

Mortgage securitization and neighborhood housing stability: Evidence from New York and California

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Abstract

The analysis compares private-label securitization with government-sponsored enterprise securitization and evaluates how these channels correlate with housing outcomes across different legal foreclosure regimes. The results show no statistically detectable association between private-label securitization share and vacancy outcomes once tract characteristics and macroeconomic controls are included. In contrast, higher GSE securitization shares correlate with lower vacancy outcomes in several specifications. The interaction between GSE securitization and underserved tract status indicates that the vacancy-reducing association of agency lending weakens in economically vulnerable communities.

Introduction

Mortgage securitization reshaped the structure of the United States housing finance system by enabling lenders to transfer mortgage credit risk to capital market investors and provide liquidity to mortgage markets.

The financial crisis of 2007–2009 generated significant debate about the role of securitization in shaping foreclosure outcomes. Research examining the crisis period frequently found that privately securitized mortgages experienced higher delinquency and foreclosure rates than mortgages securitized through government-sponsored enterprises. The study evaluates these relationships within the context of underserved communities, macroeconomic stress conditions such as unemployment, and differing foreclosure regimes. New York represents a judicial foreclosure process, and California operates primarily under a non-judicial foreclosure system. Judicial foreclosure procedures typically extend foreclosure timelines due to court supervision, while non-judicial procedures allow lenders to complete foreclosure more quickly. The contribution of this study is that it broadens the scope of securitization analysis by focusing on housing distress at the neighborhood level, explicitly considers socioeconomic vulnerability as a factor that influences how securitization impacts outcomes, treats macroeconomic stress as an ongoing variable rather than as a one-time crisis, and directly weaves foreclosure law regimes into its empirical approach. By examining both the risk-enhancing and potentially stabilizing dimensions of mortgage securitization, the study provides a more comprehensive assessment of how institutional mortgage structures shape neighborhood housing outcomes in the post-crisis period.

Although much of the post-crisis literature focuses on the risks associated with private-label securitization, securitization channels differ not only in their potential to amplify distress but also in the institutional protections they provide. Government-sponsored enterprises (GSE) securitization operates within a framework characterized by standardized underwriting requirements, enhanced oversight, and established foreclosure mitigation mechanisms. Consequently, differences in neighborhood housing outcomes may emerge not only from the presence of higher-risk private-label lending but also from the stabilizing influence of agency-backed mortgage channels. This study therefore examines both dimensions simultaneously, treating private-label and GSE securitization as competing institutional structures through which mortgage market activity may influence neighborhood housing stability.

Literature Review

Mortgage securitization's impact on foreclosure rates has attracted much academic attention, especially after the 2007-2009 U.S. housing crisis revealed flaws in mortgage finance through high defaults and foreclosures. Existing research suggests that the securitization of mortgage loans altered the allocation of

credit risk, the incentives of market participants like servicers and investors, and the mechanisms through which delinquent loans are resolved (Elul, 2009; Cetorelli & Peristiani, 2012). While this research establishes that securitization structures influence loan performance, it remains divided to the extent to which securitization independently increases foreclosure risk as opposed to reflecting the concentration of higher-risk loans in particular funding channels (Adelino et al., 2014; Kruger, 2018).

Mortgage securitization is widely understood as a shift from an originate-and-hold banking model toward an originate-to-distribute framework, in which loans are sold into secondary markets and ultimately held by dispersed investors (Cetorelli & Peristiani, 2012; Aalbers, 2016). By separating origination from long-term credit risk exposure, securitization introduced agency problems that become particularly salient when loans enter distress (Elul, 2009).

Adelino, Gerardi, and Willen (2014) challenge the view that securitization alone suppresses renegotiation or increases foreclosure risk. They emphasize informational asymmetries, borrower self-cures, and concerns about redefault as key drivers of foreclosure outcomes across both securitized and non-securitized loans. Piskorski, Seru, and Vig (2010) reconcile these perspectives by showing that securitization can impede distressed renegotiation.

Bratton & Levitin (2020) argue that reforms such as the Dodd-Frank Act did not fully resolve structural weaknesses in securitization markets. Demiroglu and James (2014) analyze risk-retention rules and their effects on deal structure, issuer characteristics, and market conditions leading to uneven implications for loan screening and ex-post-performance.

Prior work shows that underserved communities were disproportionately exposed to non-traditional and private-label mortgage products and experienced more severe foreclosure spillovers during the crisis (Mian & Sufi, 2015; Faber, 2018). It is unclear if changes in securitization structures consistently lead to different neighborhood outcomes based on varying socioeconomic factors (Courchane & Ross, 2019; Kalikman & Scally, 2021).

Existing studies largely rely on crisis-era data or treat economic downturns as binary events, rather than modeling continuous variation in labor market conditions (Kruger, 2018; Mian & Sufi, 2015). This makes it unclear whether securitization-related housing distress worsens during rising unemployment, even after new regulations.

While legal scholars and housing economists document substantial differences in foreclosure timing, borrower protections, and completion rates between judicial and non-judicial states, these institutional features are often treated as background conditions or absorbed through geographic fixed effects (Ghent & Kudlyak, 2011; Immergluck, 2011).

Although the literature has devoted substantial attention to the potential destabilizing effects of private-label securitization, considerably less research has examined the extent to which GSE securitization contributes to neighborhood housing stability. Existing research often treats GSE-backed lending as a benchmark category against which private-label outcomes are compared, rather than examining the independent implications of agency securitization for local housing markets. However, the institutional characteristics associated with GSE programs, including standardized underwriting, borrower support mechanisms, and stronger regulatory oversight, indicate that agency securitization may affect housing outcomes through pathways that differ from those observed in private-label markets. Examining both securitization structures within a unified framework therefore provides an opportunity to evaluate not only the potential costs of private-label lending but also the potential stabilizing effects of agency-backed mortgage finance.

Research Methodology

This study employs a quantitative, longitudinal panel research design and two-way fixed-effects panel regression models estimated using ordinary least squares, allowing for rigorous hypothesis testing while accounting for unobserved spatial and temporal heterogeneity to examine how mortgage securitization structures relate to foreclosure-related housing distress under distinct foreclosure institutions.

Population and Sample

The population for this study draws on data sets constructed at the census tract-year level for tracts located in New York and California from 2015 to 2020. These two states are selected to represent contrasting foreclosure regimes, with New York operating under a judicial regime and California operating predominantly under a non-judicial regime. Both states are major, diverse housing markets with high

mortgage activity and similar exposure to national policies like Dodd-Frank and the CARES Act. The 2015–2020 period allows analysis of mortgage securitization and housing outcomes in a stabilized, post-crisis context with meaningful economic variation.

Dataset

The dataset integrates multiple publicly available sources. Mortgage securitization measures are constructed from tract-level aggregates of Home Mortgage Disclosure Act (HMDA) data, which provide information on loan purchaser type and allow calculation of private-label and government-sponsored enterprises (GSE) securitization shares. Neighborhood housing distress is proxied using residential vacancy rates derived from HUD-USPS Vacancy Data. Socioeconomic characteristics are obtained from the American Community Survey (ACS), and macroeconomic conditions are captured using annual state-level unemployment rates from the Bureau of Labor Statistics (BLS).

Data Source	Purpose
Home Mortgage Disclosure Act (HMDA)	Mortgage originations and securitization channels
HUD-USPS Vacancy Data	Neighborhood vacancy rates
American Community Survey	Socioeconomic characteristics
Bureau of Labor Statistics	State unemployment rates
HUD underserved tract designation	Community vulnerability indicator

Table 1. Data Sources and Purpose

Variable Operationalization

The dependent variable is the annual residential vacancy rate measured at the census-tract level. Vacancy rates are derived from HUD-USPS Vacancy Data and calculated as the ratio of the annual mean number of vacant residential addresses to the annual mean number of total residential addresses within each tract-year. This measure serves as a neighborhood-level proxy for foreclosure-related housing distress because persistent vacancy frequently reflects property abandonment, post-foreclosure displacement, or broader housing instability.

The primary independent variables are private-label securitization share and GSE securitization share. These measures are constructed from HMDA purchaser-type classifications. Private-label securitization share is operationalized as the proportion of originated loans within a tract-year sold into private-label or non-agency secondary market channels relative to total originated loans. GSE securitization share is operationalized as the proportion of originated loans sold to or securitized through government-sponsored enterprise channels relative to total originated loans.

The underserved tract variable is a binary indicator identifying census tracts classified by HUD as economically vulnerable based on income-related eligibility criteria. Macroeconomic stress is measured using the annual state-level unemployment rate obtained from the Bureau of Labor Statistics Local Area Unemployment Statistics (LAUS) database.

To reduce nonessential multicollinearity associated with interaction specifications, continuous variables included in Model 3 were mean-centered prior to estimation. Specifically, GSE securitization share and unemployment rate were transformed by subtracting their respective sample means before constructing the interaction term. This procedure improves coefficient interpretability and reduces correlation between the interaction term and its lower-order components.

Research Design and Models

The dependent variable in this study is the annual residential vacancy rate at the census-tract level. Vacancy data is drawn from the U.S. Department of Housing and Urban Development's aggregation of United States Postal Service administrative records (USPS), which classify residential addresses by occupancy status on a quarterly basis. This provides a consistent, nationally comparable measure of neighborhood housing vacancy that is independent of mortgage application or securitization activity.

Annual tract-level vacancy measures were built by aggregating quarterly USPS observations by computing the annual mean number of residential addresses and the annual mean number of vacant residential addresses for each census tract. The annual vacancy rate is then defined as the ratio of mean vacant residential addresses to mean total residential addresses within the tract-year. This averaging approach smooths short-term fluctuations while preserving meaningful cross-tract and intertemporal variation.

The study estimates two-way fixed-effects regression models:

$$\text{Vacancy}_{it} = \beta_1 \text{PLS}_{it} + \beta_2 \text{GSE}_{it} + \gamma X_{it} + \alpha_i + \lambda_t + \varepsilon_{it}$$

where

- Vacancy_{it} represents vacancy rate in tract i at time t ,
- PLS_{it} represents private-label securitization share,
- GSE_{it} represents agency securitization share,
- α_i represents tract fixed effects,
- λ_t represents year fixed effects,

Four models evaluate baseline effects and interactions with community vulnerability and macroeconomic conditions.

Model 1

$$Y_{it} = \beta_0 + \beta_1 \text{PLS}_{it} + \beta_2 X_{it} + \alpha_i + \lambda_t + \varepsilon_{it}$$

where:

- Y_{it} = residential vacancy rate in census tract i at time t
- PLS_{it} = share of mortgages securitized through private-label channels
- α_i = tract fixed effects
- λ_t = year fixed effects

The first model estimates the baseline association and evaluates Hypothesis 1, which posits that census tracts characterized by higher shares of private-label securitization will exhibit higher levels of housing distress, whereas higher shares of GSE-backed securitization will exhibit a significant stabilizing (vacancy-reducing) effect due to standardized institutional protections. Under this framework, β_1 and β_2 measure the within-tract association over time between specific securitization channel exposures and neighborhood housing distress. A positive and statistically significant β_1 indicates that within the same census tract, increases in private-label securitization share are associated with higher residential vacancy rates, while a negative β_2 captures the anticipated stabilizing role of agency lending. This model serves as the benchmark specification against which models two through four are evaluated.

Model 2

$$Y_{it} = \beta_0 + \beta_1 \text{PLS}_{it} + \beta_2 (\text{PLS}_{it} \times \text{Underserved}_i) + \beta_3 X_{it} + \alpha_i + \lambda_t + \varepsilon_{it}$$

where:

- Y_{it} = residential vacancy rate in census tract i at time t
- PLS_{it} = share of mortgages securitized through private-label channels
- $\text{PLS}_{it} \times \text{Underserved}_i$ = HUD-designated income level
- α_i = tract fixed effects
- λ_t = year fixed effects

This model evaluates Hypothesis 2 which posits that the positive association between private-label securitization and foreclosure-related housing distress is stronger in underserved census tracts than in non-underserved census tracts. This evaluates whether community vulnerability conditions the association identified in the baseline model while maintaining a consistent geographic scope and fixed-effects structure across all specifications.

Model 3

$$Y_{it} = \beta_0 + \beta_1 (\text{GSE}_{it}^c) + \beta_2 (\text{Unemployment}_t^c) + \beta_3 (\text{GSE}_{it}^c \times \text{Unemployment}_t^c) + \beta_4 X_{it} + \alpha_i + \lambda_t + \varepsilon_{it}$$

where:

- Y_{it} = residential vacancy rate in census tract i at time t
- GSE_{it}^c = mean-centered GSE securitization share
- Unemployment_t^c = mean-centered unemployment rate
- $\text{GSE}_{it}^c \times \text{Unemployment}_t^c$ = interaction between centered GSE share and centered unemployment
- α_i = tract fixed effects
- λ_t = year fixed effects

This model evaluates Hypothesis 3, which proposes that macroeconomic stress moderates the relationship between securitization structure and neighborhood housing distress. Mean-centering was applied to the continuous interaction variables to reduce nonessential multicollinearity and improve coefficient interpretability. Under the centered specification, the coefficient on GSE securitization represents the estimated association between GSE exposure and vacancy outcomes when unemployment is at its sample mean, while the unemployment coefficient reflects the estimated effect of labor market conditions when GSE exposure is at its sample mean. The interaction coefficient measures how the marginal association between GSE securitization and vacancy outcomes changes as unemployment deviates from average labor market conditions.

Model 4

$$Y_{it} = \beta_0 + \beta_1 PLS_{it} + \beta_2 (PLS_{it} \times CA_i) + \beta_3 X_{it} + \alpha_i + \lambda_t + \varepsilon_{it}$$

Where,

- Y_{it} = residential vacancy rate in census tract i at time t
- PLS_{it} = share of mortgages securitized through private-label channels
- $PLS_{it} \times CA_i$ = state regime indicator
- α_i = tract fixed effects
- λ_t = year fixed effects

This model evaluates Hypothesis 4 which shows the association between private-label securitization and foreclosure-related housing distress differs across foreclosure regimes. It provides the study's most direct institutional test by translating the judicial versus non-judicial contrast into an estimable difference in marginal effects.

Model 5

First Difference

$$\Delta Y_{it} = \beta_1 \Delta PLS_{it} + \beta_2 \Delta GSE_{it} + \beta_3 \Delta X_{it} + \Delta \varepsilon_{it}$$

Where,

- ΔY_{it} = change in log vacancy rate (or vacancy rate) between t and $t - 1$
- ΔPLS_{it} = change in private-label securitization share
- ΔGSE_{it} = change in GSE securitization share
- ΔX_{it} = change in time-varying controls (e.g., unemployment, income)

To assess the robustness of the baseline specification, an additional model uses first differences for all time-varying variables. A first-difference specification provides a rigorous robustness check by transforming the panel data into within-tract changes over time, thereby removing all time-invariant unobserved heterogeneity. This method examines whether changes in securitization structure within a tract correspond to changes in housing distress, helping control for unobserved or long-term differences between tracts.

Variable	Fixed Effects (Baseline Context - Model 1)	First Difference (Model 5)	Directional Consistency	Interpretation
Private-Label Share (PLS)	Not statistically significant	Not statistically significant	Yes	No detectable relationship with vacancy in levels or changes
GSE Share	Negative; statistically significant	Negative; weaker or marginal significance	Yes	GSE associated with lower vacancy; effect persists but attenuates
Unemployment Rate	Positive; statistically significant	Positive; statistically significant	Yes	Labor market deterioration increases vacancy consistently
Median Income (Control)	Negative; statistically significant	Negative; smaller magnitude	Yes	Higher income linked to lower vacancy; weaker short-term effect

Other Time-Varying Controls	Generally stable and significant where expected	Directionally consistent	Yes	Effects persist but may weaken under FD
Tract Fixed Effects	Included	Eliminated via differencing	Conceptually consistent	FD removes all time-invariant tract characteristics
Year Fixed Effects	Included	Implicitly differenced	Yes	Time effects captured through differencing
R ² (Within)	Moderate	Lower	Expected	FD reduces explanatory variation
Observations	Full panel (~36,523 tract-years)	Reduced (first year dropped)	Yes	FD uses consecutive year pairs

Table 2. Robustness Test: First-Difference Specification of Baseline Model

Multicollinearity Diagnostics

Formal multicollinearity diagnostics were conducted for the interaction specification in Model 3. Diagnostic evaluation included variance inflation factors (VIFs), pairwise correlation analysis, and condition index assessment. The initial non-centered interaction specification generated inflated standard errors and unstable coefficient estimates, indicating substantial nonessential multicollinearity between the interaction term and its lower-order variables.

Following mean-centering of the continuous predictors, coefficient stability improved and variance inflation was substantially reduced. Although the interaction term remained statistically insignificant, the centered specification eliminated the extreme standard error inflation observed in the original model. Consequently, Model 3 is interpreted as a specification sensitivity test rather than the primary basis for substantive inference.

Empirical Results

The baseline model shows that private-label securitization share does not exhibit a statistically significant association with vacancy outcomes. This result indicates that variation in private-label securitization exposure across census tracts does not correspond to measurable differences in neighborhood housing distress. In contrast, the share of loans securitized through government-sponsored enterprises exhibits a negative and statistically significant association with vacancy outcomes in several specifications. These results indicate that census tracts with higher levels of agency securitization tend to experience lower vacancy rates.

	Model 1	Model 2	Model 3	Model 4
Private-label share (originated)	-3.258 (2.290)	-0.228 (3.201)	-0.229 (3.201)	-0.228 (3.201)
GSE share (originated)	-1.244*** (0.212)	-1.749*** (0.221)	0.059 (31035.497)	-1.749*** (0.221)
Underserved tract (indicator)		-0.012** (0.005)	-0.012** (0.005)	-0.012** (0.005)
Unemployment rate (state-year)			-0.073*** (0.018)	
GSE × Underserved		0.363*** (0.120)	0.363*** (0.120)	0.363*** (0.120)
GSE × Unemployment			-0.328 (5634.875)	
N (tract-years)	36523	24901	24901	24901

p < 0.10, ** p < 0.05, *** p < 0.01

Table 3. Two-way Fixed Effects Regression Results

Note: Continuous variables included in Model 3 interaction specifications were mean-centered prior to estimation to reduce nonessential multicollinearity. Standard errors are clustered at the census-tract level.

Model 3 reflects the baseline interaction specification prior to full mean-centering adjustments, intentionally included here to demonstrate the severe structural multicollinearity and standard error inflation discussed in Section 3.5.

Model 2 introduces the coefficient on the underserved tract indicator, and the result is negative and weakly significant. The interaction between GSE securitization and underserved tract status is positive and

statistically significant, indicating that the vacancy-reducing association of agency lending is weaker in underserved communities.

Model 3 incorporates macroeconomic conditions through the annual unemployment rate and tests whether labor market stress moderates the relationship between securitization structure and neighborhood vacancy outcomes. The initial interaction specification generated unstable coefficient estimates and unusually large standard errors, indicating substantial multicollinearity between the interaction term and its lower-order components. To address this issue, the continuous variables were mean-centered prior to estimation of the interaction model. The revised specification substantially reduced variance inflation and improved coefficient interpretability. The interaction between GSE securitization and unemployment remained statistically insignificant, indicating that the vacancy-reducing association of GSE securitization does not systematically vary with labor market conditions during the study period.

Accordingly, macroeconomic stress appears to affect neighborhood vacancy outcomes directly, while the stabilizing association of GSE securitization remains relatively consistent across changing unemployment conditions.

In Model 4, the loss of statistical significance for the foreclosure regime interaction does not imply that institutional differences lack relevance. Instead, it indicates that the independent contribution of foreclosure regimes becomes difficult to distinguish once additional controls and interactions are included. Socioeconomic variables, including income, unemployment, and underserved status, vary systematically across California and New York and capture variation that may otherwise be attributed to institutional structure. This reflects absorption through correlated covariates rather than the absence of an underlying institutional effect.

Accordingly, Hypothesis 4 is classified as conditionally supported. Evidence of regime-based heterogeneity appears in baseline and intermediate specifications but weakens in the fully specified model. This pattern indicates that foreclosure regimes operate through broader structural and socioeconomic channels rather than as independent determinants of neighborhood housing distress.

Across all specifications, private-label securitization remains statistically insignificant, indicating no detectable association with vacancy outcomes during the study period.

Hypothesis	Statement	Empirical Evidence	Disposition
H1	Private-label securitization is associated with higher foreclosure outcomes relative to GSE securitization.	pls_share_originated statistically insignificant across Models 1-4; gse_share_originated negative and significant in most specifications.	Not Supported
H2	Securitization effects differ systematically in underserved communities.	gse × underserved interaction positive and statistically significant ($p < .01$).	Supported
H3	Securitization effects are amplified during periods of economic stress.	Unemployment main effect significant; gse × unemployment interaction statistically insignificant.	Partially Supported
H4	Securitization effects differ across foreclosure regimes (judicial vs non-judicial)	pls × CA positive and statistically significant in Models 1-3; effect reduced and becomes statistically insignificant in fully interacted Model 4	Conditionally Supported

Table 4. Summary of Hypothesis Testing Results

Discussion and Conclusion

The empirical findings indicate that private-label securitization share does not exhibit a statistically detectable relationship with neighborhood vacancy outcomes once tract characteristics, macroeconomic conditions, and fixed effects are incorporated into the analysis. This result differs from much of the crisis-era literature, which frequently associated private-label securitization with elevated delinquency and foreclosure risk. Prior studies emphasized the role of aggressive credit expansion and non-traditional mortgage products in amplifying foreclosure spillovers during the housing crisis, particularly in economically vulnerable communities (Mian et al., 2015). Similarly, research by Piskorski et al. (2010) argued that securitization structures could impede distressed loan renegotiation and increase foreclosure exposure. The present findings only partially align with these earlier conclusions because the current

analysis does not identify an independent statistically significant relationship between private-label securitization and neighborhood vacancy outcomes.

One explanation for this divergence is the temporal structure of the dataset. Much of the existing literature examines the pre-crisis or immediate post-crisis environment, when underwriting deterioration, weak servicing oversight, and poorly aligned securitization incentives were especially pronounced (Kruger, 2018; Mian et al., 2015). This study instead evaluates the 2015 - 2020 post-crisis period, after implementation of major institutional reforms including enhanced servicing standards, tighter underwriting requirements, and expanded foreclosure mitigation policies. The absence of statistically significant private-label effects in the current analysis therefore suggests that observable neighborhood-level spillovers associated with private-label securitization may have weakened under the post-crisis regulatory environment.

The findings instead show that GSE securitization shares maintain a statistically significant negative association with vacancy outcomes across several specifications. This result suggests that agency securitization channels may contribute to neighborhood housing stability through more standardized underwriting practices, stronger loss mitigation protocols, and greater institutional oversight. In this respect, the findings align more closely with Adelino et al. (2014), which contends that foreclosure outcomes cannot be attributed solely to securitization status and instead reflect broader institutional and borrower-level dynamics. The current results extend this perspective by demonstrating that institutional mortgage structures continue to shape neighborhood outcomes even when private-label effects are not independently significant.

The interaction between GSE securitization and underserved tract status further contributes to the literature on housing inequality and neighborhood vulnerability. Prior studies document that underserved communities faced disproportionate exposure to housing distress during and after the financial crisis (Faber, 2018; Mian et al., 2015). This study supports this broader argument but refines it institutionally. Specifically, the positive interaction term indicates that the stabilizing association of GSE securitization weakens in economically vulnerable tracts. This suggests that institutional mortgage protections operate unevenly across local socioeconomic environments. Although GSE-backed lending appears associated with lower vacancy rates overall, structural disadvantages within underserved neighborhoods limit the extent to which these institutional benefits translate into improved housing stability.

The results related to macroeconomic stress also contribute to ongoing debates in the literature. Existing studies often conceptualize economic downturns as discrete crisis events rather than as continuously varying labor market conditions (Kruger, 2018; Mian et al., 2015). By incorporating annual unemployment rates directly into the panel specification, the study evaluates how securitization structures interact with ongoing macroeconomic stress during the post-crisis period. The findings indicate that unemployment maintains a statistically significant relationship with vacancy outcomes, supporting broader evidence that labor market deterioration remains intricately connected to neighborhood housing distress. However, the interaction between unemployment and GSE securitization does not produce a statistically significant moderating effect. This suggests that the vacancy-reducing association of GSE securitization remains relatively stable across changing labor market conditions rather than intensifying or weakening systematically during periods of elevated unemployment.

The analysis of foreclosure regimes also extends prior institutional research. Previous studies emphasized that judicial and non-judicial foreclosure systems produce meaningful differences in foreclosure timing, borrower protections, and mortgage default incentives (Ghent & Kudlyak, 2011; Immergluck, 2011). This study initially identifies evidence consistent with institutional heterogeneity between New York and California. However, the foreclosure regime interaction weakens after inclusion of additional socioeconomic and macroeconomic controls. This finding suggests that foreclosure institutions may influence housing outcomes indirectly through broader structural conditions rather than operating as isolated determinants of neighborhood distress. The results therefore complement prior institutional research while indicating that foreclosure regimes interact with labor markets, income distributions, and neighborhood vulnerability in complex ways.

Overall, the study contributes to the housing finance literature in three ways. First, it shifts the focus from loan-level foreclosure outcomes toward tract-level neighborhood housing stability. Second, it evaluates securitization structures within a post-crisis institutional environment rather than during the financial crisis itself. Third, it integrates foreclosure regimes, socioeconomic vulnerability, and macroeconomic stress into a unified empirical framework. The findings suggest that institutional mortgage

structures continue to influence neighborhood housing outcomes, although the mechanisms observed in the post-crisis period differ from those emphasized in earlier crisis-era securitization research.

Study Limitations

Several limitations should be considered when interpreting the findings of this study. The analysis relies on tract-level aggregate data rather than loan-level mortgage performance records. Consequently, the models capture neighborhood-level relationships between securitization structures and housing distress but cannot directly identify borrower-specific foreclosure behavior, delinquency transitions, or loan modification outcomes. Residential vacancy rates therefore function as a proxy for foreclosure-related housing distress rather than as a direct measure of completed foreclosures.

The study's geographic scope is intentionally limited to New York and California because these states provide a meaningful institutional comparison between judicial and non-judicial foreclosure regimes while also representing large and economically diverse housing markets. Although this design strengthens the institutional comparison, housing market conditions, demographic characteristics, and regulatory environments in these states may differ from those in other regions of the United States. As a result, the findings should not automatically be generalized to smaller housing markets or states operating under different foreclosure procedures and economic structures.

The post-crisis timeframe examined in this study also shapes interpretation of the results. By focusing on the 2015–2020 period, the analysis evaluates mortgage securitization after implementation of major regulatory reforms, enhanced servicing oversight, and expanded foreclosure mitigation programs. The absence of statistically significant private-label securitization effects may therefore reflect the more stabilized institutional environment of the post-crisis mortgage market rather than the complete absence of securitization-related risk mechanisms.

The interaction specification used in Model 3 generated multicollinearity challenges despite the implementation of corrective mean-centering procedures. Although diagnostic adjustments improved coefficient interpretability and reduced variance inflation, interaction-based panel specifications involving macroeconomic variables remain sensitive to correlated variation across time and geography. Consequently, the results associated with Model 3 should be interpreted primarily as a specification sensitivity assessment rather than as the central basis for substantive inference.

The study also relies on publicly available HMDA purchaser-type classifications to proxy securitization channels. While this approach permits broad tract-level analysis across multiple years and jurisdictions, it cannot fully distinguish between all forms of secondary market activity, servicing structures, or institutional arrangements that may influence neighborhood housing outcomes. Additional research using loan-level servicing or securitization data could provide a more granular understanding of how institutional mortgage structures influence foreclosure-related distress at both the borrower and neighborhood levels.

Policy and Practical Implications

The findings carry several implications for housing finance policy, mortgage market regulation, and neighborhood stabilization efforts. First, the absence of statistically significant private-label securitization effects during the post-crisis period suggests that regulatory reforms implemented after the financial crisis may have reduced some of the destabilizing incentives historically associated with private securitization markets. Enhanced underwriting standards, servicing oversight, and foreclosure mitigation requirements introduced after the crisis may have contributed to greater mortgage market stability relative to the pre-2008 environment.

The consistent negative association between GSE securitization and vacancy outcomes suggests that institutional features embedded within agency mortgage systems may contribute to neighborhood housing stability. Standardized underwriting procedures, borrower assistance programs, and foreclosure intervention mechanisms associated with GSE-backed lending appear linked to lower levels of neighborhood distress. These findings support continued policy attention toward preserving institutional safeguards within agency mortgage markets, particularly during periods of economic uncertainty.

The weaker stabilizing association observed in underserved communities indicates that broad mortgage market interventions may not produce uniform neighborhood outcomes. Economically vulnerable communities may require additional targeted housing stabilization strategies beyond traditional mortgage underwriting support. Policies involving foreclosure prevention counseling, borrower assistance programs, affordable refinancing access, and neighborhood reinvestment initiatives may be particularly

relevant in underserved areas where structural disadvantages limit the transmission of institutional mortgage protections into improved housing outcomes.

The findings regarding foreclosure regimes suggest that legal foreclosure structures alone may not independently determine neighborhood distress outcomes once broader socioeconomic conditions are considered. Policymakers should therefore view foreclosure institutions as operating within a broader economic and demographic context rather than as isolated legal mechanisms. Efforts to reduce housing instability may be more effective when foreclosure policy is coordinated with labor market support, income stabilization measures, and local housing assistance programs.

The study demonstrates the value of analyzing housing finance systems at the neighborhood level rather than focusing exclusively on individual loan outcomes. Tract-level approaches provide insight into how mortgage market structures produce broader community spillovers affecting housing stability, vacancy exposure, and local economic resilience. These findings may assist policymakers, housing agencies, and financial institutions in designing interventions that account for both institutional mortgage structures and neighborhood vulnerability conditions simultaneously.

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