

The Effects of Local Demographic Characteristics and State-Level Legislation on Foreclosure Rates

By Ross Lawrence and Brent C. Smith

Problems in the housing sector have prompted research into the causes of default by borrowers. The terms of the loans that were made, the characteristics of borrowers, and local economic conditions, among other factors, all contributed significantly to differences in default rates. State-level legislation may also have played a role by making it more costly for lenders in some states to proceed to foreclose on defaulted mortgages.

Since late 2006, the United States has experienced a decline in the housing market, including a large increase in the number of foreclosures. Many of these homeowners were faced with negative equity positions, while others had taken out loans that they were no longer able to afford or refinance. Higher-risk borrowers with “subprime” mortgages, loosely defined as a loan made with a higher interest rate than a traditional loan because the borrower is expected to have a relatively higher chance of defaulting, were disproportionately affected.

Foreclosures may be both a signal and a cause of a weak economy, and concern about the effects of increasing foreclosure rates on both consumers and financial institutions has prompted research into the causes of the recent foreclosure wave. Many of those factors developed during 2003-2006, and include falling or stagnant home prices, rising interest rates, lax underwriting, predatory lending, fraud, lack of borrower due diligence, and underlying economic conditions in certain regions.

In a recent working paper from the Richmond Fed, one of the authors of this *Economic Brief*

(Smith) and Allen C. Goodman explore another potential factor in foreclosure rates: differences in state laws regulating predatory lending and foreclosure proceedings.¹ Noting that default rates vary greatly by state, Smith and Goodman hypothesize that these variations may be caused by variations in state laws, which change the costs of foreclosure to lenders. Previous research into the effects of legislation on default rates has attempted to determine the impact on the borrower’s decision to default,² while Smith and Goodman examine the effects of these laws on lenders’ underwriting standards and acceptance rates. In general, their data suggest that lenders have stricter borrowing requirements in states where it is more costly to foreclose, which leads to lower relative foreclosure rates.

Smith and Goodman examine two main types of state lending laws: those regulating “predatory lending” and those regulating the foreclosure process itself. Anti-predatory lending laws are intended to curb the incidence of dishonest or fraudulent lending. The term refers to loans with exceptionally high interest charges or unreasonable or deceptive terms, such as balloon payments or negative amortization. One of the first

such laws was the Federal Home Ownership and Equity Protection Act of 1994 (HOEPA), which restricted “high-cost” loans. States began enacting similar legislation in the late 1990s, although the strictness and enforcement of these laws varies greatly by state.

Supporters of anti-predatory lending statutes argue that the regulation helps the market function properly by assuaging consumer fears about dishonest lenders and by guaranteeing that creditors bear the cost of any negative externalities caused by predatory loans. Critics contend that the laws create incentives for credit-rationing and increase the price for loans to high-risk borrowers, further reducing the amount of credit available to borrowers who already had limited access to financing. Research on the issue is inconclusive; some studies have found that the number of subprime loan originations decreased in states with anti-predatory lending laws, while in other states the number of originations stayed constant or increased. Studies have also shown that while the number of subprime loans remains unchanged in states with regulation, the number of loan applications and denials decreases. Overall, more aggressive laws seem to reduce the number of highest-risk loans, although some of those loans may shift to non-bank institutions.

The second category of state laws includes those overseeing the foreclosure process. While every state has laws governing foreclosure proceedings, they vary in the amount of redress and protection they offer to both lenders and borrowers. In 21 states, lenders must go through the court system to foreclose on a property, which adds an average of five months to the process. Several studies indicate that the judicial requirement can significantly increase foreclosure costs for the lender, and that foreclosure laws can affect the costs to borrowers at the time of loan origination. Another variable influencing foreclosure costs is the type of redemption allowed, statutory or equitable. Statutory redemption lengthens the foreclosure process by providing borrowers with a period of time after a foreclosure sale when they may redeem the property by paying the principal balance, accrued interest, any penalties or fees, and court costs. Equitable redemption, a common-law concept,

is the right of a borrower to reclaim a property before foreclosure by paying all past due mortgage payments. Additionally, in some states lenders may seek deficiency judgments in an attempt to collect any balance that remains after a foreclosure sale.

Financial institutions use the underwriting process to minimize their exposure to future defaults—in other words, to reduce the anticipated costs arising from the nonpayment of a loan. This process is where Goodman and Smith believe that state laws governing default can affect the pricing and number of loans offered.

In states where lenders absorb fewer costs associated with default, they have an incentive to institute more liberal underwriting practices than generally would be desirable in higher-cost states. Because borrowers are unable to self-select to avoid disparities caused by location, borrowers in different states will face different loan requirements. Based on these conditions, Goodman and Smith hypothesize a) that laws regulating the time before lenders can execute foreclosures influence the rate of foreclosures across the market; and b) that the more options and lower costs for borrowers to default, the greater the cost to lenders. The increased incentive on lenders to tighten underwriting standards influences the rate of foreclosures across the market.

The authors’ hypotheses rest on several assumptions. First, Goodman and Smith assume that foreclosures are not costless to the lender, and that the costs can be estimated and built into the price of a mortgage. Because of differences in state laws, lenders face different foreclosure costs depending upon the state where the loan originates. Assuming lenders are rational and well-informed of the cost differentials, they will have a higher acceptance bar for borrowers in states with higher foreclosure rates relative to the price that can be legally charged for loans. This practice reduces the lender’s exposure in states with higher relative foreclosure costs. In theory, lenders will accept fewer high-risk applicants in high-cost states than in low-cost states. One should therefore expect to see fewer foreclosures in states with higher costs to the lender.

Goodman and Smith build two regression models using a database of individual loan performance data aggregated by zip code to determine the effect of location on foreclosure rates. The observations include both dynamic data, such as the number of loans in default or with prepayment penalties, and static data, such as the original purchase price of loans or the borrower's FICO score. The authors also include zip code level census data to control for the effects of neighborhood on the types of loans offered. (Households tend to sort themselves into neighborhoods with households of similar characteristics, and mortgage vendors may target different loan types to different neighborhoods, or require different underwriting standards because of the perceived credibility of the neighborhood. These tendencies could affect foreclosure rates and distort the effects of state legislation in the model.)

The authors also include data at both the state level and the Metropolitan Statistical Area (MSA) level, since some MSAs cross state borders, and some states contain multiple MSAs with very different housing market conditions (Buffalo and New York City, for example). To account for both the state- and MSA-level variables, the authors use hierarchical linear regression (HLR), a statistical technique that can be used with "nested," or multi-level, variables. The authors also use ordinary least squares (OLS) regression as a basis for comparison.

Mortgage defaults are a complex problem, and the regression equations reflect this with a number of independent variables related to home values, loan types, and borrower characteristics. Of course, the primary variables of interest in this case are laws regarding predatory lending and foreclosure proceedings. The authors use a dichotomous variable to differentiate states that do or do not have HOEPA-type laws, and they use data derived from Freddie Mac to construct variables regarding the cost to the lender and the total number of days from the borrower's default through the final disposition of the property. Although the relationship is not especially strong, there is a positive relationship between time and cost, particularly at the extremes of the foreclosure timeline. Variables for redemption (the right of a

borrower to reclaim the property) and confirmation (court review of the sale) are obtained from foreclosure sale Web sites. Both redemption and confirmation lengthen the foreclosure process and presumably increase the cost of foreclosure to the lender.

Finally, the equations include two different dependent variables for default outcomes: foreclosure and real estate owned (REO). A property becomes REO when the mortgage lender is not able to sell the home at a price sufficient to recover loss due to default at auction, and thus takes ownership itself. Because a foreclosed property does not necessarily proceed to REO, Goodman and Smith distinguish between these outcomes in their analysis. They also test the sum of foreclosure and REO to reflect the cross-sectional nature of the data.

The authors' supposition is that as it becomes more expensive to foreclose, lenders will impose more stringent underwriting standards, leading to lower default rates. Although it is difficult to tease out the effects of various policies, the results do suggest that there is a relationship between certain state laws and the occurrence of foreclosure.

In both the OLS and HLR models, the variables related to differences in state legislation are statistically significant. As constructed, the variables related to foreclosure proceedings increase the costs to the lender, and although the results are not entirely consistent, there is a strong association between higher costs and lower foreclosure rates. The results are more mixed for the impact of HOEPA-like laws. In the HLR model, stricter predatory-lending laws do seem to reduce the number of foreclosures, although the relationship does not hold in the OLS model. The variables related to borrower characteristics do suggest that stricter underwriting standards have an effect. In both models, for example, higher FICO scores are related to lower default rates.

While the authors' primary purpose is to examine the effects of state legislation, the data show interesting results in other areas. For example, increasing home values over the last several years are positively related to foreclosures, but negatively related to REO,

which indicates that different factors at the state level influence foreclosure and the transition of foreclosed properties to REO. In the OLS model, median household income is not a significant predictor of default, which suggests that foreclosures are not limited to lower-wealth neighborhoods. The percentage of a neighborhood that is African-American is related to higher foreclosure rates, which suggests that some demographic groups may have been disproportionately affected by certain types of mortgage products. As one might intuit, higher interest rates—a common feature of predatory loans—are positively related to higher defaults.

While Goodman and Smith's results suggest that differences in state laws can help explain differences in foreclosure rates, their research also highlights the complexity of the foreclosure problem and potential responses to it. For example, a 2008 paper by Amy Crews Cutts and William Merrill suggests that foreclosure timelines may alter borrowers' and lenders' incentives in surprising ways.³ Longer foreclosure processes, which Goodman and Smith suggest lower default rates, may actually create opportunities for borrowers to occupy homes free of charge, thereby increasing their likelihood of default. On the other hand, states with shorter timelines reduce the incentive for lenders to conduct workouts that enable borrowers to "cure" their loans and bring them current.

The social costs of foreclosure are many. In a 2005 paper, Dan Immergluck and Geoff Smith cite negative spillover effects including value loss, tax-base erosion, instability in retirement wealth for middle-income households, and ultimately the economic stability of local communities.⁴ There are tradeoffs with any regulation, however. Rules designed to protect consumers from abusive practices may reduce their access to credit, or make it more expensive for them to borrow; and lenders' efforts to protect themselves from high-cost foreclosures may lead them to sacrifice both efficiency and profit.

Market interventions often restrict participants' abilities to exercise certain choices deemed undesirable or harmful to the public at large. These legislative initiatives may also restructure the cost-benefit calculations of actors involved in the transactions, either intentionally or unintentionally. Goodman and Smith's research offers potential explanations of how legislation affects mortgage lenders and foreclosure rates, and offers a promising avenue for further research into a multifaceted problem.

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Endnotes

¹ Allen C. Goodman and Brent C. Smith, "Housing Default: Theory Works and So Does Policy," Federal Reserve Bank of Richmond Working Paper No. 10-10, May 2010.

² Andra C. Ghent and Marianna Kudlyak, "Recourse and Residential Mortgage Default: Theory and Evidence from U.S. States," Federal Reserve Bank of Richmond Working Paper No. 09-10R, July 2009 (revised June 2010).

³ Amy Crews Cutts and William A. Merrill, "Interventions in Mortgage Default: Policies and Practices to Prevent Home Loss and Lower Costs." Freddie Mac Working Paper No. 08-01, March 2008.

⁴ Dan Immergluck and Geoff Smith, "Measuring the Effect of Subprime Lending on Neighborhood Foreclosures: Evidence from Chicago." *Urban Affairs Review*, January 2005, vol. 40, no. 3, pp. 240-362.

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