GSE Repurchase Activity and Its Chilling Effect on the Market

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The government-sponsored enterprises (GSEs), Freddie Mac in particular, have sharply increased their putback, or repurchase, activity in recent years. When a loan violates the representations and warranties (reps and warrants) that a lender has made to the GSEs, the GSEs can demand that the lender repurchase the loan. Even though the number of affected loans is still low, the economic impact is magnified in a rising-interest-rate environment. And this can have an outsize effect on access to credit, as originators become less inclined to originate the types of loans that account for a disproportionate share of repurchase requests.

Recognizing this, on October 16, 2023, the Federal Housing Finance Agency (FHFA) took action to provide greater certainty to lenders and has promised further action (Thompson 2023). In particular, the FHFA has made it clear that it will revise the treatment of loans in which the borrowers have elected a COVID-19 pandemic forbearance; these loans would be treated as loans that have elected forbearance because of a natural disaster. These loans would be eligible for reps and warrants relief based on the borrower's payment history, and pandemic forbearance will not cause a loan to lose eligibility.[1] The FHFA has also made it clear it will try to expand the number of loans for which alternatives to repurchases are available and offered on a regular basis (Thompson 2023). As a follow-up to this, in mid-November 2023, Freddie Mac announced it would roll out a pilot in early 2024 as a replacement to its current repurchase policy for defective performing loans.[2] Specifically, lenders will not be subject to repurchases on most performing loans, but they will be subject to a fee-based structure to compensate Freddie Mac for the defects. The pilot will begin with a "limited rollout to a targeted group of lenders."

It is critical this set of issues be addressed, and we are encouraged by the actions that have been taken to date, but more needs to be done. Both GSEs need to roll out more transparent fee-based alternatives to all lenders for performing loans and to clarify alternatives for nonperforming loans. In

addition, the FHFA did not address the repurchase policies for the loans where the borrower has opted for postpandemic forbearance. Servicers could offer these policies as early as July 1, 2023, but were required to offer them by October 1, 2023; consequently, new originations would be subject to these policies. If a borrower opts for forbearance, the loan would be treated as delinquent unless otherwise clarified and hence would be ineligible for Freddie Mac's new fee-based structure.

Why Have Repurchases Received So Much Attention?

The repurchase issue has received much attention from the lending community, as the increased number of repurchases coincided with interest rate increases; the cost of repurchases increases as interest rates rise. When rates are stable, a loan that is repurchased for a minor deficiency will generally be resold as part of a "scratch and dent" package that cannot be sold into agency securitizations because of origination defects or other blemishes. These loans trade at a higher yield, both because they are defective and because they cannot benefit from the liquidity in the agency market. The originator must pay the GSEs $100 par value to buy back the loan, and they will generally resell the loan for $93 to $95 per $100 par, or a five-to-seven-point discount from par. But it takes time to put back many of the loans, and this is particularly true because of the explosion in mortgage originations in 2020 and 2021. As time has elapsed, the prices of those loans have fallen as interest rates have risen.

To demonstrate the impact of this repurchase policy, assume an originator made a loan in January 2022 at a 3.25 percent interest rate and that mortgage was placed into a 2.5 percent mortgage pool. The price of that pool in October 2023 is $78 per $100 par, reflecting higher interest rates since January 2022. The scratch-and-dent market would likely price the loan at $71 to $73 (the same five-to-seven-point discount, from the base price of $78), given that it is defective. Thus, the loss to the originator is $27 to $29 rather than $5 to $7 in a stable-interest-rate environment. Moreover, these putbacks are occurring as origination loan volumes are down and mortgage origination is not profitable, also because of high interest rates.

Repurchases after the Financial Crisis

When a loan has a manufacturing defect, the GSEs are allowed to demand that the originator repurchase the loan under specific circumstances. The GSEs did a large number of putbacks after the financial crisis. The originators believed that the poorer performance on some of the loans that were targeted for repurchase were not caused by minor defects during origination but rather by subsequent events, such as medical expenses, a divorce, or unemployment. To address this, the GSEs, between 2012 and 2014, gave lenders more certainty by doing the following:[3]

- providing relief from certain repurchase obligations for loans that had no more than two 30-day delinquencies and no 60-day delinquencies in the first 36 months (the first 12 months for Home Affordable Refinance Program loans) of the loan's existence

- clarifying the life-of-loan exclusions (i.e., exclusions that run for the life of the loans instead of being extinguished with the 36-month sunset), which include (1) misrepresentations, misstatements, and omissions; (2) data inaccuracies; (3) charter compliance issues; (4) first-lien enforceability or clear title matters; (5) legal compliance violations; or (6) unacceptable mortgage products; the FHFA clarified that there must be a pattern of violations
- providing earlier review of loans, through both random and targeted sampling
- developing a range of alternatives to repurchases. These remedies include pricing adjustments, in which the GSEs assess and the lender pays an additional guarantee fee or additional price-level adjustment; it also includes lenders providing recourse for some period of time or for the life of the loan, as well as indemnification, in which the lender compensates the GSEs if a loss is incurred (Freddie Mac's pilot, announced in mid -November, is designed to use these alternatives for performing loans, where there is no life-of-loan exclusion)

In addition, as the GSEs have incorporated state-of-the-art technology into their underwriting systems, some of the reps and warrants are removed at the point of origination. For example, reps and warrants on home value are removed for certain loans if the appraised value is close to the value produced by the GSEs' automated valuation model. Income reps and warrants are removed for loans with low loan-to-value (LTV) ratios.

Given the industry's concern over the recent repurchase requests and their implications for borrowers' access to credit, this brief draws trends and characteristics from an analysis of GSE data. We used Fannie Mae and Freddie Mac loan-level performance data for this analysis, as they have a field showing repurchases. One constraint in our data is that if a repurchase request has been issued but the originator is contesting it or requesting further information, it will not show up in our data. Only completed repurchases are included.

Recent Repurchase Activity

We used Freddie Mac and Fannie Mae loan-level data to analyze repurchase activities. Both databases cover loans originated between January 1, 1999, and March 31, 2023. The credit performance information is through June 30, 2023. Table 1 shows the number of completed repurchases for each group of origination years. For example, for loans originated from 2005 to 2008, Freddie Mac forced originators to repurchase 50,562 loans. This number does not include global settlements (i.e., one-time payments from the originators to the GSEs to compensate for originations of defective loans), as these do not cover specific loans but rather all loans in a given origination period. For origination years 2011–17, Freddie Mac put back 10,160 loans, and the number is 24,606 for the 2018 and later vintages. Most of these recent repurchases were done in 2021 and 2022 on 2020 and 2021 originations. We have repurchase data only through the second quarter of 2023.

TABLE 1

Repurchase Activities, by Origination Year

	Freddie Mac		Fannie Mae	
Origination year	Count	Average months from origination to repurchase	Count	Average months from origination to repurchase
2004 and before	25,715	39	19,333	53
2005–08	50,562	46	29,521	52
2009–10	5,267	29	3,868	30
2011–17	10,160	19	10,034	15
2018–Q1 2023	24,606	11	16,085	13
All	116,310	34	78,841	39

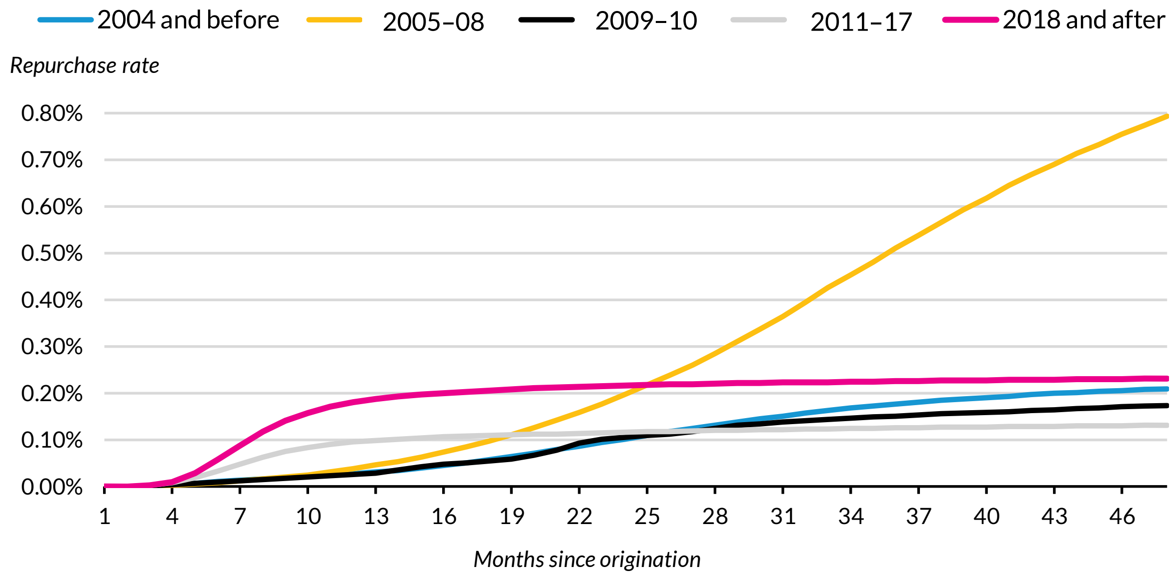
Source: Urban Institute calculations using Freddie Mac and Fannie Mae loan-level data.
Notes: Q = quarter. Repurchase activity is tracked through Q2 2023.

It is important to scale these numbers to both origination volumes and loan age. The years 2020 and 2021 were the two biggest years for mortgage origination in market history, so the volume should have been higher. Table 1 shows the earlier loan reviews have substantially reduced the time from sale to the GSEs to repurchase.

Figure 1 for Freddie Mac and figure 2 for Fannie Mae show the repurchase activity as a function of loan age (expressed as a share of total originations) in the first 48 months across the same set of origination years as in table 1. The GSEs have become more aggressive, forcing more repurchases earlier in the life of the loan than was the case in earlier vintages. In the first few years of the mortgages' life, there have been more repurchases for the 2018–22 origination years than there were in the 2005–08 origination years.[4]

FIGURE 1

Freddie Mac Repurchase Figures

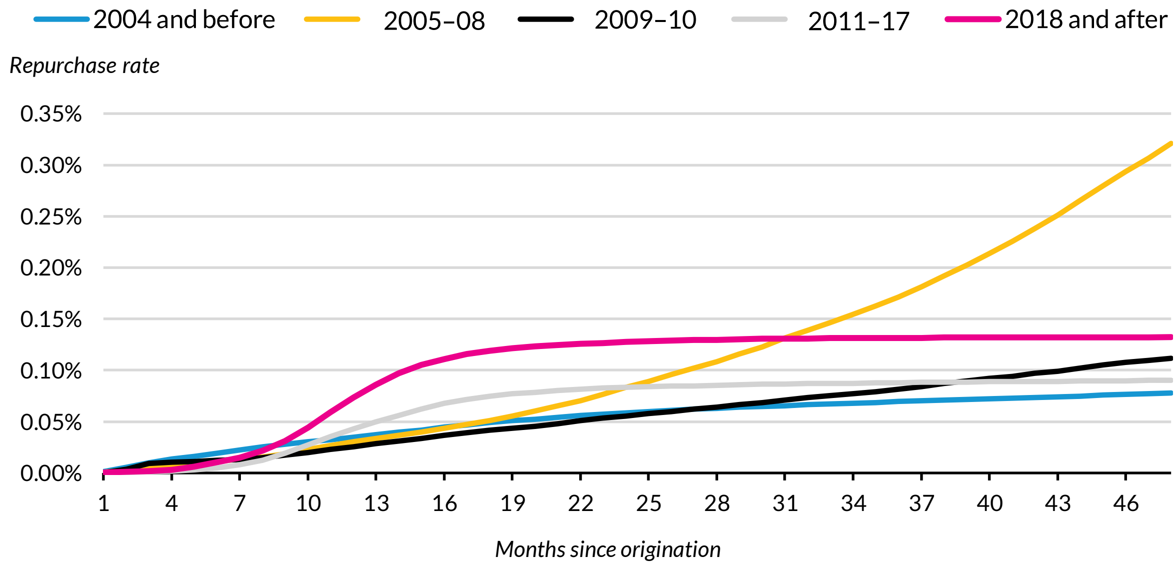


URBAN INSTITUTE

Source: Urban Institute calculations using Freddie Mac loan-level data.
Notes: Q = quarter. Origination data through Q1 2023 are included. Performance is tracked through Q2 2023.

FIGURE 2

Fannie Mae Repurchase Figures



URBAN INSTITUTE

Source: Urban Institute calculations using Fannie Mae loan-level data.
Notes: Q = quarter. Origination data through Q1 2023 are included. Performance is tracked through Q2 2023.

What Type of Entities Have the Highest Putback Rates?

Reports suggest that loan repurchase has disproportionately affected nonbanks,[5] but our evidence indicates this is not the case. In the GSE loan-level databases we used for this analysis, the GSEs show the issuer's name if the entity has more than a 1 percent market share; all issuers with a 1 percent market share or less are lumped together. We classify all issuers where the name is given as a large bank issuer or a large nonbank issuer; the nonbank issuer category includes both independent mortgage banks and potentially credit unions, if they are large enough. Thus, we divide the universe of issuers into three categories: large bank issuers, large nonbank issuers, and smaller issuers. Table 2 shows that Freddie Mac is more apt to require the repurchase of loans from smaller issuers. That is, for 2018–23 originations, the repurchase rate is 0.24 percent overall, 0.21 percent for large bank issuers, 0.16 percent for large nonbank issuers, and 0.35 percent for smaller issuers. The Fannie Mae repurchase rates are lower for all issuers than the Freddie Mac repurchase rates. And repurchase incidence of the entities is different: the smaller issuers have a repurchase rate between that of the large banks and the large nonbanks.

TABLE 2A

Freddie Mac Repurchases, by Institution Type

	All Loans		Large Banks		Large Nonbanks		Smaller Institutions	
Vintage year	Orig. count	Repur. rate	Share of orig. count	Repur. rate	Share of orig. count	Repur. rate	Share of orig. count	Repur. rate
2018	1,088,578	0.26%	29%	0.16%	37%	0.24%	34%	0.36%
2019	1,482,570	0.26%	31%	0.21%	36%	0.19%	33%	0.37%
2020	2,941,791	0.22%	19%	0.31%	42%	0.12%	39%	0.28%
2021	3,129,268	0.23%	18%	0.16%	48%	0.16%	34%	0.37%
2022	1,369,891	0.31%	19%	0.21%	50%	0.22%	32%	0.52%
2023	172,012	0.06%	14%	0.04%	54%	0.03%	33%	0.12%
All	10,184,110	0.24%	21%	0.21%	44%	0.16%	35%	0.35%

TABLE 2B

Fannie Mae Repurchases, by Institution Type

	All Loans		Large Banks		Large Nonbanks		Smaller Institutions	
Vintage year	Orig. count	Repur. rate	Share of orig. count	Repur. rate	Share of orig. count	Repur. rate	Share of orig. count	Repur. Rate
2018	1,525,097	0.11%	27%	0.10%	32%	0.10%	41%	0.14%
2019	1,841,854	0.15%	22%	0.14%	38%	0.13%	40%	0.19%
2020	3,758,270	0.13%	12%	0.23%	36%	0.09%	52%	0.13%
2021	3,388,315	0.14%	11%	0.16%	44%	0.13%	45%	0.15%
2022	1,530,958	0.04%	12%	0.07%	43%	0.03%	45%	0.04%
2023	125,535	0.00%	7%	0.00%	48%	0.00%	45%	0.00%
All	12,170,029	0.12%	15%	0.15%	39%	0.10%	46%	0.13%

Source: Urban Institute calculations using Freddie Mac and Fannie Mae loan-level data.

Note: orig. = origination; Q = quarter; repur. = repurchase. 2023 includes origination data only through Q1. Performance data are through Q2 2023.

Are Loans with Forbearance More Likely to Be Put Back?

One of the ambiguous aspects of the GSEs' reps-and-warrants framework is how forbearance is handled. Does a loan that has elected forbearance and has missed payments count as a delinquency for the purpose of the 36-month sunset? Published mortgage delinquency numbers would count these loans as delinquent, but credit bureaus would ignore it for the purposes of calculating the borrower's credit score.

We find that loans for which the borrower has elected forbearance are more likely to be put back than loans for which the borrower did not elect forbearance (table 3). Freddie Mac loans in forbearance had a repurchase rate of 1.21 percent, versus 0.21 percent for loans that were never in forbearance. Not only did the loans in forbearance experience a higher repurchase rate, but the time from original sale to the GSEs was much longer. For example, for 2019 originations, the time before repurchase for loans that had experienced forbearance was 29 months, versus 9 months for those that had not experienced forbearance. This pattern holds across every origination year. Fannie Mae loans exhibit the same pattern, with repurchase rates on forborne loans five times as high as rates for loans that had never experienced forbearance, and a longer time from sale to Fannie Mae to repurchase. This was particularly true for the 2018 and 2019 vintages; the differences in the later vintages were small.

The recent GSE actions clarify that pandemic forbearance will not count against loans' payment history for the purpose of the 36-month sunset. Although this is helpful, it applies only to preexisting loans. The GSEs did not clarify how loans originated under the new postpandemic policies, now in effect, will be treated. That is, the new postpandemic policies, which allow a borrower to ask for a 6-month forbearance at any time, with the repayment of forbearance to follow the pandemic waterfall, became optional on July 1, 2023, and mandatory on October 1, 2023.[6]

TABLE 3A

Freddie Mac Repurchases, by Whether the Borrower Selected Forbearance

	All		No Forbearance		Forbearance	
Vintage year	Repurchase rate	Average months	Repurchase rate	Average months	Repurchase rate	Average months
2018	0.26%	18	0.21%	9	0.87%	45
2019	0.26%	14	0.20%	9	0.96%	29
2020	0.22%	10	0.18%	9	2.14%	14
2021	0.23%	9	0.22%	8	1.31%	17
2022	0.31%	7	0.31%	7	0.88%	11
2023	0.06%	3	0.06%	3	0.00%	N/A
All	0.24%	11	0.21%	8	1.21%	25

TABLE 3B

Fannie Mae Repurchases, by Whether the Borrower Selected Forbearance

	All		No Forbearance		Forbearance	
Vintage year	Repurchase rate	Average months	Repurchase rate	Average months	Repurchase rate	Average months
2018	0.12%	16	0.11%	14	0.15%	30
2019	0.15%	14	0.11%	13	0.57%	17
2020	0.13%	12	0.10%	12	1.19%	11
2021	0.15%	12	0.15%	12	0.72%	13
2022	0.09%	9	0.09%	9	0.50%	10
2023	0.00%	N/A	0.00%	N/A	0.00%	N/A
All	0.13%	13	0.12%	12	0.56%	15

Source: Urban Institute calculations using Freddie Mac and Fannie Mae loan-level data.

Note: N/A = not applicable.

Repurchased Loans Have Weaker Borrower Characteristics

Loans that are repurchased generally have weaker credit characteristics than loans that are not repurchased (table 4). Using Freddie Mac loans as an example, the average LTV ratio among loans that are repurchased is 78 percent, and the average for those that are not repurchased is 75 percent. The FICO score is lower on loans that are repurchased (730) than on those that are not (751). The average debt-to-income (DTI) ratio is 39 percent on repurchased loans and is 35 percent on loans that were not repurchased. Interest rates are higher on repurchased loans (3.84 percent) than on loans that were not repurchased (3.66 percent), a function of their weaker credit characteristics. Fannie Mae loans show the same pattern.

TABLE 4

Credit Characteristics for Loans That Were Repurchased versus Loans That Were Not Repurchased

Credit characteristic	GSE	Loans that were not repurchased	Loans that were repurchased	All loans
LTV ratio	Freddie Mac	75%	78%	75%
	Fannie Mae	74%	77%	74%
FICO score	Freddie Mac	751	730	751
	Fannie Mae	755	736	755
DTI ratio	Freddie Mac	35%	39%	35%
	Fannie Mae	35%	40%	35%
Interest rate	Freddie Mac	3.66%	3.84%	3.66%
	Fannie Mae	3.75%	3.78%	3.75%

Source: Urban Institute calculations using Freddie Mac and Fannie Mae loan-level data.

Note: DTI = debt-to-income; GSE = government-sponsored enterprise; LTV = loan-to-value.

Loans that have been repurchased are more apt to be purchase loans, more apt to be first-time homebuyer loans, and much more apt to be loans with a single borrower than loans with two borrowers. For Freddie Mac loans, for example, 57.1 percent of repurchased loans were purchase loans (as opposed to refinance loans) versus 50.2 percent of loans that were not repurchased. Twenty-four percent of repurchased loans were for first-time homebuyers versus 21 percent of those that were not repurchased. Most interesting, 64.4 percent of the repurchases were loans in which there was only one borrower, versus 54.4 percent for loans that were not repurchased. These results hold for both Freddie Mac and Fannie Mae in every origination year.

TABLE 5A

Purchase, First-Time-Homebuyer, and Single-Borrower Shares of Loans That Were Repurchased versus Loans That Were Not Repurchased

Freddie Mac

	Share of Purchase-Only Loans			Share of Single-Borrower Loans			Share of First-Time-Homebuyer Loans		
Vintage year	**Not repur.**	**Repur.**	**All**	**Not repur.**	**Repur.**	**All**	**Not repur.**	**Repur.**	**All**
2018	73.6%	68.9%	73.6%	54.7%	67.1%	54.7%	30.4%	35.8%	30.5%
2019	60.3%	64.1%	60.3%	54.7%	66.7%	54.7%	24.8%	31.1%	24.8%
2020	35.8%	45.8%	35.9%	52.4%	60.2%	52.3%	14.7%	17.8%	14.8%
2021	41.4%	51.3%	41.4%	55.0%	65.4%	55.0%	17.1%	19.5%	17.1%
2022	67.5%	69.3%	67.5%	56.7%	65.3%	56.7%	29.6%	27.6%	29.6%
2023	84.4%	80.4%	84.4%	56.9%	55.9%	56.9%	40.2%	35.3%	40.2%
All	50.2%	57.1%	50.2%	54.4%	64.4%	54.4%	21.0%	24.2%	21.1%

TABLE 5B

Purchase, First-Time-Homebuyer, and Single-Borrower Shares of Loans That Were Repurchased versus Loans That Were Not Repurchased

Fannie Mae

	Share of Purchase-Only Loans			Share of Single-Borrower Loans			Share of First-Time-Homebuyer Loans		
Vintage year	**Not repur.**	**Repur.**	**All**	**Not repur.**	**Repur.**	**All**	**Not repur.**	**Repur.**	**All**
2018	71.1%	67.6%	71.1%	55.7%	67.3%	55.7%	32.2%	34.6%	32.2%
2019	56.6%	60.8%	56.6%	54.7%	66.9%	54.7%	25.5%	30.0%	25.5%
2020	37.1%	43.6%	37.1%	53.7%	64.5%	53.7%	16.9%	22.1%	17.0%
2021	40.6%	49.6%	40.6%	56.1%	64.6%	56.2%	20.0%	23.7%	20.0%
2022	66.9%	54.9%	66.9%	56.6%	70.2%	56.6%	32.1%	26.1%	32.1%
2023	81.6%	N/A	81.6%	55.0%	N/A	55.1%	38.7%	N/A	38.7%
All	49.5%	52.2%	49.5%	55.2%	65.8%	55.2%	23.1%	25.7%	23.2%

Source: Urban Institute calculations using Freddie Mac and Fannie Mae loan-level data.
Note: N/A = not applicable; repur. = repurchased.

We also observe that repurchase loans have a higher probability of ever having been 90 or more days delinquent than loans that were not repurchased. For example, among Freddie Mac loans, 15 percent of repurchase loans were ever 90 or more days delinquent, while only 2 percent of loans that were not repurchased were ever 90 or more days delinquent. For Fannie Mae loans, those shares were 13 percent and 2 percent.

But these numbers also show that most of the loans on which repurchases were required were in fact performing loans. Eighty-five percent of total repurchase loans were performing loans for Freddie Mac, and 87 percent of total repurchase loans were performing loans for Fannie Mae.

Implications and Policy Recommendations

Lenders need to be responsible for serious loan defects that reflect carelessness or fraud in underwriting. Lax and fraudulently underwritten loans fueled the foreclosure crisis and need to be discouraged. That said, credit quality is better today than it was before the financial crisis. The Urban Institute's Housing Credit Availability Index shows that the ex-ante probability of default for loans originated in 2007 was 17 percent. Default probability was 10 to 12 percent from 2001 to 2003, a period of reasonable credit standards, and is it is now under 5 percent. Although the FHFA is encouraging the GSEs to support more first-time borrowers and borrowers of color, the GSEs' repurchase policies could be having the opposite effect on lending.

Although the repurchase share is small, repurchases have an outsize impact on the mortgage market by affecting lender behavior, and that effect is magnified as interest rates rise, resulting in higher repurchase losses. In particular, when originators are hit with repurchase requests, they tend to be more reluctant to make mortgages to borrowers with characteristics similar to the mortgages they are forced to repurchase. We have seen the evidence that single-borrower loans are more apt to require repurchase, as are purchase loans and first-time homebuyer loans. Although we do not have information on race, ethnicity, and income, we do know that Black and Hispanic borrowers have lower credit scores, higher LTV ratios, and higher DTI ratios than white borrowers, and loans with these characteristics are more apt to be repurchased (Neal, Choi, and Walsh 2020). Similarly, first-time homebuyers also have lower credit scores, higher LTV ratios, and higher DTI ratios (Goodman et al. 2023). Indeed, in a high-interest-rate environment, the number of borrowers who qualify is small, and discouraging otherwise qualified applicants seems counterproductive. The clarification of when loans are subject to repurchase, when repurchase alternatives are available for both performing and nonperforming loans, and a transparent schedule of the fee structure for these alternatives is necessary to ensure that lenders continue to extend credit to the full extent of the GSE credit box.

Moreover, without an explicit clarification, it appears that loans with missed payments because the borrower has elected nonpandemic and non-disaster-related forbearance will be treated as delinquent and will not qualify for the 36-month sunset. This may make lenders less apt to offer forbearance assistance as early in the process as they can; they may wait until the borrower has already missed two payments, and thus the loan cannot qualify for the sunset. Delaying forbearance may result in an initial adverse impact to the homeowner's credit score.[7]

It is critical that lenders be given clear signals and directives. It serves no one when government policies work at cross purposes. There have been significant government and GSE efforts to try to close the racial homeownership gap and make homeowning more possible for lower-income families (Stegman and Ratcliffe 2023). These effects include pricing changes such as the removal of loan-level pricing adjustments for less affluent first-time homeowners, more emphasis on down payment assistance, and an emphasis on special purpose credit programs to close the racial homeownership gap. Questionable repurchase requests will result in a tightening of the credit box for many of the borrowers these programs are intended to help. The FHFA has taken some effective first steps to curb this,

followed by the announcement of a Freddie Mac pilot. We look forward to further actions in the next few months.

Notes

[1] See Federal Housing Finance Agency, "FHFA Announces Expanded Eligibility for 'Rep and Warrant' Relief Following COVID-19 Forbearance," news release, October 16, 2023, https://www.fhfa.gov/Media/PublicAffairs/Pages/FHFA-Announces-Expanded-Eligibility-for-Rep-and-Warrant-Relief-following-COVID-19-Forbearance.aspx?utm_medium=email&utm_source=govdelivery.

[2] "Pilot Transparency," Freddie Mac, accessed November 20, 2023, https://www.freddiemac.com/about/pilots.

[3] These efforts are summarized in Goodman, Parrott, and Zhu (2015).

[4] The repurchase calculations are slightly different between Freddie Mac and Fannie Mae. Freddie Mac includes putbacks after liquidation ("make-whole provisions"), but Fannie Mae does not. This will give Freddie Mac's numbers a small upward bias relative to Fannie Mae's numbers. Given the low level of liquidations, we do not think this significantly distorts the analysis.

[5] Bill Conroy, "Agency Loan–Repurchase Strategy Sparks Pushback," HousingWire, May 9, 2023, https://www.housingwire.com/articles/agency-loan-repurchase-strategy-sparks-pushback/.

[6] This waterfall requires the borrower to make payments in a lump sum or over a short period if they can afford to do so. If the borrower cannot afford to increase their payments, they will receive a payment deferral, with the payments added to the end of the life of the mortgage. If they cannot make their old payments, they will be considered for a mortgage modification.

[7] Michael Neal and Caitlin Young, "Delinquent Homeowners in Neighborhoods of Color Are Less Likely to Be Protected by Forbearance," *Urban Wire* (blog), Urban Institute, December 2, 2020, https://www.urban.org/urban-wire/delinquent-homeowners-neighborhoods-color-are-less-likely-be-protected-forbearance.

References

Goodman, Laurie, Jim Parrott, and Jun Zhu. 2015. "The Impact of Early Efforts to Clarify Mortgage Repurchases: Evidence from Freddie Mac and Fannie Mae's Newest Data." Washington, DC: Urban Institute.

Goodman, Laurie, Janneke Ratcliffe, Michael Neal, Jung Hyun Choi, Linna Zhu, John Walsh, Daniel Pang, et al. 2023. *Housing Finance: At a Glance Monthly Chartbook, October 2023*. Washington, DC: Urban Institute.

Neal, Michael, Jung Hyun Choi, and John Walsh. 2020. *Before the Pandemic, Homeowners of Color Faced Structural Barriers to the Benefits of Homeownership*. Washington, DC: Urban Institute.

Stegman, Michael, and Janneke Ratcliffe. 2023. *The FHFA Is Right to Codify the GSEs' Equitable Housing Finance Plans*. Washington, DC: Urban Institute.

Thompson, Sandra L. 2023. Keynote Address before the Mortgage Bankers Association Annual Convention and Expo, Denver, CO, October 16.

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