Comment

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In their NBER Macroeconomics Annual paper, “Reducing Foreclosures: No Easy Answers,” Foote et al. consider why we have so many foreclosures. The paper takes on three popular claims about why the incidence of foreclosures is so high: (1) the massive growth in ex ante unaffordable mortgages (measured by the payment-to-income ratio) is a major contributor to subsequent defaults; (2) many foreclosures are due to “ruthless defaults” driven by owners who choose to walk away from their houses that are underwater; and (3) securitization led to the growth in foreclosures, and in particular, servicers of securitized loans foreclose more frequently than is optimal because of incomplete contracts (they term this the “renegotiation failure theory”).

The paper argues that all three claims, unaffordable mortgages, ruthless defaults, and renegotiations failures, are overblown. The authors suggest that instead negative labor market and house price shocks are the primary contributors to the foreclosure crisis.

The authors present a variety of evidence against these three popular explanations of foreclosures. They show that variability in the initial payment-to-income ratio is only weakly related to subsequent default as compared to variability in initial FICO (credit scores) and in ex post house price appreciation. These results are consistent with the “double trigger” model of default, in which owners walk away from mortgages only if their house is underwater and they face a negative credit shock at the same time. Next, the paper posits that a proxy for the number of owners who ruthlessly default is the number of owners who make payments for 6 months and then permanently stop making payments. Foote et al. then show that such a pattern of permanently stopping payments represents less than a majority of all defaults. The authors examine the renegotiation failure theory by considering differences in the extent of loan modification for privately securitized loans as compared
to portfolio lenders who do not suffer from such potential contractual failures. They present evidence that the likelihood of modification is nearly identical for mortgages made by these two groups of lenders, suggesting that contractual frictions are relatively unimportant in explaining the current foreclosure crisis. The paper argues that modifying mortgages to help delinquent borrowers is against the financial interests of lenders.

The authors deserve credit for pushing hard to understand why foreclosures have taken off, especially since policy makers are pursuing sometimes extensive and radical steps to stem foreclosures. However, in their effort to challenge conventional wisdom, I believe the authors have pushed their arguments too far. While conventional wisdom can be wrong, it often contains at least a grain of truth. In the case of foreclosures, conventional wisdom has more than a grain of truth. As well, I think the authors underplay the roles of poor underwriting and speculation about future price appreciation as contributors to the current housing crisis.

To get a sense of aggregate trends in housing and labor markets, figure 1 plots the unemployment rate against foreclosure starts reported by the Mortgage Bankers Association, while figure 2 plots the Case and Shiller 20 City House Price Index against foreclosure starts. These

Fig. 1. Foreclosure starts and unemployment rate. Sources: Foreclosure starts, Mortgage Bankers Association; unemployment rates, Bureau of Labor Statistics.
aggregate data do not appear to support the authors’ basic premise that adverse labor shocks combined with negative house price appreciation to lead to a spike in foreclosures.

In particular, foreclosure starts spiked well in advance of any problems in the labor markets. According to figure 1, foreclosure starts bottomed out in the second quarter of 2005 at 214,000 and started growing rapidly at the end of 2006. By the third quarter of 2007, foreclosure starts, at an annualized rate of 429,000, had doubled from their trough and were growing at an increasing rate. Yet the labor market was showing few signs of a crisis. The unemployment rate in the third quarter of 2007 was 4.7%, below the 5.1% rate in the second quarter of 2005 when foreclosure starts were at their low. When unemployment started spiking in the second half of 2008, foreclosure starts began to level off as lenders began to face political pressure to stop foreclosures.

While foreclosure starts show a strong correlation with house prices, it is really the change in house prices rather than the level of house prices that appears to matter most for foreclosures. This is consistent with the work in Foote et al. (2008). The large spike in foreclosures in 2006 and early 2007 occurred in an environment where U.S. house prices fell only 5% from their peak.

The fact that foreclosures grew so rapidly when house prices fell only moderately suggests that expectations of future appreciation might
have also played a role in the growth in foreclosures. Many borrowers took advantage of low down payment loans to purchase houses with little equity. For example, Mayer, Pence, and Sherlund (2009) show that the median combined loan-to-value ratio of subprime purchase loans in 2005 and 2006 was 100% (so-called “no money down” mortgages). When house prices stopped rising and depreciation became a lot more likely than appreciation, many of these purchasers (or speculators, as the case may be) might have exercised their default option and stopped making payments.

The first major result in the paper—that high initial payment-to-income ratios do not appreciably contribute to defaults—is the least controversial finding in the paper. This result is consistent with the authors’ “double trigger” model of defaults, but it also does not disprove my alternative explanation that speculation and poor underwriting were larger causes of the sharp rise in defaults. The paper presents many convincing regressions showing that payment-to-income ratios are only weakly related to ex post defaults. The results show that high loan-to-value ratios and local area unemployment are much stronger contributors to defaults.

Of course, it is also possible that mismeasurement of the payment-to-income ratio could bias the coefficient on this variable in the author’s regressions. Jiang, Nelson, and Vytlacil (2009) show that misreporting of income was quite common in mortgages originated over this time period, especially for low- or no-documentation loans originated by mortgage brokers. The authors are aware of this problem, and they show that their results hold for full documentation loans as well. However, between missing data (one-half of their data have a missing debt-to-income ratio) and the strong prevalence of low documentation mortgages, fully documented mortgages represent an appreciable minority of all mortgages. It is quite possible that the borrowers for whom ex ante indebtedness was the least good predictor of default were also the most likely borrowers to report their income accurately (as suggested by Jiang et al. [2009]). While the authors have done as much as they can with their data, it is hard to conclude that unaffordable loans had virtually no role in defaults and foreclosures.

The authors question why anyone might take out a loan that was unaffordable at the beginning, suggesting differences between how economists versus noneconomists define “affordable.” One answer might be that some borrowers (or their brokers) at this time knew that they would be unable to afford the mortgages over a longer-term horizon without appreciable cutbacks in their lifestyles but that the borrowers
expected to be able to quickly refinance or sell the property at a profit as house prices rose. When house prices stopped rising (and started falling), these borrowers decided not to continue making payments but to instead default. Mayer, Pence, and Sherlund (2009) present evidence consistent with this alternative hypothesis that the large initial increase in foreclosures was due to investors (so-called flippers) walking away from their mortgages once house prices stopped rising. In 2007, when house prices stopped appreciating, there was a large increase in the number of mortgages that defaulted within months of origination. While labor shocks are a possible explanation, as noted above, unemployment did not start to rise until the following year.

The second claim in the paper, that ruthless default was not an appreciable contributor to the crisis, seems to work against the role of speculation in foreclosures. The paper shows that a majority of borrowers do not directly default with a complete stoppage of payments, that instead they go back and forth between making and missing payments. While this is a very clever measure of ruthless default, it only provides indirect evidence, at best, on the role of ruthless defaults in foreclosures. If information about the state of housing markets is imperfect, a speculator could start and stop making payments based on differential inferences about the state of future house price appreciation at various points in time.

There are two other potential problems with interpreting this evidence. First, the authors’ definition of a direct default may be too narrow in that their definition includes only borrowers who have made at least three consecutive payments at the beginning of the mortgage. At the end of the boom, early payment defaults—in which the borrower missed one of his first three payments—became much more common. So the authors do not include early payment defaults as direct defaults, so their definition of direct defaults may understate the role of ruthless defaults.

Second, even with this narrower definition of direct defaults, more than 30% of all defaults from 2003 to 2008 are direct defaults, with the bulk of all direct defaults occurring in 2007 and 2008. This suggests that speculation over future house price appreciation might still have been quite common and an appreciable factor in the rise in mortgage defaults. In the boom states of Arizona, California, Florida, and Nevada, direct defaults grew from 15% of all defaults in 200 to 37% of defaults in 2007 and to more than 55% of all defaults in 2008. These percentages hardly seem to represent a small factor in the foreclosure wave.

The last part of the paper examines the role that loan servicing plays in the spike in foreclosures, taking as given the behavior of borrower. The authors claim that servicers are doing as good a job in preventing
foreclosures as portfolio lenders, which suggests that securitization does not serve as a barrier to addressing the current crisis. I believe this finding is tenuous at best. This claim is based on a very one-sided reading of surrounding academic literature and appears counter to both economic theory of incentives and data on the performance of servicers.²

The authors cite the Coase Theorem, suggesting that, if servicers were truly taking actions that were against the interest of investors, these investors would get together to remove the servicer. To support the Coase Theorem analogy, the paper creates a “straw man” estimate that investors might face losses of $180 billion due to too many foreclosures. Furthermore, they argue that, since property rights are well defined, aggrieved investors can buy each other out, making side payments to obtain the efficient outcome.

This argument is quite dubious on a number of dimensions. First, the estimate of the cost of foreclosures to investors (55% loss based on origination balance) is based on a crude calculation using data from an article coming out in a law journal. Economics research on the subject, including a well-done working paper by Campbell, Giglio, and Pathak (2009), shows that the costs of foreclosure are less than one-half the 55% estimate. Research by Freddie Mac economists finds even lower foreclosure losses (Crews Cutts and Merrill 2008).

As well, the Coase Theorem faces barriers, including costs of gathering interested parties together and the holdup problem. There are as many as 20 different tranches in each securitization, with many owners of securities in each tranche. These tranches have very different economic incentives. For example, modifying a mortgage by reducing the payments or writing down principal imposes an immediate loss on the tranche in the securitization that is immediately in the money. That tranche holder would prefer that the servicer pursue a foreclosure, thus guaranteeing a year or more of principal and interest payments because the servicer is required to advance payments to the trust until the loss is actually realized. However, a higher-priority tranche holder would prefer the immediate foreclosure, locking in a smaller loss instead of taking a risk that the future loss might be higher. This is a common problem in bankruptcy, where senior creditors prefer liquidation, while junior creditors prefer that the firm continue to operate. Neither security holder is interested in maximizing the value of the entire enterprise. Attempts by one group of creditors to buy out the other creditors typically fail in bankruptcy for the same reasons they do not work for securitizations. It is nearly impossible to gather all creditors together, and the holdup problems are severe.
The authors claim that the bankruptcy analogy does not hold because the servicer is charged with considering the whole securitization, not just the interests of any particular group of creditors. In making this argument, the paper almost completely ignores the very strong and well-known principal-agent conflicts that exist with securitization (Ashcraft and Schuermann 2008).

Servicers have strong financial incentives to choose foreclosure over modification (Mayer, Morrison, and Piskorski 2009). The typical pooling and servicing agreement (PSA) compensates servicers for costs associated with foreclosing, including additional fees on a cost-plus basis, but servicers receive no cost reimbursement whatsoever for loan modifications. Since as many as two-thirds of all loan modifications eventually fail and require foreclosure, servicers have strong economic incentives to avoid modification or to exert little effort on modifications they pursue. When servicers choose to modify loans, they have little incentive to investigate the problems that borrowers face and to carefully choose the type of modification that is likely to be most successful because they are not paid to do so. In circumstances where effort is costly to the agent and unobservable to the principal, the standard principal-agent model predicts that an agent will underprovide effort relative to an optimum. Thus the analogy of the servicer as bankruptcy judge is quite misleading. In fact, securitization serves more like paying a judge in bankruptcy court to choose one type of resolution (foreclosure) over another (modification). While some judges (servicers) might ignore personal payments that encourage one resolution over another, one suspects that most servicers are likely influenced by these strong economic incentives.

Agency conflicts may also explain why some investors might prefer that servicers not modify more mortgages when they are acting as a conflicted agent. When a homeowner requests a modification, a servicer must determine whether to grant this request. Servicers are not compensated for effort in determining which mortgages would resume payments if they were modified and which mortgages would make their payments if the modification were refused. Thus servicers will likely underprovide effort in determining which mortgages to modify. In the context of the model in the paper, servicers will often choose bad modifications (e.g., agreeing to modify all mortgages regardless of whether the modification would be truly marginal in the default decision of the borrower). Thus a conflicted servicer is likely to make many Type II errors, that is, modify loans that would otherwise not default. However, a portfolio lender who has the incentive to exert optimal effort to determine which modifications are truly marginal pursues higher-quality modifications.
Finally, agency conflicts present additional barriers to the successful application of the Coase Theorem. Investors would need to be able to get together to purchase all troubled mortgages out of the securitization and handle these troubled loans themselves. Yet, these investors are not skilled in handling troubled mortgages; nor do they have the expertise and information to properly supervise servicers’ actions.

The empirical evidence in the paper itself is quite weak as to how servicers of privately securitized loans perform relative to lenders managing their own portfolio loans. Most of the evidence in favor—and against—their hypothesis is considered much more carefully in other papers that are cited but not carefully discussed in this paper. This paper presents simple means and univariate Kaplan-Meier estimates of the hazard rate of modification for different types of mortgages, conditional on being 30 days delinquent. The Kaplan-Meier hazard functions do not control for many covariates that surely affect the decision of whether or not to modify a mortgage as well as the overall underwriting quality of the different types of mortgages. Nothing presented in the paper provides support for the strong statements made.

At the risk of wading into a more complicated debate that is beyond the scope of this discussion, I would like to make a few observations on the literature on whether servicers truly perform similarly to portfolio lenders in modifying mortgages and reducing foreclosures. These observations create quite a bit of doubt about the claims in this paper.

The paper’s definition of modification is limiting and does not include many ways that servicers might make adjustments to mortgages to avoid foreclosures. Servicers might allow short sales (the sale of a property for less than the mortgage amount), which would not count as a modification but is a way of reducing the cost of a foreclosure for the household. Servicers might also just delay foreclosure with the hope of renegotiating. An appreciable percentage of seriously delinquent mortgages resume payments without any discernable modification. Finally, as Piskorski et al. show, many portfolio lenders transfer particularly troubled mortgages to servicers not in the LPS database when attempting more substantial modifications, creating a potentially serious censoring problem. Thus, Foote et al.’s definition of modifications is substantially flawed.

The statistic that policy makers (and investors) care about is the likelihood of foreclosure, not the likelihood of modification. That is, we should measure outputs (foreclosures), not inputs (modifications). By this measure, just doing modifications is not as important as doing effective modifications. Piskorski et al. (2009) report two facts that together...
call into question Foote et al.’s claims. First, mortgages that are seriously delinquent are more likely to become current when they are owned by a portfolio lender than when they are managed by a third-party servicer. This is exactly what agency theory predicts; servicers might blindly modify mortgages rather than exert effort to figure out which modifications are likely to be successful. Second, conditional on serious delinquency, servicers foreclose at a much higher rate. These facts put together suggest that servicers really do a much poorer job of avoiding foreclosure than portfolio lenders.

Overall, the authors deserve credit for taking on an important policy question in this paper and putting together a provocative set of hypotheses and suggestive evidence. As is clear from this discussion, I believe that the claims in the paper are overstated. First, I believe the poor lending practices and speculation played a much larger role in the initial foreclosure wave than the “double trigger” model of falling house prices and negative labor shocks. Second, the claim that securitization itself is not to blame for the spike in foreclosures seems to be misleading. There is substantial evidence that agency theory in the form of conflicted servicers has led to many more foreclosures than would be the case if all mortgages had been managed by portfolio lenders who bear gains and losses from effective management of mortgage servicing.

Endnotes

1. Note that foreclosure starts are a lagging indicator of housing problems because a household would likely be at least from 120 to 180 days delinquent before a lender would begin foreclosure proceedings, which are costly.

2. See Mayer, Morrison, and Piskorski (2009) and Piskorski, Seru, and Vig (2009) for an overview of the arguments made in this section of the discussion.

3. The paper also confidently suggests that pooling and servicing agreements present little barrier to loan modifications. According to my read of the literature, there is, at a minimum, appreciable disagreement over this point in the legal community. Many law professors and securitization experts believe that the legal restrictions present appreciable barriers to modifications. See, e.g., Gelpern and Levitin (2009).

References


