transfer date to reperforming at a future follow-up time, as estimated by statistical models.

Our analysis of outcomes by different delinquency categories showed that length of delinquency was less strongly associated with reperforming rates for sold loans compared to similar, unsold loans (see fig. 27). For example, while the probability of reperforming 12 months after the servicing transfer date ranged from 8 to 29 percent across different delinquency lengths for unsold loans, this range was smaller for sold loans—about 9 to about 16 percent.

Figure 27: Reperforming Outcomes by Delinquency Category for Loans Sold through the Distressed Asset Stabilization Program and Similar, Unsold Loans, Fiscal Years 2013–2016

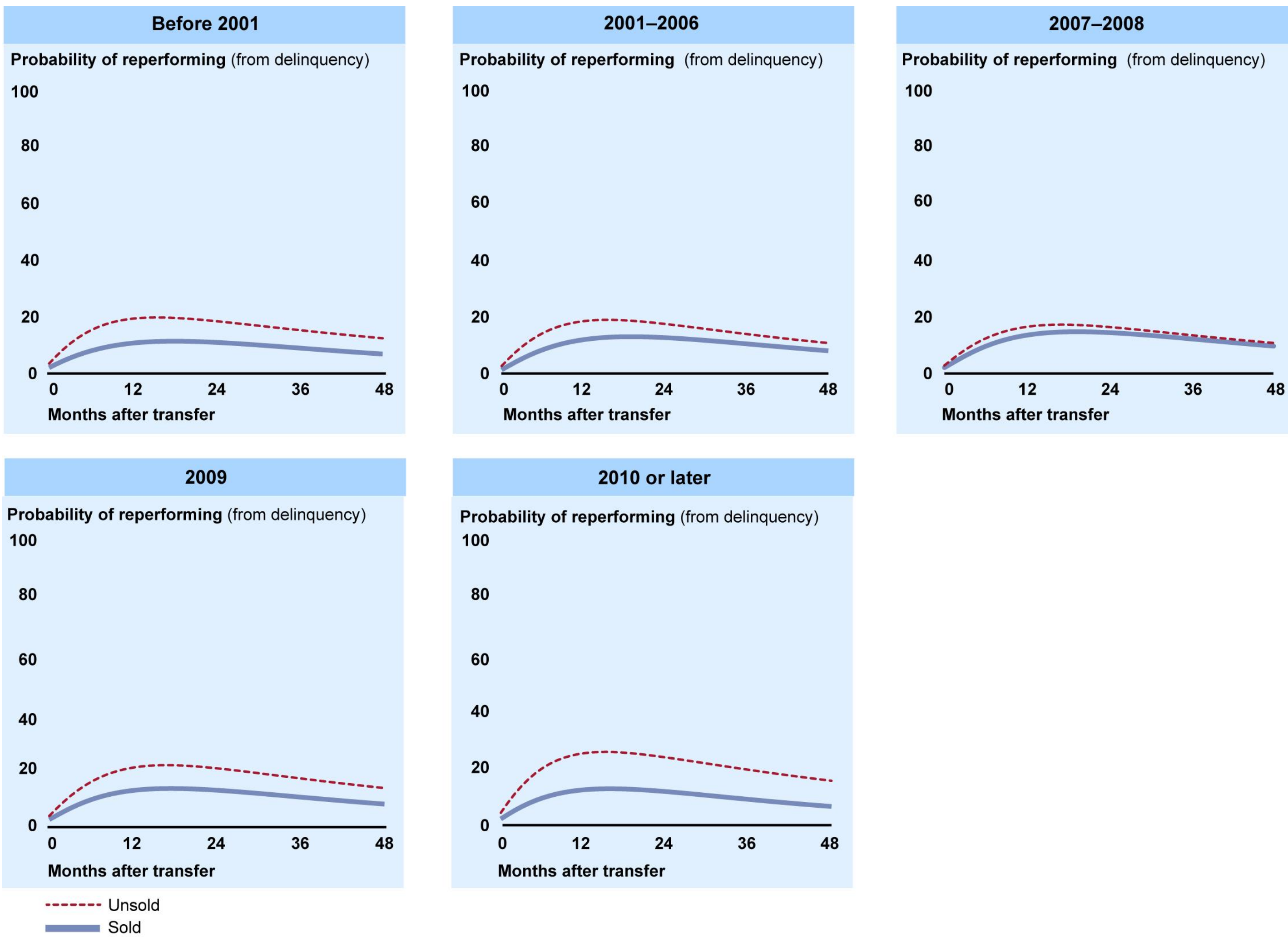


Source: GAO analysis of Federal Housing Administration data. | GAO-19-228

Notes: Graphs represent the estimated probabilities of transitioning from delinquency at the servicing transfer date to reperforming at a future follow-up time, as estimated by statistical models.

Our analysis of outcomes by year of loan origination showed that length of delinquency was less strongly associated with reperforming rates for sold loans compared to similar, unsold loans (see fig. 28). For example, the year of loan origination did not affect the probability of reperforming for sold loans. However, for unsold loans the probability of reperforming was lowest for loans originating in 2007–2008 at the beginning of the housing crisis.

Figure 28: Reperforming Outcomes by Loan Origination Year for Loans Sold through the Distressed Asset Stabilization Program and Similar, Unsold Loans, Fiscal Years 2013–2016

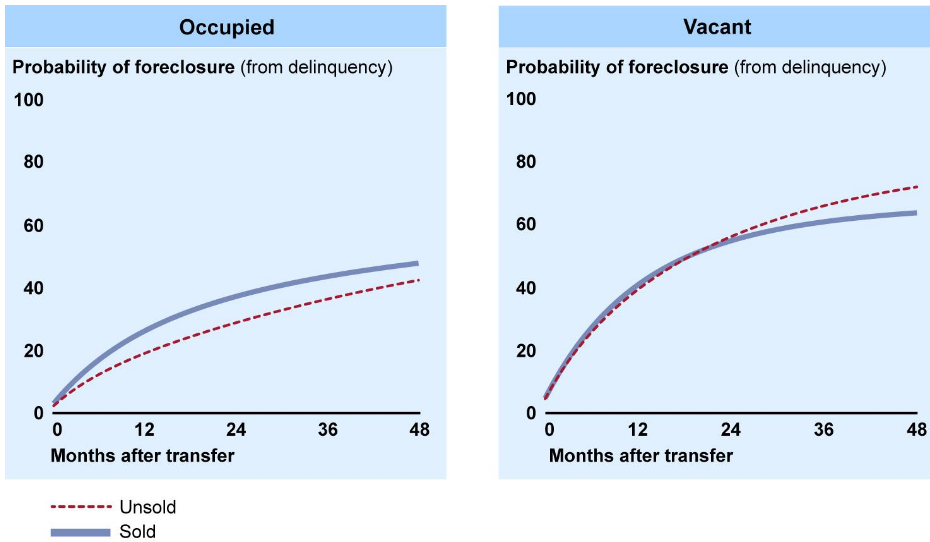


Source: GAO analysis of Federal Housing Administration data. | GAO-19-228

Notes: Graphs represent the estimated probabilities of transitioning from delinquency at the servicing transfer date to reperforming at a future follow-up time, as estimated by statistical models.

Our analysis of outcomes by occupancy showed that, for occupied properties, sold loans were more likely to experience foreclosure compared with similar, unsold loans (see fig. 29). However, for vacant properties, sold loans experience foreclosure at equal or smaller rates compared to similar, unsold loans.

Figure 29: Foreclosure Outcomes by Occupancy for Loans Sold through the Distressed Asset Stabilization Program and Similar, Unsold Loans, Fiscal Years 2013–2016



Source: GAO analysis of Federal Housing Administration data. | GAO-19-228

Notes: Graphs represent the estimated probabilities of transitioning from delinquency at the servicing transfer date to foreclosure at a future follow-up time, as estimated by statistical models.

Appendix VII: Additional Auction Structure Information and Evaluation

The Federal Housing Administration (FHA) uses a pooled, highest-bidder, sealed-bid auction structure to sell its single-family defaulted residential mortgages through the Distressed Asset Stabilization Program (DASP).[1] This auction structure is consistent with industry standards and private market practices for selling these mortgages and includes many characteristics of a successful auction. We identified characteristics of successful auctions by reviewing economics literature on auction structures and auction descriptions in business and commercial literature, and we obtained information about the nature of the loans being auctioned, about sellers, purchasers and other auction stakeholders, and about the benefits and drawbacks to each of various details of the auction design. Table 14 shows some auction characteristics and an evaluation of FHA's DASP design.

Table 14: Some Characteristics of a Successful Auction Design and Evaluation of the Federal Housing Administration's (FHA) Distressed Asset Stabilization Program (DASP)

Characteristic of auction design	Evaluation of DASP's design
Meets auction objectives: The optimal auction design needs to consider the intended auction objectives. • For sellers, one objective is to maximize returns, but there may be other objectives.	According to FHA, DASP auctions are intended to • obtain the greatest revenue and minimize effect on the Mutual Mortgage Insurance Fund (MMI Fund) by transferring loan ownership to purchasers to avoid the alternative costs of foreclosure and the disposal of the property; and • when possible, enable more borrowers to remain in their homes through program rules that require purchasers to evaluate borrowers for additional assistance beyond what FHA servicers can offer, such as principal reduction.

[1]Pooled refers to multiple items grouped into pools where purchasers win all the items in the pool. Highest bidder refers to auctions where the bidder who submitted the highest bid is awarded the object being sold and pays a price equal to the amount he or she bid. In sealed bid auctions, bidders do not know the bid amount of the other bidders.

Characteristic of auction design	Evaluation of DASP's design
Attracts sufficient bidder interest with items of value and low participation costs: Auction objectives are more likely to be achieved when bidders have more interest in the auction, measured in numbers of participating bidders and the amounts they are willing and able to bid. • Sufficient information must be provided on the characteristics of the auctioned assets so bidders can conduct due diligence to estimate the value of the assets or products and compare them to the bidders' available alternatives. • If the costs of performing due diligence and qualifying for and participating in the auction are too high, then bidder participation in the auction will be discouraged.	DASP auctions generally attract sufficient interest. FHA generally attracts multiple bidders for each pool and has drawn numbers of bidders similar to those of similar sales by the government-sponsored enterprises Fannie Mae and Freddie Mac. • About 95 percent of all pools were traded, indicating that the assets sold provided sufficient value to bidders and that the bids met FHA reserve prices. • Some indicators show that participation may be dropping. For example, the numbers of bidders decreased in FHA auctions held in fiscal years 2015 and 2016 compared with earlier sales.
Provides sufficient time and information to bidders to encourage them to participate and is appropriate for the type of assets being auctioned: • Information must be made readily accessible to all bidders in a timely manner. • Documents must be consistent and complete. • The extent to which the assets exhibit both common value and private value must be considered.[a] • If private value is more important than common value, then, among other things, the auction design should use sealed bids so as not to reveal bidders' private values.	FHA provides detailed information on loans to the bidders in a timely manner and provides sufficient time for bidders to review it. However, the fluidity in the default status of loans makes it difficult for FHA to fully assure the continued eligibility of the loans. • FHA's data room is open to all qualifying bidders consistently. • Bidders may not have complete information on loans' current status. Some loans intended for auction may become ineligible for sale postbid due to foreclosure or cured delinquency. Fannie Mae and Freddie Mac auctions of defaulted loans share this problem. • The properties associated with the loans have common value for all bidders based on the estimated property values at bid time. However, the loans also have private value because some bidders have unique strengths—such as strong default servicing or property rehabilitation infrastructures—that would make the assets more profitable to them compared to other bidders. The DASP sealed-bid characteristic addresses bidders' private value. Additionally, FHA officials stated that they encourage outlier bids in how they structure their pools.
Encourages participation, including of weaker bidders: For example, if the number of interested bidders is limited, the use of single-round sealed bids may be appropriate. • If strong asymmetries exist among bidders in terms of valuations, budgets, information advantages, or sophistication, some auction designs will discourage participation by weaker bidders. • When weaker bidders are encouraged to participate, even if they ultimately do not win, they force stronger bidders to bid more competitively.	The number of bidders interested in buying defaulted loans is limited and FHA uses single-round, sealed bids for its auctions. • FHA promotes competition by reaching out to potential bidders at conferences and has made nonprofit bidding a targeted goal, attempting to increase participation among nonprofit organizations.
Considers the extent to which assets are related in value: When multiple assets are auctioned, the assets can be related in value as substitutes or complements, or they may be related indirectly through bidders' budget constraints.[b] • To the extent that assets are related in value, they should be auctioned simultaneously so that bidders can win preferred combinations of complementary assets. • Auctioning the assets independently, one by one, may lead to suboptimal results.	FHA pools and auctions loans that bidders consider complementary in value. • In interviews, several purchasers expressed interest in sets of loans rather than individual loans, in part to manage risk due to unknown loan outcomes and to achieve economies of scale in loan servicing, which indicates that loans have related values and should be combined.

Characteristic of auction design	Evaluation of DASP's design
Implements effective auction bidding rules: The complete, detailed set of bidding procedures must be clear and free of ambiguity and loopholes. Otherwise, bidders will have incentives to invest time and energy in taking advantage of the flaws. • From the seller's point of view, a bidder should win because no other bidder was willing and able to bid more for the asset, not because he or she was better at manipulating the auction. • For example, auction design needs to mitigate any possibility of collusive behavior on the part of bidders. This includes providing effective information and communications protocols to limit what can be exchanged between bidders before and during the bidding process.	DASP auctions have detailed rules and FHA has taken action to reduce opportunities for bidders to take advantage of flaws. • A loan sale advisory firm and an advocacy group expressed concerns regarding large sales of loans by purchasers shortly after purchase, which can be evidence of communication between bidders before or during the auction. • FHA lowered limits on loan-level bid pricing to minimize the potential negative effects of ineligible loans being removed from sales after bidding. Purchasers could use loan-level bid pricing to strategically take advantage of the expected removal of ineligible loans after bidding. Because a purchaser pays only for the loans that are actually transferred and some loans are removed from sales due to ineligibility, FHA receives less in returns than the winning bid for the loan pool.[c]

Source: GAO analysis of auction literature and DASP processes. | GAO-19-228

[a]In a private-value auction, each bidder knows how much he or she values the object (pool) for sale, but the value of the assets is not correlated among bidders. In a common-value auction, the actual value of the object is the same for every bidder, but no bidder knows the value.

[b]A loan is complementary with another loan if the purchaser values them more highly when they are purchased together than when they are purchased separately.

[c]In interviews, most purchasers thought it unlikely that a bidder could successfully predict which loans would be removed from a sale and that such a prediction would place the bidder at risk of losing the cost of the additional due diligence to make the prediction. However, two purchasers said that for some categories of loans they could determine which loans would be removed.

Appendix VIII: Comments from the Department of Housing and Urban Development

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

Office of Housing

MAY 2 8 2019

Daniel Garcia-Diaz
Director, Financial Markets
and Community Investment
Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Mr. Garcia-Diaz:

Thank you for the opportunity to respond to the Draft Report GAO-19-228 entitled Federal Housing Administration "Opportunities Exist to Improve Defaulted, Single-Family Loan Sales" received on April 29, 2019. This letter communicates the Department of Housing and Urban Development (HUD), Federal Housing Administration's (FHA) response to the audit.

The FHA's management generally agrees with the Government Accountability Office (GAO) that opportunities exist for improvements to single family loan sales through more formalized procedures and analysis, as this critical defaulted loan disposition option transitions to a permanent disposition alternative.

A point of clarification throughout the report relates to the comparison analysis of sold and unsold loans performed by GAO. All the loans identified by FHA servicers for inclusion in the Distressed Asset Stabilization Program (DASP) sale had to have first been reviewed for loss mitigation. All applicable loss mitigation activities must have been completed prior to loans being eligible for sale by the FHA servicers. Any loans that are used for comparison as similar loans, by definition, must have also been deemed to have completed loss mitigation prior to their inclusion in a comparison group for analysis. We do not believe the loans assessed as part of the GAO's analysis meet that criteria and therefore are invalid for comparative analysis purposes.

Concerning GAO's nine (9) recommendations for executive action, FHA takes GAO's comments and recommendations under advisement and submits the following responses;

Recommendation 1

The Commissioner of FHA should ensure that its eligibility checks are conducted throughout the DASP sale process, such as by establishing a schedule to check for eligibility at certain milestones.

www.hud.gov espanol.hud.gov

Management's Response:

FHA works intently with servicers throughout the DASP sale process to determine each defaulted loan's eligibility status, for inclusion in or exclusion from sales. We recognize that although a loan is in defaulted status this may change at any point prior to sale if the borrower contacts the servicer for any loss mitigation proceedings. This is often due to a change in their own circumstances (i.e. re-employment). For this reason, FHA management established eligibility checks at various check points; at initial loan identification, a few weeks prior to auction, and at claims submission after the sale. The final eligibility check, at claims submission, is used to remove any loans that are no longer eligible from delivery to a purchaser/winning bidder. Based on our experience with loan sales auctions, management believes that the final eligibility check at claim submission remains the best opportunity to remove ineligible loans. Management agrees to include a schedule of eligibility checks in our procedures.

Recommendation 2

In formalizing procedures for DASP the Commissioner of FHA should document processes for timely consideration and review of program changes.

Management's Response:

Management agrees with GAO's recommendation. We are currently working on developing consolidated loan sales procedures and will include a process or standard pertaining to review and consideration of characteristics of the loan sales alternative option that may warrant changes.

Recommendation 3

The Commissioner of FHA should clearly define DASP objectives and develop measurable targets for all program objectives.

Management's Response:

Management believes that we have clear objectives and sound performance measurement in place for DASP as a single family defaulted loan disposition option. The objective of this alternative is to maximize recoveries (minimize losses) to the insurance fund. FHA measures whether DASP is meeting this objective by comparing recoveries (losses) against other disposition types.

3

Recommendation 4

The Commissioner of FHA should use performance data to develop criteria for when to hold DASP sales.

Management's Response:

Management accepts GAO's recommendation and will work with our internal stakeholders to further improve existing criteria and standards used to determine when to execute single family defaulted loan sales.

Recommendation 5

The Commissioner of FHA should evaluate loan outcomes under DASP compared to outcomes for similar, unsold loans.

Management's Response:

In deciding to include defaulted loans in loans sales, as a disposition option, and in setting reserve pricing, FHA's management considers the anticipated loss rate for the asset as if it were to go into foreclosure and be disposed of under other disposition alternatives within the department.

However, we acknowledge GAO's recommendation and will look at methods to improve our evaluation of possible options for defaulted assets.

Recommendation 6

The Commissioner of FHA should monitor individual purchasers' compliance with FHA's modification requirements and ensure that purchasers submit the data needed to evaluate the sustainability of modifications.

Management's Response:

Management accepts GAO's recommendations and will re-examine existing purchasers' post sale reporting requirements around modifications.

Recommendation 7

The Commissioner of FHA should communicate long-range notice to prospective bidders of upcoming sales.

4

Management's Response:

Management accepts GAO's recommendations. We will review our existing processes for loan sale announcements and make changes where practicable.

Recommendation 8

The Commissioner of FHA should develop a methodology to assess the range of possible outcomes for loans when setting DASP reserve prices.

Management's Response:

FHA's current loan sale reserve pricing model considers a range of possible outcomes (primarily centered around losses to the FHA insurance fund) for the loans in sales pools and based on existing options available to management. However, FHA management accepts GAO's recommendation and will examine the existing methodology with a goal of further optimization.

Recommendation 9

The Commissioner of FHA should analyze its loan portfolio and market information before setting loan eligibility criteria.

Management's Response:

FHA's management accepts GAO's recommendation, though we currently analyze our loan portfolio against current market information before deciding to execute a note sale and in setting reserve pricing. Management also takes into consideration FHA's regulation on loss mitigation to be certain that all loans have been analyzed for the full suite of loss mitigation options before being considered eligible for loan sales.

We appreciate the GAO's review of FHA's defaulted single-family loan sales disposition option and subsequent recommendations.

Sincerely,

John Garvin
General Deputy Assistant Secretary for Housing

Appendix IX: GAO Contact and Staff Acknowledgments

GAO Contact

Daniel Garcia-Diaz, (202) 512–8678 or garciadiazd@gao.gov

Staff Acknowledgments

In addition to the contact named above, Jill Naamane (Assistant Director), Rhonda Rose (Analyst in Charge), Abigail Brown, Stephen Brown, Karen Jarzynka-Hernandez, John Karikari, May Lee, Ned Malone, Paulina Maqueda-Escamilla, John McGrail, Samuel Portnow, Tovah Rom, Jena Sinkfield, Anne Stevens, Jeff Tessin, Jim Vitarello, Sarah Wilson, and Elisa Yoshiara made key contributions to this report. Also contributing to this report were DuEwa Kumara and Jason Rodriguez.

Appendix X: Accessible Data

Data Tables

Accessible Data for Foreclosure and Foreclosure Avoidance Outcomes for Loans Sold through the Distressed Asset Stabilization Program and Similar, Unsold Loans, Fiscal Years 2013–2016

Months after transfer	Sold	Unsold	Sold	Unsold
1	3.55719	2.90181	4.12782	7.31788
	6.81882	5.50935	7.6718	13.2454
	9.81775	7.87042	10.7042	18.0262
	12.5829	10.0245	13.2884	21.8617
	15.1399	12.0044	15.4802	24.918
	17.5112	13.8371	17.3286	27.3324
	19.7166	15.5451	18.8768	29.2184
	21.7737	17.1469	20.1624	30.6696
	23.6979	18.658	21.2188	31.7633
	25.5027	20.091	22.0751	32.5634
	27.2003	21.4567	22.757	33.1227
12	28.8014	22.7637	23.2871	33.4845
	30.3152	24.0194	23.685	33.685
	31.7501	25.2299	23.9681	33.7536
	33.1135	26.4003	24.1517	33.715
	34.4118	27.5347	24.2492	33.5893
	35.6509	28.6369	24.2722	33.3931
	36.8359	29.7096	24.231	33.1402
	37.9713	30.7555	24.1347	32.842
	39.0611	31.7766	23.9912	32.5077
	40.109	32.7746	23.8073	32.145
	41.1181	33.7513	23.5892	31.7603
	42.0913	34.7077	23.3421	31.3587
24	43.0311	35.645	23.0708	30.9445
	43.9398	36.5642	22.7792	30.5214
	44.8195	37.4661	22.4709	30.092
	45.672	38.3514	22.149	29.6588

Months after transfer	Sold	Unsold	Sold	Unsold
	46.4988	39.2207	21.8161	29.2237
	47.3016	40.0746	21.4748	28.7883
	48.0816	40.9136	21.1269	28.3539
	48.84	41.7381	20.7742	27.9215
	49.5779	42.5486	20.4184	27.4918
	50.2964	43.3453	20.0608	27.0657
	50.9962	44.1287	19.7024	26.6437
	51.6783	44.8991	19.3444	26.2261
36	52.3434	45.6566	18.9875	25.8133
	52.9922	46.4017	18.6324	25.4055
	53.6253	47.1345	18.28	25.003
	54.2433	47.8553	17.9305	24.6059
	54.8468	48.5644	17.5846	24.2143
	55.4363	49.2619	17.2426	23.8282
	56.0121	49.9481	16.9048	23.4478
	56.5748	50.6231	16.5714	23.0729
	57.1249	51.2872	16.2428	22.7037
	57.6625	51.9405	15.919	22.34
	58.1882	52.5833	15.6002	21.982
	58.7023	53.2156	15.2865	21.6294
48	59.2051	53.8378	14.978	21.2824

Accessible Data for Figure 1: Numbers of Defaulted Loans Sold in Distressed Asset Stabilization Program Sales, Fiscal Years 2010–2016

Sale	Number of sold loan (in thousands)
2010"	0.41
2011-1	0.804
2011-2	0.517
2011-3	0.06
2012-1	0.069
2012-2	0.195
2012-3	6.117
2013-1	13.709
2013-2	16.341

Sale	Number of sold loan (in thousands)
2014-1	20.378
2014-2	34.362
2015-1	5.78
2016-1	5.785
2016-2	6.41

Accessible Data for Figure 2: Share of FHA Defaulted Loans Sold out of the Total Number of FHA Defaulted Loans by State, 2013–2016

Number Sold	Number in Default	Raw Ratio	NAME	Category	Percentage of all loans sold
2153	63627	33.83783614	Texas	1	2%
0	675	0	Hawaii	1	0%
0	5	0	Guam	1	0%
3	65	46.15384615	U.S. Virgin Islands	2	0%
11	824	13.34951456	Alaska	1	0%
19	1126	16.87388988	Wyoming	1	0%
25	453	55.18763797	North Dakota	2	0%
44	1448	30.38674033	Montana	1	0%
62	2376	26.09427609	West Virginia	1	0%
74	12415	5.960531615	Puerto Rico	1	0%
76	1075	70.69767442	South Dakota	2	0%
126	2076	60.69364162	New Hampshire	2	0%
137	814	168.3046683	Vermont	4	0%
166	3403	48.7804878	Nebraska	2	0%
184	1436	128.1337047	District of Columbia	3	0%
289	3228	89.5291202	Rhode Island	3	0%
310	11272	27.50177431	Minnesota	1	0%
382	4436	86.11361587	Idaho	3	0%
455	8339	54.56289723	Mississippi	2	0%
556	3576	155.4809843	Maine	4	1%
575	8459	67.97493794	Kansas	2	1%
632	10237	61.73683696	Arkansas	2	1%
668	13539	49.33894675	Arizona	2	1%
757	13827	54.7479569	Colorado	2	1%
852	19766	43.10432055	Missouri	2	1%
857	7920	108.2070707	Iowa	3	1%

Number Sold	Number in Default	Raw Ratio	NAME	Category	Percentage of all loans sold
1009	23950	42.12943633	Tennessee	2	1%
1014	14308	70.86944367	Louisiana	2	1%
1039	10813	96.08804217	Utah	3	1%
1089	19699	55.28199401	Alabama	2	1%
1095	5882	186.1611697	Delaware	5	1%
1102	30016	36.71375267	Michigan	2	1%
1119	8640	129.5138889	New Mexico	3	1%
1265	21396	59.1232006	Virginia	2	1%
1353	15027	90.03793172	Oklahoma	3	1%
1356	13231	102.4865845	Nevada	3	1%
1514	9486	159.6036264	Oregon	4	1%
1648	14727	111.9033069	Kentucky	3	2%
1783	11504	154.9895688	Massachusetts	4	2%
1802	15002	120.1173177	South Carolina	3	2%
1923	15815	121.593424	Connecticut	3	2%
1975	13802	143.0952036	Wisconsin	4	2%
2130	21925	97.14937286	Washington	3	2%
2629	30144	87.21470276	North Carolina	3	3%
2966	35640	83.22109989	California	2	3%
3588	52950	67.76203966	Georgia	2	3%
3682	33702	109.2516765	Indiana	3	4%
3940	33654	117.0737505	Maryland	3	4%
4629	43408	106.6393292	Pennsylvania	3	4%
6207	55610	111.6166157	Ohio	3	6%
8038	51089	157.3332811	New York	4	8%
8387	59585	140.7569019	Illinois	4	8%
13027	58893	221.1977654	New Jersey	5	13%
13064	82981	157.4336294	Florida	4	13%

Accessible Data for Figure 6: FHA-Insured Loans 6 or More Months Past Due and Number of Loans Sold in the Distressed Asset Stabilization Program, Fiscal Years 2010–2017

Fiscal year	Loans at least 6 months	loans sold
2010	252.509	0.41
2011	397.383	1.381

Fiscal year	Loans at least 6 months	loans sold
2012	488.087	6.381
2013	318.168	30.05
2014	398.383	54.74
2015	319.059	5.78
2016	262.006	12.195
2017	204.362	

Accessible Data for Figure 7: Foreclosure and Foreclosure Avoidance Outcomes for Loans Sold through Distressed Asset Stabilization Program Sales and Similar, Unsold Loans, Fiscal Years 2013–2016

Months after transfer	Sold (foreclosure)	Unsold (foreclosure)	Sold (foreclosure avoided)	Unsold (foreclosure avoided)
1	3.55719	2.90181	4.12782	7.31788
	6.81882	5.50935	7.6718	13.2454
	9.81775	7.87042	10.7042	18.0262
	12.5829	10.0245	13.2884	21.8617
	15.1399	12.0044	15.4802	24.918
	17.5112	13.8371	17.3286	27.3324
	19.7166	15.5451	18.8768	29.2184
	21.7737	17.1469	20.1624	30.6696
	23.6979	18.658	21.2188	31.7633
	25.5027	20.091	22.0751	32.5634
	27.2003	21.4567	22.757	33.1227
12	28.8014	22.7637	23.2871	33.4845
	30.3152	24.0194	23.685	33.685
	31.7501	25.2299	23.9681	33.7536
	33.1135	26.4003	24.1517	33.715
	34.4118	27.5347	24.2492	33.5893
	35.6509	28.6369	24.2722	33.3931
	36.8359	29.7096	24.231	33.1402
	37.9713	30.7555	24.1347	32.842
	39.0611	31.7766	23.9912	32.5077
	40.109	32.7746	23.8073	32.145
	41.1181	33.7513	23.5892	31.7603
	42.0913	34.7077	23.3421	31.3587
24	43.0311	35.645	23.0708	30.9445

Months after transfer	Sold (foreclosure)	Unsold (foreclosure)	Sold (foreclosure avoided)	Unsold (foreclosure avoided)
	43.9398	36.5642	22.7792	30.5214
	44.8195	37.4661	22.4709	30.092
	45.672	38.3514	22.149	29.6588
	46.4988	39.2207	21.8161	29.2237
	47.3016	40.0746	21.4748	28.7883
	48.0816	40.9136	21.1269	28.3539
	48.84	41.7381	20.7742	27.9215
	49.5779	42.5486	20.4184	27.4918
	50.2964	43.3453	20.0608	27.0657
	50.9962	44.1287	19.7024	26.6437
	51.6783	44.8991	19.3444	26.2261
36	52.3434	45.6566	18.9875	25.8133
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	54.2433	47.8553	17.9305	24.6059
	54.8468	48.5644	17.5846	24.2143
	55.4363	49.2619	17.2426	23.8282
	56.0121	49.9481	16.9048	23.4478
	56.5748	50.6231	16.5714	23.0729
	57.1249	51.2872	16.2428	22.7037
	57.6625	51.9405	15.919	22.34
	58.1882	52.5833	15.6002	21.982
	58.7023	53.2156	15.2865	21.6294
48	59.2051	53.8378	14.978	21.2824

Accessible Data for Figure 8: Out-of-Home and In-Home Outcomes for Loans Sold through Distressed Asset Stabilization Program Sales and Similar, Unsold Loans, Fiscal Years 2013–2016

Months after transfer	Sold (out of home)	Unsold (out of home)	Sold (in home)	Unsold (in home)
1"	4.95771	3.62879	2.56648	6.47818
	9.52005	6.88844	4.77889	11.7242
	13.7244	9.83635	6.67724	15.9495
	17.6045	12.5203	8.29719	19.3296

Months after transfer	Sold (out of home)	Unsold (out of home)	Sold (in home)	Unsold (in home)
	21.1904	14.98	9.67061	22.0105
	24.5094	17.2487	10.8259	24.1131
	27.5859	19.354	11.7884	25.738
	30.4419	21.319	12.5807	26.9686
	33.0972	23.1629	13.2231	27.8741
	35.5696	24.9018	13.7333	28.5121
	37.8752	26.5492	14.1275	28.9302
12"	40.0284	28.1162	14.4199	29.168
	42.0423	29.6125	14.6231	29.2583
	43.9287	31.0458	14.7485	29.2283
	45.6982	32.4229	14.8061	29.1005
	47.3604	33.7494	14.8049	28.8938
	48.9241	35.0301	14.7526	28.6235
	50.397	36.2689	14.6564	28.3025
	51.7863	37.4694	14.5226	27.9414
	53.0985	38.6344	14.3566	27.5489
	54.3393	39.7665	14.1633	27.1322
	55.5141	40.8677	13.9471	26.6975
	56.6278	41.94	13.7118	26.2495
24"	57.6846	42.9849	13.4608	25.7924
	58.6886	44.0039	13.1971	25.3294
	59.6434	44.9982	12.9233	24.8633
	60.5524	45.969	12.6416	24.3963
	61.4185	46.9171	12.3542	23.9303
	62.2446	47.8434	12.0628	23.4666
	63.0331	48.7488	11.7689	23.0066
	63.7864	49.6339	11.4738	22.5511
	64.5067	50.4995	11.1789	22.1009
	65.1958	51.346	10.885	21.6566
	65.8557	52.1741	10.593	21.2187
	66.4879	52.9842	10.3037	20.7875
36"	67.094	53.7769	10.0178	20.3634
	67.6754	54.5526	9.73566	19.9464
	68.2334	55.3118	9.45787	19.5368
	68.7692	56.0548	9.18478	19.1345
	69.2841	56.782	8.9167	18.7397

Months after transfer	Sold (out of home)	Unsold (out of home)	Sold (in home)	Unsold (in home)
	69.7789	57.4938	8.65388	18.3524
	70.2548	58.1906	8.39652	17.9725
	70.7125	58.8727	8.14478	17.6
	71.153	59.5405	7.89876	17.2348
	71.5771	60.1942	7.65855	16.8768
	71.9855	60.8342	7.4242	16.526
	72.3789	61.4607	7.19573	16.1823
48"	72.7579	62.0741	6.97313	15.8455

Accessible Data for Figure 9: Foreclosure and Foreclosure Avoidance Outcomes by Distressed Asset Stabilization Program Sale and Similar, Unsold Loans, Fiscal Years 2013–2016

Months after transfer (2013-1 sale)	foreclosure sold	Foreclosure avoid sold	foreclosure unsold	Foreclosure avoid unsold
1	3.23441	5.0478	2.38057	4.53773
	6.14571	9.2631	4.59436	8.36719
	8.77644	12.7664	6.66193	11.5885
	11.1632	15.6612	8.60101	14.2878
	13.3375	18.0361	10.4269	16.5392
	15.3264	19.9673	12.1529	18.4064
	17.1533	21.5201	13.7903	19.9442
	18.8383	22.7504	15.349	21.1996
	20.3987	23.7063	16.8375	22.2134
	21.8495	24.4289	18.2633	23.0202
	23.2035	24.9536	19.6326	23.6501
12	24.4719	25.3106	20.9511	24.1288
	25.6644	25.5257	22.2235	24.4785
	26.7892	25.6213	23.4539	24.7183
	27.8535	25.6163	24.6461	24.8644
	28.8635	25.5269	25.8031	24.9309
	29.8248	25.3672	26.9277	24.93
	30.7419	25.1489	28.0224	24.872
	31.6189	24.8824	29.0891	24.7658

Months after transfer (2013-1 sale)	foreclosure sold	Foreclosure avoid sold	foreclosure unsold	Foreclosure avoid unsold
	32.4595	24.5762	30.1298	24.619
	33.2667	24.2378	31.146	24.4383
	34.0432	23.8736	32.1392	24.2293
	34.7914	23.4889	33.1107	23.9968
24	35.5134	23.0883	34.0616	23.745
	36.211	22.6757	34.9927	23.4774
	36.8858	22.2544	35.9052	23.197
	37.5394	21.8272	36.7996	22.9065
	38.1729	21.3966	37.6768	22.6081
	38.7875	20.9644	38.5374	22.3036
	39.3841	20.5324	39.3819	21.9948
	39.9638	20.1019	40.2109	21.683
	40.5273	19.6742	41.0249	21.3693
	41.0754	19.2503	41.8243	21.0548
	41.6088	18.8309	42.6095	20.7404
	42.1279	18.4166	43.3809	20.4266
36	42.6335	18.0081	44.1389	20.1143
	43.1261	17.6058	44.8837	19.8037
	43.606	17.21	45.6157	19.4955
	44.0738	16.8209	46.3352	19.1899
	44.5298	16.4389	47.0425	18.8873
	44.9745	16.0639	47.7377	18.5878
	45.4082	15.6961	48.4213	18.2917
	45.8312	15.3356	49.0933	17.9992
	46.2438	14.9824	49.754	17.7103
	46.6464	14.6365	50.4037	17.4251
	47.0393	14.2978	51.0425	17.1439
	47.4226	13.9664	51.6706	16.8665
48	47.7967	13.6421	52.2883	16.593

Months after transfer (2013-2 sale)	foreclosure sold	Foreclosure avoid sold	foreclosure unsold	Foreclosure avoid unsold

Months after transfer (2013-2 sale)	foreclosure sold	Foreclosure avoid sold	foreclosure unsold	Foreclosure avoid unsold
1	3.80899	3.49663	3.23212	5.55331
	7.30768	6.47917	6.1817	10.1724
	10.5298	9.0123	8.88734	13.9992
	13.505	11.1527	11.3819	17.1541
	16.2596	12.9503	13.6935	19.7396
	18.8167	14.4488	15.8459	21.8428
	21.1968	15.6865	17.8596	23.5376
	23.4178	16.697	19.7519	24.887
	25.4957	17.51	21.5377	25.9443
	27.4446	18.1512	23.2297	26.7551
	29.2771	18.6435	24.8388	27.3577
12	31.004	19.0066	26.3741	27.7851
	32.6352	19.2581	27.8437	28.0649
	34.1794	19.4132	29.2544	28.2209
	35.6443	19.4853	30.612	28.2732
	37.0367	19.4862	31.9216	28.2386
	38.3626	19.426	33.1874	28.1318
	39.6276	19.3138	34.4133	27.9649
	40.8364	19.1573	35.6025	27.7484
	41.9933	18.9635	36.7577	27.491
	43.1022	18.7383	37.8813	27.2002
	44.1665	18.487	38.9756	26.8824
	45.1893	18.214	40.0422	26.5429
24	46.1734	17.9234	41.0829	26.1862
	47.1213	17.6186	42.0991	25.8162
	48.0352	17.3026	43.092	25.4361
	48.9172	16.978	44.0627	25.0486
	49.7691	16.647	45.0122	24.656
	50.5925	16.3116	45.9415	24.2602
	51.3891	15.9735	46.8512	23.8629
	52.1601	15.6342	47.7421	23.4654
	52.9068	15.2948	48.6148	23.0688
	53.6304	14.9564	49.47	22.6741
	54.332	14.62	50.3082	22.2821

Months after transfer (2013-2 sale)	foreclosure sold	Foreclosure avoid sold	foreclosure unsold	Foreclosure avoid unsold
	55.0125	14.2863	51.1298	21.8933
36"	55.6729	13.956	51.9354	21.5084
	56.3139	13.6295	52.7254	21.1278
	56.9364	13.3075	53.5002	20.7517
	57.5411	12.9902	54.2601	20.3805
	58.1286	12.678	55.0055	20.0145
	58.6996	12.371	55.7368	19.6537
	59.2546	12.0696	56.4543	19.2983
	59.7943	11.7738	57.1582	18.9483
	60.3192	11.4838	57.8489	18.6039
	60.8297	11.1997	58.5266	18.2651
	61.3263	10.9214	59.1917	17.9319
	61.8095	10.649	59.8443	17.6043
48"	62.2797	10.3825	60.4848	17.2822

Months after transfer (2014-1 sale)	foreclosure sold	f Foreclosure avoid sold	foreclosure unsold	Foreclosure avoid unsold
1	3.55073	4.4367	2.54444	6.50097
	6.79093	8.29001	4.85773	11.8978
	9.75455	11.628	6.97341	16.3635
	12.4717	14.5111	8.91982	20.044
	14.9689	16.9924	10.721	23.0626
	17.27	19.1194	12.3971	25.5234
	19.3958	20.9336	13.9655	27.5144
	21.3649	22.4722	15.4406	29.1098
	23.1938	23.7678	16.8347	30.3724
	24.8971	24.8495	18.1583	31.3551
	26.4878	25.7428	19.4202	32.1025
12	27.9774	26.4704	20.6279	32.6525
	29.376	27.0523	21.7879	33.0368
	30.6928	27.5063	22.9053	33.2824
	31.9357	27.8481	23.985	33.412
	33.112	28.0916	25.0308	33.4446

Months after transfer (2014-1 sale)	foreclosure sold	f Foreclosure avoid sold	foreclosure unsold	Foreclosure avoid unsold
	34.228	28.249	26.0459	33.3966
	35.2894	28.3311	27.0334	33.2815
	36.3011	28.3477	27.9955	33.1108
	37.2676	28.307	28.9344	32.8942
	38.1929	28.2167	29.8518	32.6399
	39.0806	28.0832	30.7493	32.3548
	39.9338	27.9126	31.6282	32.0446
24	40.7552	27.7098	32.4897	31.7144
	41.5475	27.4796	33.3346	31.3681
	42.3129	27.2258	34.164	31.0093
	43.0533	26.952	34.9785	30.6409
	43.7706	26.6614	35.7787	30.2653
	44.4664	26.3567	36.5654	29.8845
	45.142	26.0403	37.3389	29.5003
	45.7989	25.7143	38.0998	29.1142
	46.4381	25.3806	38.8485	28.7272
	47.0607	25.0409	39.5852	28.3405
	47.6677	24.6965	40.3105	27.9548
	48.2598	24.3489	41.0244	27.5709
36	48.8379	23.999	41.7275	27.1892
	49.4027	23.6478	42.4198	26.8104
	49.9548	23.2963	43.1016	26.4347
	50.4947	22.945	43.7732	26.0625
	51.023	22.5947	44.4347	25.6941
	51.5402	22.2459	45.0864	25.3296
	52.0467	21.8991	45.7285	24.9692
	52.5429	21.5548	46.361	24.613
	53.0291	21.2132	46.9842	24.2611
	53.5058	20.8746	47.5983	23.9136
	53.9733	20.5394	48.2033	23.5706
	54.4317	20.2078	48.7995	23.232
48	54.8815	19.8799	49.387	22.8979

Months after transfer (2014-2 sale)	foreclosure sold	Foreclosure avoid sold	foreclosure unsold	Foreclosure avoid unsold
1	3.36245	4.10964	2.59416	8.56197
	6.45642	7.61047	4.90228	15.3859
	9.31245	10.5814	6.97551	20.8018
	11.9573	13.0913	8.85537	25.0772
	14.4144	15.2004	10.5756	28.4293
	16.7043	16.9611	12.1636	31.0341
	18.845	18.4192	13.6415	33.0343
	20.8524	19.6148	15.0276	34.5456
	22.7404	20.5827	16.3365	35.6621
	24.521	21.3534	17.5802	36.4598
	26.2051	21.9534	18.7684	37.0005
12	27.802	22.4059	19.909	37.3342
	29.32	22.7311	21.0087	37.5014
	30.7665	22.9467	22.0725	37.5352
	32.1478	23.0679	23.105	37.462
	33.4697	23.1082	24.1095	37.3037
	34.7372	23.0792	25.0891	37.0775
	35.9547	22.991	26.0461	36.7978
	37.1261	22.8526	26.9825	36.4759
	38.2548	22.6716	27.8999	36.1213
	39.3441	22.4546	28.7996	35.7414
	40.3967	22.2076	29.6829	35.3422
	41.415	21.9355	30.5506	34.9288
24	42.4012	21.6428	31.4036	34.505
	43.3572	21.3332	32.2425	34.0741
	44.2848	21.0101	33.0679	33.6386
	45.1857	20.6763	33.8803	33.2007
	46.0612	20.3343	34.6802	32.7619
	46.9125	19.9862	35.4679	32.3237
	47.741	19.6339	36.2438	31.887
	48.5476	19.2788	37.0082	31.4528
	49.3333	18.9225	37.7612	31.0217
	50.099	18.5661	38.5033	30.5942
	50.8455	18.2105	39.2346	30.1707

Months after transfer (2014-2 sale)	foreclosure sold	Foreclosure avoid sold	foreclosure unsold	Foreclosure avoid unsold
	51.5735	17.8566	39.9553	29.7516
36	52.2837	17.5052	40.6656	29.3372
	52.9768	17.1568	41.3658	28.9275
	53.6533	16.812	42.0559	28.5227
	54.3138	16.4712	42.7362	28.1229
	54.9589	16.1347	43.4067	27.7283
	55.5889	15.8029	44.0678	27.3387

Months after transfer (2015-1 sale)	foreclosure sold	Foreclosure avoid sold	foreclosure unsold	Foreclosure avoid unsold
1"	4.1313	3.99835	3.81932	7.26903
	7.91371	7.38302	7.21789	12.9584
	11.3877	10.2355	10.2701	17.3789
	14.5886	12.6269	13.0362	20.7812
	17.5473	14.6187	15.5647	23.3667
	20.2908	16.2649	17.8949	25.2979
	22.8429	17.6121	20.0588	26.7054
	25.2242	18.701	22.082	27.6944
	27.4529	19.567	23.9855	28.3497
	29.5447	20.2408	25.7863	28.7394
	31.5137	20.7493	27.4984	28.9182
12"	33.3721	21.1156	29.1328	28.9303
	35.1307	21.3599	30.699	28.811
	36.7988	21.4999	32.2044	28.589
	38.3847	21.5507	33.6553	28.287
	39.8959	21.5256	35.0569	27.9234
	41.3388	21.4361	36.4133	27.513
	42.7189	21.2921	37.7283	27.0675
	44.0415	21.1024	39.0047	26.5964
	45.311	20.8743	40.245	26.1072
	46.5313	20.6144	41.4516	25.606
	47.706	20.3283	42.6261	25.0976
	48.8381	20.0207	43.7701	24.5857

Months after transfer (2015-1 sale)	foreclosure sold	Foreclosure avoid sold	foreclosure unsold	Foreclosure avoid unsold
24"	49.9306	19.696	44.8851	24.0734
	50.9859	19.3577	45.9723	23.563
	52.0062	19.009	47.0327	23.0564
	52.9936	18.6524	48.0674	22.555
	53.9499	18.2904	49.0772	22.0601

Months after transfer (2016-1 sale)	foreclosure sold	Foreclosure avoid sold	foreclosure unsold	Foreclosure avoid unsold
1	4.39861	4.85616	4.06022	9.22144
	8.3554	9.09123	7.59868	16.1983
	11.9205	12.7777	10.7229	21.4326
	15.1384	15.9795	13.5166	25.3149
	18.0482	18.7534	16.0453	28.1492
	20.6848	21.1494	18.36	30.172
	23.0789	23.212	20.5008	31.5671
	25.2577	24.9802	22.4987	32.4775
	27.2453	26.4888	24.3783	33.0147
	29.063	27.7684	26.1588	33.265
	30.7297	28.8461	27.8553	33.2956
12	32.262	29.746	29.4796	33.159
	33.6747	30.4891	31.0412	32.8955
	34.9809	31.0942	32.5476	32.5368
	36.1923	31.578	34.0046	32.1073
	37.3189	31.955	35.417	31.626
	38.3701	32.2382	36.7888	31.1075
	39.3536	32.4391	38.1229	30.5632
	40.2768	32.5678	39.422	30.0018
	41.1458	32.6332	40.6882	29.4302
	41.9664	32.6433	41.9232	28.8535
	42.7433	32.605	43.1286	28.2758
	43.4811	32.5245	44.3056	27.7
24	44.1836	32.4072	45.4554	27.1284

Months after transfer (2016-2 sale)	foreclosure sold	Foreclosure avoid sold	foreclosure unsold	Foreclosure avoid unsold
1"	2.97	4.1323	4.9311	9.51717
	5.72433	7.90048	9.17682	16.629
	8.28053	11.3346	12.8826	21.8899
	10.6547	14.4622	16.1611	25.7275
	12.8617	17.3087	19.0994	28.472
	14.9149	19.8973	21.7649	30.3781
	16.827	22.2493	24.2102	31.6422
	18.6094	24.3843	26.4758	32.4158
	20.2724	26.3203	28.5935	32.8157
	21.8258	28.0737	30.5878	32.9322
	23.2785	29.6597	32.478	32.8344
12"	24.6384	31.0923	34.2792	32.576
	25.9132	32.384	36.0033	32.1981
	27.1096	33.5467	37.6596	31.7324

Accessible Data for Figure 10: Sold Loan Outcomes by Selected Purchasers in Distressed Asset Stabilization Program Sales Compared with Similar Unsold Loans, Fiscal Years 2013–2016

Months after transfer (purchaser 1)	Short sale	foreclosure	reperforming
1	1.71822	3.13323	2.35656
	3.25833	5.94165	4.87822
	4.64405	8.46855	7.38147
	5.8949	10.7495	9.7607
	7.02721	12.8143	11.9595
	8.05484	14.6882	13.9523
	8.98971	16.393	15.7322
	9.84214	17.9474	17.3036
	10.6211	19.3679	18.6772
	11.3346	20.669	19.8669
	11.9896	21.8633	20.8881
12	12.5921	22.9621	21.7563
	13.1478	23.9754	22.4866

Months after transfer (purchaser 1)	Short sale	foreclosure	reperforming
	13.6614	24.912	23.0931
	14.1373	25.7798	23.5891
	14.5793	26.5858	23.9866
	14.9908	27.3362	24.2967
	15.3749	28.0366	24.5292
	15.7344	28.692	24.6931
	16.0715	29.3068	24.7964
	16.3886	29.885	24.8462
	16.6874	30.43	24.8489
	16.9699	30.945	24.8104
24	17.2374	31.4329	24.7355
	17.4915	31.8962	24.629
	17.7332	32.337	24.4949
	17.9638	32.7574	24.3366
	18.1841	33.1593	24.1575
	18.3952	33.5441	23.9604
	18.5977	33.9134	23.7478
	18.7924	34.2685	23.522
	18.98	34.6105	23.2849
	19.1609	34.9404	23.0383
	19.3357	35.2591	22.7837
	19.5048	35.5676	22.5227
36	19.6687	35.8665	22.2563
	19.8278	36.1565	21.9857
	19.9823	36.4383	21.7119
	20.1326	36.7123	21.4357
	20.2789	36.9791	21.1578
	20.4215	37.2392	20.8789
	20.5606	37.4928	20.5996
	20.6964	37.7404	20.3204
	20.829	37.9823	20.0418
	20.9587	38.2188	19.7641
	21.0856	38.4501	19.4877
	21.2098	38.6766	19.2128
48	21.3314	38.8984	18.9399

Months after transfer (purchaser 2)	Short sale	foreclosure	reperforming
1	2.47037	3.49598	1.01209
	4.75487	6.72894	1.84503
	6.87157	9.72443	2.52127
	8.83617	12.5047	3.06166
	10.6624	15.089	3.48513
	12.3623	17.4947	3.80861
	13.9466	19.7367	4.04709
	15.4248	21.8287	4.21372
	16.8056	23.7828	4.31998
	18.0965	25.6096	4.37582
	19.3046	27.3192	4.38981
12	20.4359	28.9203	4.36936
	21.4963	30.4209	4.3208
	22.4909	31.8283	4.24953
	23.4242	33.1492	4.16018
	24.3008	34.3897	4.05666
	25.1244	35.5552	3.94229
	25.8986	36.6508	3.81986
	26.6268	37.6814	3.69174
	27.312	38.651	3.55988
	27.9569	39.5637	3.42593
	28.5643	40.4232	3.29126
	29.1364	41.2329	3.15696
24	29.6755	41.9958	3.02396
	30.1837	42.7149	2.893
	30.6627	43.3929	2.76466
	31.1145	44.0323	2.63941
	31.5407	44.6354	2.51759
	31.9428	45.2044	2.39948
	32.3222	45.7413	2.28528
	32.6803	46.2481	2.17509
	33.0183	46.7265	2.06901
	33.3375	47.1781	1.96706
	33.6388	47.6046	1.86924
	33.9234	48.0073	1.77551

Months after transfer (purchaser 2)	Short sale	foreclosure	reperforming
36"	34.1922	48.3877	1.68582
	34.446	48.7469	1.60008
	34.6859	49.0863	1.51821
	34.9124	49.407	1.44011
	35.1265	49.7099	1.36566
	35.3288	49.9961	1.29474
	35.5199	50.2666	1.22723
	35.7005	50.5222	1.163
	35.8712	50.7638	1.10193
	36.0326	50.9921	1.0439
	36.185	51.2079	0.988766
	36.3292	51.4118	0.936415
48"	36.4654	51.6046	0.886723

Months after transfer (purchaser 3)	Short sale	foreclosure	reperforming
1	2.62324	4.15101	1.09446
	5.01025	7.92819	2.02952
	7.18588	11.3709	2.82241
	9.17217	14.514	3.48879
	10.9886	17.3884	4.0429
	12.6526	20.0214	4.49761
	14.1795	22.4375	4.86456
	15.5829	24.6582	5.15427
	16.8749	26.7028	5.3762
	18.0664	28.5882	5.53884
	19.167	30.3298	5.64981
12	20.1852	31.9409	5.71595
	21.1286	33.4338	5.74335
	22.0041	34.8192	5.73745
	22.8178	36.1067	5.70308
	23.575	37.305	5.64456
	24.2807	38.4217	5.56568
	24.9393	39.4638	5.46982
	25.5546	40.4375	5.35995

Months after transfer (purchaser 3)	Short sale	foreclosure	reperforming
	26.1302	41.3484	5.2387
	26.6694	42.2015	5.10835
	27.1748	43.0013	4.97093
	27.6493	43.7521	4.82818
24	28.095	44.4574	4.68164
	28.5141	45.1206	4.53263
	28.9086	45.7449	4.38229
	29.2802	46.3329	4.23161
	29.6306	46.8872	4.08141
	29.961	47.4102	3.93243
	30.273	47.9038	3.78524
	30.5677	48.3702	3.64037
	30.8462	48.8109	3.49822
	31.1096	49.2277	3.35912
	31.3589	49.6221	3.22337
	31.5948	49.9954	3.09116
36	31.8182	50.349	2.96266
	32.0299	50.6839	2.83799
	32.2305	51.0014	2.71723
	32.4207	51.3023	2.60043
	32.6011	51.5878	2.48761
	32.7722	51.8586	2.37876
	32.9346	52.1155	2.27386
	33.0887	52.3594	2.17286
	33.2351	52.591	2.07572
	33.374	52.8109	1.98235
	33.506	53.0197	1.89269
	33.6314	53.2181	1.80665
48	33.7505	53.4066	1.72413

Months after transfer (purchaser 4)	Short sale	foreclosure	reperforming
1	0.790482	3.33631	1.32315
	1.51859	6.40937	3.30655
	2.19227	9.25268	5.22809

Months after transfer (purchaser 4)	Short sale	foreclosure	reperforming
	2.81736	11.8909	6.91805
	3.39873	14.3447	8.35622
	3.94062	16.6318	9.56059
	4.44677	18.7681	10.557
	4.92051	20.7675	11.3708
	5.3648	22.6427	12.0253
	5.78226	24.4046	12.541
	6.17527	26.0633	12.9361
12	6.54592	27.6277	13.2266
	6.89608	29.1056	13.4267
	7.22746	30.5042	13.5486
	7.54155	31.8299	13.6033
	7.8397	33.0883	13.6002
	8.12314	34.2845	13.5478
	8.39295	35.4233	13.4534
	8.65012	36.5087	13.3234
	8.89555	37.5446	13.1634
	9.13002	38.5342	12.9784
	9.35427	39.4807	12.7727
	9.56896	40.3868	12.55
24	9.77469	41.2551	12.3136
	9.972	42.0878	12.0663
	10.1614	42.8872	11.8107
	10.3433	43.655	11.5488
	10.5182	44.393	11.2826
	10.6864	45.1029	11.0136
	10.8482	45.7861	10.7433
	11.0041	46.444	10.4727
	11.1543	47.0778	10.203
	11.299	47.6887	9.93502
	11.4386	48.2778	9.66944
	11.5732	48.8461	9.40691
36	11.7032	49.3945	9.14796
	11.8286	49.9239	8.89301
	11.9497	50.4351	8.64242
	12.0667	50.9288	8.39647

Months after transfer (purchaser 4)	Short sale	foreclosure	reperforming
	12.1797	51.4058	8.15539
	12.289	51.8668	7.91936
	12.3945	52.3124	7.68852
	12.4966	52.7432	7.46295
	12.5953	53.1598	7.24272
	12.6907	53.5626	7.02786
	12.7831	53.9522	6.81839
	12.8724	54.3292	6.61428
48	12.9588	54.6938	6.41551

Months after transfer (purchaser 5)	Short sale	foreclosure	reperforming
1	1.50551	16.103	0.061386
	2.73862	29.2922	0.118653
	3.75047	40.115	0.168063
	4.58191	49.0081	0.208434
	5.26582	56.3231	0.239921
	5.82883	62.345	0.263316
	6.29259	67.3055	0.27967
	6.67481	71.3936	0.290075
	6.98994	74.7643	0.295566
	7.24987	77.5445	0.297072
	7.46434	79.8385	0.295398
12	7.64137	81.7319	0.291228
	7.78753	83.2953	0.285135
	7.90826	84.5867	0.277593
	8.00803	85.6538	0.268991
	8.0905	86.5359	0.259644
	8.15872	87.2655	0.249808
	8.21517	87.8693	0.239688
	8.26192	88.3693	0.229445
	8.30065	88.7837	0.219208
	8.33278	89.1273	0.209076
	8.35944	89.4125	0.199127
	8.3816	89.6494	0.189417

Months after transfer (purchaser 5)	Short sale	foreclosure	reperforming
24	8.40003	89.8465	0.179991
	8.41537	90.0107	0.170878
	8.42817	90.1476	0.162098
	8.43887	90.262	0.153666
	8.44782	90.3577	0.145586
	8.45532	90.438	0.137861
	8.46163	90.5054	0.130488
	8.46694	90.5622	0.123462
	8.47142	90.6102	0.116775
	8.47522	90.6508	0.110419
	8.47845	90.6854	0.104382
	8.4812	90.7148	0.098654
36	8.48355	90.74	0.093222
	8.48557	90.7616	0.088074
	8.48732	90.7802	0.083199
	8.48882	90.7963	0.078584
	8.49014	90.8104	0.074217
	8.49128	90.8226	0.070085
	8.49229	90.8334	0.066178
	8.49317	90.8428	0.062485
	8.49396	90.8512	0.058993
	8.49465	90.8587	0.055694
	8.49528	90.8653	0.052577
	8.49584	90.8713	0.049632
48	8.49634	90.8767	0.04685

Months after transfer (unsold loans)	Short sale	foreclosure	reperforming
1	0.724464	2.89303	2.64928
	1.37321	5.48368	5.15143
	1.95878	7.82205	7.45682
	2.49141	9.94905	9.53912
	2.9795	11.8982	11.3884
	3.42992	13.6968	13.0058
	3.84829	15.3675	14.4003

Months after transfer (unsold loans)	Short sale	foreclosure	reperforming
	4.23928	16.9289	15.5852
	4.60671	18.3961	16.5765
	4.95375	19.782	17.3917
	5.28302	21.0968	18.0484
12"	5.59669	22.3494	18.5637
	5.89658	23.547	18.9541
	6.18421	24.6956	19.2348
	6.46085	25.8003	19.4199
	6.72757	26.8654	19.5221
	6.98526	27.8945	19.5529
	7.23469	28.8905	19.5226
	7.4765	29.8562	19.4403
	7.71126	30.7937	19.3139
	7.93944	31.7049	19.1505
	8.16145	32.5914	18.9563
	8.37765	33.4548	18.7365
24	8.58835	34.2961	18.4958
	8.79382	35.1167	18.2382
	8.9943	35.9172	17.9671
	9.19001	36.6988	17.6856
	9.38114	37.462	17.396
	9.56787	38.2077	17.1007
	9.75034	38.9364	16.8013
	9.92872	39.6487	16.4995
	10.1031	40.3451	16.1967
	10.2737	41.0261	15.8938
	10.4405	41.6922	15.5919
	10.6036	42.3438	15.2917
36	10.7633	42.9813	14.9938
	10.9194	43.605	14.6988
	11.0723	44.2153	14.4072
	11.2218	44.8125	14.1192
	11.3682	45.397	13.8352
	11.5114	45.9691	13.5554
	11.6517	46.529	13.28
	11.7889	47.077	13.0091

Months after transfer (unsold loans)	Short sale	foreclosure	reperforming
	11.9232	47.6134	12.7427
	12.0547	48.1385	12.4811
	12.1834	48.6525	12.2241
	12.3094	49.1557	11.9718
48"	12.4328	49.6483	11.7243

Accessible Data for Figure 11: Number of Loans Sold through Neighborhood Stabilization Outcome (NSO) and Nonprofit Pools Relative to National Pools in Distressed Asset Stabilization Program Sales, Fiscal Years 2013–2016

Sale	Number of loans sold in NSO or nonprofit pools	Number of loans sold in national pools	% of loans sold in NSO or nonprofit pools
2013-1		10457	0
2013-2	3186	13370	19
2014-1	3220	17440	16
2014-2	6887	27969	20
2015-1	1501	4318	26
2016-1	2634	3164	45
2016-2	2835	3528	45

Accessible Data for Figure 12: Share of Sold Loans Bought by Distressed Asset Stabilization Program Purchasers, Fiscal Years 2013 and 2016

Purchaser	Percentage
25 Capital (purchaser a)	8.24
Oaktree Capital (purchaser b)	8.66
Bayview (purchaser c)	9.69
Altisource (purchaser d)	10.19
All other 2013 purchasers	10.57
OHA Newbury (purchaser e)	14.11
RBS (purchaser f)	15.79
Selene (purchaser g)	22.75

Bayview (purchaser c)	All other 2016 purchasers	Kondaur (purchaser h)	Rushmore (purchaser I)

Bayview (purchaser c)	All other 2016 purchasers	Kondaur (purchaser h)	Rushmore (purchaser l)
68.38	4.84	10.86	15.92

Accessible Data for Figure 14: Comparison of Defaulted Loan Pool Characteristics and Sale Results for FHA Sales, Fiscal Years 2011–2016, and Enterprise Sales, Calendar Years 2015–2017

Average Loan delinquency (years)					
n/a	minimum	quartile one	median	quartile 3	maximum
FHA	0.58	1.33	1.83	2.42	4
Enterprises	1.4	2.7	3.2	3.9	6.2

Occupied loans (percentage)					
n/a	minimum	quartile one	median	quartile 3	maximum
FHA	18.73	70.18	82.73	100	100
Enterprises	11	51	62	69	91

Average estimated property value at bid (dollars, in thousands)					
n/a	minimum	quartile one	median	quartile 3	maximum
FHA	64.364	119.109	132.843	157.679	445.007
Enterprises	140.895	190.432	229.675	250.029	545.821

Pool loan count at bid (loans, in thousans)					
n/a	minimum	quartile one	median	quartile 3	maximum
FHA	0.011	0.252	0.616	1.029	5.944
Enterprises	0.053	0.589	1.065	1.7	3.826

Estimated property value at bid (dollars, in millions)					
n/a	minimum	quartile one	median	quartile 3	maximum
FHA	0.708	38.466	84.005	148.282	832.12
Enterprises	9.71	124.144	217.975	390.457	977.68

Unpaid balance at bid (dollars, in millions)					
n/a	minimum	quartile one	median	quartile 3	maximum
FHA	0.896	42.613	105.36	173.195	1022.49
Enterprises	10.19	123.91	222.06	306.828	669.36

2nf half

Bidders (numbers)					
n/a	minimum	quartile one	median	quartile 3	maximum
FHA	1	3	4	6	14
Enterprises	1	3	5	6	15

Winning bid of estimated property value (percentage)					
n/a	minimum	quartile one	median	quartile 3	maximum
FHA	0	57.81	65.69	71.16	87.2
Enterprises	4.96	58.3	63.83	70.07	111.95

Accessible Data for Figure 15: Number of Distressed Asset Stabilization Program (DASP) Servicers and Purchasers, Fiscal Years 2013–2016

Sale	Number of servicers	Number of purchasers
2013-1	9	5
2013-2	17	12
2014-1	16	13
2014-2	20	11
2015-1	20	5
2016-1	24	6
2016-2	22	5

Accessible Data for Figure 16: Share of Sold Loans Offered by Distressed Asset Stabilization Program Servicers, Fiscal Years 2013 and 2016 Sales

Servicer A	Servicer B	Servicer all other	Servicer C	Servicer D
4.05	4.71	8.6	26.83	55.85

Servicer E	Servicer F	Servicer G	Servicer H	Servicer I	All other 2016	Servicer C	Servicer A	Servicer D
4.16	4.32	5.47	6.94	10.38	19.83	14.81	16.8	17.29

Accessible Data for Figure 17: Occupancy Status of Loans Sold through the Distressed Asset Stabilization Program, Fiscal Years 2013–2016

Other	Occupied by renter	Unable to determine occupancy	Vacant	Occupied by borrower

Other	Occupied by renter	Unable to determine occupancy	Vacant	Occupied by borrower
1.08	2.73	5.79	18.65	72.29

Accessible Data for Figure 18: Length of Delinquency for Loans Sold through the Distressed Asset Stabilization Program, Fiscal Years 2013–2016

Category	Number of sold loans
Fewer than12 missed payments	22779
12-23 missed	33331
24-35 missed	18429
36-47 missed	10572
48 or more missed	7761

Accessible Data for Figure 19: Loan-to-Value Ratio of Loans Sold through the Distressed Asset Stabilization Program, Fiscal Years 2013–2016

Less than 70 percent	70 to less than 90 percent	90 to less than 110 percent	110 to less than 130 percent	130 percent or more	Unknown
5.29	24.11	36.74	13.02	4.51	16.32

Accessible Data for Figure 20: Origination Years of Loans Sold through the Distressed Asset Stabilization Program, Fiscal Years 2013–2016

Calendar year	Number of loans
Before 2000	1610
2000"	281
2001"	568
2002"	1106
2003"	3572
2004"	3365
2005"	3664
2006"	4492
2007"	8528
2008"	24521
2009"	22735
2010"	11095
2011"	3768

Calendar year	Number of loans
2012"	1949
2013"	1210
2014"	330
2015"	78

Accessible Data for Figure 25: Additional Outcomes for Loans Sold through the Distressed Asset Stabilization Program and Similar, Unsold Loans, Fiscal Years 2013–2016

Unresolved, Foreclosure, Short sale or deed in lieu of foreclosure

Months after transfer	Sold (unresolved)	Unsold (unresolved)	Sold (foreclosure)	Unsold (foreclosure)	Sold (short sale or deed)	Unsold (short sale or deed)
1	91.565	89.1961	3.55248	2.89295	1.3802	0.724526
	84.0724	80.1991	6.80982	5.48355	2.64573	1.37333
	77.379	72.6767	9.80425	7.82186	3.80912	1.95895
	71.372	66.3599	12.5632	9.9488	4.88104	2.49163
	65.9605	61.0305	15.1106	11.8979	5.87072	2.97976
	61.0706	56.5112	17.4669	13.6965	6.78619	3.43021
	56.6405	52.6579	19.6504	15.3671	7.63452	3.84862
	52.6183	49.3533	21.6772	16.9284	8.42195	4.23964
	48.9596	46.5018	23.5615	18.3957	9.15405	4.6071
	45.6261	44.0251	25.3162	19.7815	9.83576	4.95417
	42.5844	41.8594	26.9526	21.0963	10.4715	5.28346
12	39.8052	39.9523	28.481	22.3489	11.0654	5.59716
	37.2626	38.261	29.9108	23.5464	11.6209	5.89708
	34.9336	36.7503	31.2502	24.695	12.1413	6.18474
	32.7976	35.391	32.5068	25.7997	12.6295	6.4614
	30.8364	34.1593	33.6874	26.8647	13.0881	6.72814
	29.0335	33.0354	34.7982	27.8937	13.5197	6.98585
	27.374	32.0032	35.8448	28.8898	13.9263	7.2353
	25.8449	31.0491	36.8322	29.8554	14.3099	7.47714
	24.434	30.1618	37.7651	30.7929	14.6724	7.71192
	23.1306	29.3322	38.6476	31.704	15.0153	7.94012
	21.925	28.5524	39.4836	32.5906	15.3401	8.16215
	20.8084	27.8159	40.2765	33.4539	15.6481	8.37836
24	19.7728	27.1174	41.0295	34.2953	15.9407	8.58908
	18.8111	26.4524	41.7454	35.1157	16.2188	8.79456

Months after transfer	Sold (unresolved)	Unsold (unresolved)	Sold (foreclosure)	Unsold (foreclosure)	Sold (short sale or deed)	Unsold (short sale or deed)
	17.9168	25.817	42.4269	35.9163	16.4836	8.99506
	17.084	25.208	43.0764	36.6978	16.7359	9.19079
	16.3073	24.6228	43.696	37.4611	16.9767	9.38194
	15.5821	24.0591	44.2878	38.2067	17.2066	9.56868
	14.9039	23.5148	44.8535	38.9354	17.4264	9.75118
	14.2687	22.9884	45.3948	39.6477	17.6367	9.92956
	13.6731	22.4785	45.9133	40.3441	17.8381	10.104
	13.1137	21.9837	46.4104	41.0251	18.0313	10.2745
	12.5876	21.5031	46.8874	41.6912	18.2166	10.4414
	12.0921	21.0358	47.3454	42.3428	18.3945	10.6045
36	11.6249	20.581	47.7855	42.9802	18.5655	10.7642
	11.1837	20.138	48.2088	43.6039	18.7299	10.9204
	10.7664	19.7061	48.6161	44.2142	18.8882	11.0732
	10.3714	19.2849	49.0084	44.8114	19.0406	11.2228
	9.99683	18.8739	49.3864	45.3959	19.1875	11.3692
	9.6413	18.4726	49.7508	45.9679	19.3291	11.5124
	9.30341	18.0807	50.1024	46.5278	19.4657	11.6527
	8.9819	17.6978	50.4418	47.0758	19.5975	11.7899
	8.67563	17.3235	50.7694	47.6123	19.7248	11.9243
	8.38354	16.9577	51.086	48.1374	19.8478	12.0558
	8.1047	16.6	51.392	48.6514	19.9667	12.1845
	7.83822	16.2503	51.6879	49.1545	20.0817	12.3105
48	7.5833	15.9082	51.9741	49.6471	20.1929	12.4339

Reperforming Temporary action, other

Months after transfer	Sold (reperforming)	Unsold (reperforming	Sold (temporary action)	Unsold (temporary action)	Sold	Unsold
1	1.4092	2.6493	1.25511	4.17333	0.837971	0.363753
	2.84292	5.15147	2.02279	7.10306	1.60632	0.689488
	4.23172	7.45689	2.46324	9.10207	2.31266	0.983502
	5.53421	9.53921	2.68607	10.4095	2.96346	1.25094
	6.72773	11.3885	2.76611	11.2074	3.56433	1.49601
	7.80193	13.006	2.75426	11.634	4.12015	1.72216
	8.75441	14.4004	2.68498	11.7937	4.63521	1.93223

Months after transfer	Sold (reperforming)	Unsold (reperforming	Sold (temporary action)	Unsold (temporary action)	Sold	Unsold
	9.58781	15.5853	2.5815	11.7647	5.11329	2.12854
	10.3078	16.5767	2.45931	11.6057	5.55777	2.31303
	10.9217	17.3919	2.32862	11.3601	5.97166	2.48728
	11.4377	18.0485	2.19606	11.0597	6.35767	2.6526
12	11.8643	18.5639	2.06585	10.7277	6.71821	2.8101
	12.2097	18.9542	1.94052	10.3806	7.05547	2.96067
	12.482	19.2349	1.82154	10.03	7.37142	3.10509
	12.6886	19.42	1.70963	9.68398	7.66783	3.24399
	12.8367	19.5222	1.60504	9.34775	7.94631	3.37791
	12.9326	19.553	1.50772	9.02462	8.20833	3.5073
	12.9823	19.5227	1.41742	8.71643	8.45519	3.63253
	12.9911	19.4404	1.33379	8.42403	8.68811	3.75395
	12.964	19.314	1.25643	8.14756	8.90816	3.87182
	12.9053	19.1506	1.18489	7.88667	9.11633	3.98639
	12.819	18.9564	1.11876	7.64072	9.31353	4.09786
	12.7088	18.7366	1.05759	7.40886	9.50057	4.20642
24	12.5778	18.4959	1.00099	7.19017	9.67818	4.31221
	12.429	18.2383	0.948574	6.98367	9.84706	4.41537
	12.2649	17.9672	0.899995	6.78839	10.0078	4.51604
	12.0878	17.6856	0.854923	6.6034	10.161	4.6143
	11.8998	17.3961	0.81306	6.4278	10.3072	4.71027
	11.7027	17.1007	0.774129	6.26079	10.4468	4.80403
	11.4982	16.8014	0.737882	6.10159	10.5802	4.89565
	11.2878	16.4996	0.704088	5.94953	10.7079	4.98521
	11.0727	16.1967	0.67254	5.80398	10.8302	5.07277
	10.8541	15.8939	0.643048	5.66438	10.9475	5.1584
	10.6331	15.5919	0.61544	5.53022	11.06	5.24215
	10.4105	15.2917	0.589561	5.40107	11.168	5.32408
36	10.187	14.9938	0.565268	5.27651	11.2718	5.40423
	9.96355	14.6989	0.542432	5.1562	11.3717	5.48265
	9.74059	14.4072	0.520936	5.03982	11.4677	5.55939
	9.5187	14.1193	0.500673	4.92709	11.5603	5.63448
	9.29835	13.8353	0.481547	4.81777	11.6494	5.70798
	9.07994	13.5555	0.46347	4.71163	11.7354	5.7799
	8.86383	13.28	0.446362	4.60849	11.8183	5.8503

Months after transfer	Sold (reperforming)	Unsold (reperforming	Sold (temporary action)	Unsold (temporary action)	Sold	Unsold
	8.65032	13.0091	0.43015	4.50817	11.8984	5.91921
	8.43966	12.7428	0.414768	4.41051	11.9757	5.98666
	8.23208	12.4811	0.400155	4.31538	12.0504	6.05268
	8.02776	12.2241	0.386257	4.22266	12.1225	6.11731
	7.82685	11.9719	0.373022	4.13223	12.1923	6.18058
48	7.62947	11.7243	0.360406	4.04399	12.2598	6.24251

Agency Comment Letter

Accessible Text for Appendix VIII Comments from the Department of Housing and Urban Development

Page 1

Daniel Garcia-Diaz Director, Financial Markets and Community Investment

Government Accountability Office

441 G Street, NW

Washington, DC 20548

Dear Mr. Garcia-Diaz:

Thank you for the opportunity to respond to the Draft Report GAO-19-228 entitled Federal Housing Administration "Opportunities Exist to Improve Defaulted, Single-Family Loan Sales" received on April 29, 2019. This letter communicates the Department of Housing and Urban Development (HUD), Federal Housing Administration's (FHA) response to the audit.

The FHA's management generally agrees with the Government Accountability Office (GAO) that opportunities exist for improvements to single family loan sales through more formalized procedures and analysis, as this critical defaulted loan disposition option transitions to a permanent disposition alternative.

A point of clarification throughout the report relates to the comparison analysis of sold and unsold loans performed by GAO. All the loans identified by FHA servicers for inclusion in the Distressed Asset Stabilization Program (DASP) sale had to have first been reviewed for loss mitigation. All applicable loss mitigation activities must have been completed prior to loans being eligible for sale by the FHA servicers. Any loans that are used for comparison as similar loans, by definition, must have also been deemed to have completed loss mitigation prior to their inclusion in a comparison group for analysis. We do not believe the loans assessed as part of the GAO's analysis meet that crite1ia and therefore are invalid for comparative analysis purposes.

Concerning GAO's nine (9) recommendations for executive action, FHA takes GAO's comments and recommendations under advisement and submits the following responses;

Recommendation 1

The Commissioner of FHA should ensure that its eligibility checks are conducted throughout the DASP sale process, such as by establishing a schedule to check for eligibility at certain milestones.

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Management's Response:

FHA works intently with servicers throughout the DASP sale process to determine each defaulted loan's eligibility status, for inclusion in or exclusion from sales. We recognize that although a loan is in defaulted status this may change at any point prior to sale if the borrower contacts the servicer for any loss mitigation proceedings. This is often due to a change in their own circumstances (i.e. re-employment). For this reason, FHA management established eligibility checks at various check points; at initial loan identification, a few weeks prior to auction, and at claims submission after the sale. The final eligibility check, at claims submission, is used to remove any loans that are no longer eligible from delivery to a purchaser/winning bidder. Based on our experience with loan sales auctions, management believes that the final eligibility check at claim submission remains the best opportunity to remove ineligible loans. Management agrees to include a schedule of eligibility checks in our procedures.

Recommendation 2

In formalizing procedures for DASP the Commissioner of FHA should document processes for timely consideration and review of program changes.

Management's Response:

Management agrees with GAO's recommendation. We are currently working on developing consolidated loan sales procedures and will include a process or standard pertaining to review and consideration of characteristics of the loan sales alternative option that may warrant changes.

Recommendation 3

The Commissioner of FHA should clearly define DASP objectives and develop measurable targets for all program objectives.

Management's Response:

Management believes that we have clear objectives and sound performance measurement in place for DASP as a single family defaulted loan disposition option. The objective of this alternative is to maximize recoveries (minimize losses) to the insurance fund. FHA measures whether DASP is meeting this objective by comparing recoveries (losses) against other disposition types.

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Recommendation 4

The Commissioner of FHA should use performance data to develop criteria for when to hold DASP sales.

Management's Response:

Management accepts GAO's recommendation and will work with our internal stakeholders to further improve existing criteria and standards used to determine when to execute single family defaulted loan sales.

Recommendation 5

The Commissioner of FHA should evaluate loan outcomes under DASP compared to outcomes for similar, unsold loans.

Management's Response:

In deciding to include defaulted loans in loans sales, as a disposition option, and in setting reserve pricing, FHA' s management considers the anticipated loss rate for the asset as if it were to go into foreclosure and be disposed of under other disposition alternatives within the department.

However, we acknowledge GAO's recommendation and will look at methods to improve our evaluation of possible options for defaulted assets.

Recommendation 6

The Commissioner of FHA should monitor individual purchasers' compliance with FHA's modification requirements and ensure that purchasers submit the data needed to evaluate the sustainability of modifications.

Management's Response:

Management accepts GAO's recommendations and will re-examine existing purchasers' post sale reporting requirements around modifications.

Recommendation 7

The Commissioner of FHA should communicate long-range notice to prospective bidders of upcoming sales.

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Management's Response:

Management accepts GAO's recommendations. We will review our existing processes for loan sale announcements and make changes where practicable.

Recommendation 8

The Commissioner of FHA should develop a methodology to assess the range of possible outcomes for loans when setting DASP reserve prices.

Management's Response:

FHA's current loan sale reserve pricing model considers a range of possible outcomes (primarily centered around losses to the FHA insurance fund) for the loans in sales pools and based on existing options available to management. However, FHA management accepts GAO's recommendation and will examine the existing methodology with a goal of further optimization.

Recommendation 9

The Commissioner of FHA should analyze its loan p011folio and market information before setting loan eligibility criteria.

Management's Response:

FHA's management accepts GAO's recommendation, though we currently analyze our loan portfolio against current market information before deciding to execute a note sale and in setting reserve pricing. Management also takes into consideration FHA's regulation on loss mitigation to be certain that all loans have been analyzed for the full suite of loss mitigation options before being considered eligible for loan sales.

We appreciate the GAO's review of FHA's defaulted single-family loan sales disposition option and subsequent recommendations.

Sincerely,

John Garvin

General Deputy Assistant Secretary for Housing

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