Draft for Discussion: Not for Circulation

State Mortgage Foreclosure Policies and Counseling Interventions: Impacts on Borrower Behavior in Default

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Draft date: November 14, 2008

Abstract
With rising levels of home mortgage foreclosure filings, policymakers are increasingly exploring how public programs and processes can be designed to prevent families from losing their homes. This paper tests the extent to which consumers may benefit from three types of state foreclosure polices: (1) judicial foreclosure proceedings, (2) rights of redemption, and (3) statewide foreclosure prevention initiatives. This paper also tests how voluntary efforts of lenders to promote third party default counseling may also benefit consumers, as well as how these efforts may be more powerful in states with each of the three types of state policies tested. Using data on 32,000 borrowers in default from one national lender during the 15 month period of January 2007 through March 2008, this paper finds weak effects of state policies in general, with the effects mixed between benefiting (such as improvements in borrower-lender contact rates) and worsening loan outcomes (such as foreclosure filings). No state policy was associated with either an increase or a decrease in borrowers losing their homes to foreclosure. Lender voluntary offers of telephone-based default counseling are associated with about a 12% reduction in days delinquent. When offers of counseling are implemented in states with foreclosure prevention policies or programs, borrower-lender contact rates are about 12% higher and rates of foreclosure filings 30% lower than when implemented in states without such policies. The implications of these findings suggest state policy efforts aimed at preventing foreclosure may be enhanced by coordination with financial institutions and counseling providers.

Keywords
Mortgage Default; Foreclosure Counseling Evaluation; State Foreclosure laws

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First draft prepared for the November 6, 2008 APPAM Fall Research Conference. Second draft revised and prepared for the Federal Reserve Board Subprime Symposium December 4, 2008. This work was supported by the Homeownership Preservation Foundation. The views represented in this paper reside solely with the authors and do not represent the view of the Foundation or Abt Associates.

I. Background:

According to the National Delinquency Study released by the Mortgage Bankers Association in September 2008, 2.75 percent of all mortgage loans nationally were in some stage of the foreclosure process, an increase of more than 50 percent in just over a year. The recent rise in foreclosures has triggered considerable media attention and discussion of an array of policy approaches at the state and federal level to mitigate the harm of foreclosures for borrowers, neighborhoods and financial markets.

One of the most significant challenges for borrower-focused anti-foreclosure strategies is simply engaging borrowers to begin to identify potential solutions (Collins, 2007; Cutts and Merrill, 2008). As the volume of mortgage delinquencies has increased, state and local governments, as well as the federal government and financial industry, have attempted to promote policies which provide borrowers more time to explore alternatives to foreclosure which do not result in the loss of the home. Some policy advocates argue that states with longer foreclosure processes and enhanced borrower protections will result in fewer homes lost to foreclosure. Others argue that excessive protections for borrowers in foreclosure provide an incentive for homeowners to default and use the lengthily foreclosure period as an opportunity to occupy their home without making any payments. Meanwhile, increasing amounts of public and private resources have been aimed at efforts to offer phone-based mortgage default counseling services from third-party, non-profit counseling agencies. One goal of these efforts is to engage borrowers with their lender in an effort to work through their financial and budgeting problems and improve mortgage repayment patterns. However, there have been few studies of default counseling, consumer protection policies, or the impact of these laws in conjunction with the offer of counseling from lenders.

This paper tests the extent to which consumers may benefit from three types of state foreclosure polices: (1) judicial foreclosure proceedings, (2) rights of redemption, and (3) statewide foreclosure prevention initiatives. It also tests how voluntary efforts of lenders to promote third party default counseling may benefit consumers, as well as how these efforts may be more powerful in states with each of the three types of state policies tested. The study uses data from one national mortgage lending institution to track the loan performance of more than 32,000 delinquent borrowers. This total includes about 25,600 borrowers who were sent a letter offering counseling through the national 888-HOPE hotline as well as another group of 6,000 borrowers sent a similar letter offering assistance directly from the lender to help resolve the delinquency. Letters were not randomly assigned, as loans that were serviced in parts of the lending institution which maintained a higher-risk portfolio sent most of the counseling offer letters. The comparison group letters were mailed approximately the same week by a division of the firm managing a relatively lower risk pool of loans. All loans were at least 60 days delinquent as of January 1, 2007 and the same set of outcomes for all loans were tracked through March 31, 2008. The dataset contains loans from all 50 states and the District of Columbia, with a large proportion of loans in high foreclosure states such as Ohio, California, Michigan, Florida, Pennsylvania and Texas.

State Laws and Foreclosure Programs

When consumers take out a mortgage, they enter into a contract to make payments under specific terms. If a borrower fails to make timely payments, the contract is violated and the loan is in default. The borrower remains in default until the loan is brought current or an arrangement is made with the lender regarding payment and terms to resolve the delinquency. Depending on the state and the borrower's circumstances, when a loan is in default lenders may initiate the foreclosure process with the goal of using the home's value to pay off the remaining mortgage amount. The foreclosure process varies by state, but borrowers generally have at least 60 days from their first missed payment to take corrective action and to avoid the start of foreclosure proceedings. The foreclosure process concludes when the borrower pays off the loan, signs the home over to the lender, or when the property is sold at a foreclosure auction—with the buyer usually being the lender itself. Homes in foreclosure usually sell far below the value of the outstanding debt and, in cases where the lender becomes the owner of the foreclosed property, can be expensive to maintain as time passes while waiting for a buyer. As a result, lenders typically offer several options to borrowers prior to initiating the foreclosure process, including:

- Forbearance - a period of suspended or reduced payments within the existing mortgage contract;
- Repayment Plan – adding past due amounts to future monthly payments within the existing mortgage contract;
- Loan Modification - adding the past due amounts to the principal balance, often done in conjunction with extending the term of the loan and/or reducing the interest rate and requiring revision of the mortgage contract;
- Sales Assistance – referrals to real estate agents and help putting the home on the market with the understanding that the borrower will pay off the mortgage when the home sells;
- Pre-foreclosure sale (or 'short' sale) – allowing the sale of the property by the owner for less than is owed on the mortgage; and
- Deed-in-Lieu of Foreclosure- the property is returned to the investor and the borrower walks away without a foreclosure mark on their credit history.

Industry estimates suggest that of all the homes that have entered the foreclosure process, at least half of the borrowers avoided foreclosure because they were able to catch up on their loan or take advantage of a "workout" like those described above (Apgar and Duda, 2004). Such workouts are generally provided on a case by case basis. Lenders call or write borrowers and encourage them to speak with their loan servicer to explore various options.[1] Still, even with foreclosure alternatives and the lender's incentives to avoid foreclosure, many borrowers fail to take advantage of options presented by their lender. Borrowers, even those experiencing job loss or problems at home, also tend not to make use of counseling or other services that might help their situation. One reason for this lack of take-up of services is that the vast majority of borrowers do not know about the various options that could improve their situation (Collins, 2007; Cutts and Merrill, 2008).

[1] Making contact with borrowers in default is a significant challenge. One servicer interviewed sent defaulted borrowers a cell phone with a note that the borrower could use the phone at no charge (up to 500 minutes per month) as long as their first call was to their servicer to active the phone and discuss workout options. This is suggestive of the investment lenders will make to initiate contact.

There are several significant variations across states in the types of protections provided to borrowers facing a foreclosure. One important factor is whether foreclosure is carried out through a judicial or non-judicial process. A judicial foreclosure process requires lenders to process a foreclosure filing through the courts. Non-judicial foreclosures are generally simpler, quicker, and cost less to administer than judicial procedures. The additional time results in longer foreclosure timelines, offering borrowers more opportunities to seek a solution besides a foreclosure sale. The added time also makes foreclosure more costly for lenders and creates incentives to promote alternatives to foreclosure. Some states offer judicial or non-judicial procedures, although where non-judicial is an option it is usually more frequently used. In other states the judicial process is the only option and all foreclosures in the state must proceed through the courts.

Some states also allow homeowners to regain the property through a statutory right of redemption. Depending on the state, homeowners can redeem their property for the foreclosure sale price plus foreclosure expenses for up to a year after the foreclosure. In practice borrowers rarely exercise statutory rights of redemption, especially in weak home value markets. However, the existence of this right of redemption may chill demand for foreclosed properties by potential buyers and result in lenders of these properties having longer holding periods and/or being forced to accept lower sales prices. In short, the right of redemption adds to the costs of foreclosure for lenders and thus may provide a greater incentive to seek alternatives to foreclosure with delinquent homeowners and extend the default timeline to attempt to explore those options.

Since the 1980s various states have launched foreclosure initiatives with the goal of reducing the numbers of borrowers who lose their homes. These policies and programs include the offer and marketing of counseling services, efforts to promote voluntary arrangements with lenders to restructure loans or to offer lower payments to borrowers, and special public loans or designed to help borrowers bring their loan current. This study reviewed state foreclosure initiatives, judicial procedures and redemption periods from a variety of public sources, including RealtyTrac, a paper by Pence (2006), a report by the Pew Center for the States (2008) and the authors' review of legislative summaries, as summarized in Table 1. A total of 20 states require all mortgage foreclosures to use a judicial process, 22 states offer borrowers right of redemption periods, and 19 states have laws or programs specifically designed to address the issues that borrowers in foreclosure face (9 of which offer public loans/grants). Only two states had all three policies in place in 2007, Illinois and New Jersey.

II. Literature Review

The most relevant prior study is Ding, Quercia, and Ratcliffe (forthcoming) which examines the association between phone counseling and the likelihood of curing a delinquency among loans made to low-income borrowers. Specifically, the study examines outcomes among roughly 3,000 borrowers at least 60-days delinquent of which nearly 1,000 were notified by their lender that they would be contacted by a non-profit counseling agency by phone. The counseling agency then attempted to contact the borrowers to offer assistance in assessing their situation and offering advice about the best way to work with their lender to resolve the situation. The study finds that the receipt of counseling is associated with a higher likelihood of loans curing. The study employs a Heckman type two-stage model to account for self-selection by borrowers to receive counseling and finds that the association between counseling and cures remains.

Cutts and Merrill (2008) also present information on telephone-based counseling services offered to borrowers who were at least 60-days delinquent on their mortgages. But while the paper presents information on the borrower contact rate and the cure rates for contacted borrowers, it does not attempt to estimate the impact of counseling on cure rates.

Another relevant study is a 2006 paper by Pence examining the impact of the use of a judicial foreclosure process on average loan sizes. The study finds that mortgage loans in states with judicial court foreclosure processes are smaller than in states without such laws, suggesting these laws "impose costs on borrowers at the time of loan origination." Pence does not examine how these laws might impact borrower behavior in default, however. Similarly, Schill (1991) examines the association between redemption periods and anti-deficiency judgement provisions and variation in mortgage interest rates across states, finding that both of these provisions are associated with only modestly higher mortgage interest rates. However, Schill does not examine whether the likelihood of foreclosure varies with state laws offering borrower protections.

A common assumption in the loan default literature is that mortgage borrowers are fully informed of state laws which allow for extensive foreclosure periods. Armed with this knowledge, borrowers may choose to default in order to live rent free while the foreclosure process unfolds (see, for example, Cutts and Merrill, 2008). However, it is not clear how well-informed borrowers are about state foreclosure laws, and it may well be that other factors play much stronger roles in the decision to default, including the non-pecuniary costs of foreclosure. On the other hand, an argument in favor of laws providing for judicial foreclosures and redemption periods is that the longer period in default provides more time for finding alternative solutions to foreclosure.

While there have not been any other previous studies analyzing the impact of counseling to help resolve mortgage delinquency, there have been several studies examining the association between pre-purchase counseling and the subsequent incidence of mortgage delinquency. Hirad and Zorn (2001) analyzed the association between pre-purchase counseling and the incidence of 90-day delinquency among nearly 40,000 loans originated between 1993 and 1998 as part of a Freddie Mac affordable lending program for lower-income buyers. This study distinguished between counseling provided in one-on-one sessions, in group settings, in a home-study format, or by telephone. The study took advantage of the fact that a small share of borrowers were exempted from counseling to provide a point of comparison with borrowers who were counseled.[2] The study found that even after controlling for a variety of borrower, loan, and property characteristics, all types of counseling *except* telephonic counseling were associated with a reduced risk of delinquency.[3]

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[2] Borrowers were exempted from the counseling requirement if they either previously owned a home, had more than 5 percent equity in the home, or had cash reserves after closing sufficient to make at least 2 months of mortgage payments.

[3] The study also attempted to use a Heckman two-stage model to control for the possibility that borrowers exempted from counseling were systematically different from those who were required to obtain counseling, so that the findings regarding counseling's effectiveness may have been due to selection bias. Hirad and Zorn obtained weak results in the first stage of the model predicting whether borrowers were counseled and, if so, what type of counseling they received, which limited the conclusiveness of their findings. They concluded that while this analysis supported the effectiveness of classroom counseling in lower delinquency rates, the relatively poor success in predicting borrower assignment/selection prevented them from reliably demonstrating that individual's and home

Another study of the effectiveness of pre-purchase counseling on mortgage delinquency is Hartarska and Gonzalez-Vega 2005. This study analyzed the incidence of both default and prepayment among 1,300 borrowers assisted through a lending program for low- and moderate-income offered by a bank based in Columbus, Ohio from 1992 through 2000. This study did not find a statistically significant association between counseling and the likelihood of default, although the relatively small sample size of clients receiving counseling may have limited the ability of the study to detect statistically significant differences.

Another notable study of credit-related counseling is Elliehausen, Lundquist, and Staten (2007), which focused on clients of five consumer credit counseling organizations assisted in a six-month period in mid-1997. The clients all received individualized counseling, although roughly 80 percent met with counselors in person, while the remainder were counseled by telephone. A comparison group was constructed by identifying individuals residing in the same geographic area as those counseled and having credit scores in the same range as those receiving counseling. The study examined changes in credit scores, debt levels, and the incidence of delinquency in meeting credit payments over the three year period. Like Hirad and Zorn, these authors also used a Heckman two-stage model to account for potential selection bias in who gets counseled, relying on information from the 1997 credit profile to predict the receipt of counseling. The study concludes that counseling is associated with increases in credit scores, reduction in debt levels, and reduced incidence of missed payments.

The present study differs from the previous literature in several important respects. First, its primary focus is to examine how differences in state law and foreclosure prevention programs are related to the likelihood of a 60-day delinquent borrower avoiding foreclosure. Second, it examines how the offer of telephone counseling for delinquent mortgagors is related to the likelihood of positive outcomes. Third, it employs a quasi-experimental approach – propensity score matching – to more directly address concerns about selection bias in terms of which borrowers are required to obtain counseling based on their circumstances.

Compared to the Heckman two-stage model, using propensity score matching is more robust and requires fewer assumptions. In particular, it relaxes the linearity and normality assumptions required by the Heckman selectivity model. Propensity score matching constructs the counterfactuals using a semi-parametric approach. The method of using propensity scores as weights was first proposed by Robin and Rotnitzky (1995). In this paper, we used a variation of the method adopted by Orr, Lam and Bell (2007).

This paper explores the hypothesis that policies that increase the costs of foreclosure, allow for more time for the foreclosure process, or promote counseling as a mechanism to explore alternatives to foreclosure may each reduce the probability that foreclosures are started or completed, all else equal, in states with such laws or initiatives. The likelihood of a loan cure, modification and a borrowing not in contact since default making contact with a lender/servicer is expected to be greater in states with judicial procedures, periods of redemption, or anti-foreclosure programs based on the assumption that more time provides borrowers increased opportunities to explore alternatives to foreclosure and to fully understand their situation. It is

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study's effectiveness is not due to borrower assignment to a specific type of counseling or selection to not receive counseling at all.

also expected these laws will result in more of the borrowers who remain in default being better able to keep from becoming further delinquent as the hope of finding a resolution provides incentives to make payments.

III. Data and Methods

In January 2007, 25,695 borrowers at least 60 days behind on their mortgage received letters suggesting the borrower call the 888-HOPE hotline to receive assistance in resolving their delinquency from a non-profit counseling agency unaffiliated with their lender. A separate group of 6,285 borrowers received a letter suggesting the borrower call a toll-free phone number for their servicer (see attached letter text) but were not given information on the 888-HOPE hotline. Only owner-occupant borrowers with first-lien mortgages for purchase or refinance were included and borrowers in Chapter 7 bankruptcy or more than 120 days delinquent as of January 2007 were excluded. A total of 827 of these borrowers were documented as having called the hotline as of March 31, 2007, or about 3.2 percent of those receiving the letter. As of March 31, 2008, data existed for 29,516 borrowers out of the initial 31,980, due to loans being transferred or sold from the lender's database or simply because of incomplete records. The missing cases represent less than 8 percent of the initial panel.

Table 8 shows the group of 26,000 borrowers receiving the letter offering third party counseling is systematically different than the 6,000 not receiving the letter promoting counseling (Column B vs. Column C). Imbalanced numbers and differing characteristics between the two groups suggests a quasi-experimental approach is required to compare the two groups. The approach used in this analysis is to identify similar borrowers in each group through propensity score matching.

Propensity score matching allows us to establish causal effects even without a formal experimental design. This method is widely used in the evaluation literature and of particular value for a large dataset with a quasi-control group as in this application (Morgan and Harding, 2006; Imbens, 2004). Propensity score matching estimates the effects using nonrandom data by controlling for the other factors that might bias results through weighted comparisons of outcomes such that the two groups are as similar as possible on all baseline factors except the treatment received (LaLonde 1986). The result is an estimate of the average effect of treatment. The propensity score is the conditional probability of receiving a treatment given pre-treatment characteristics, as given by the following equation: $p(X) \equiv \Pr[\, D = 1 \mid X \,] = E\,[D \mid X\,]$ where $D = [0,1]$ is the indicator of treatment and X is a vector of baseline characteristics. Equation 1 displays the variables used to construct the score.

Eq. 1: Pr(counseling letter) = ARM + Active Repayment + Active *Days Delinquent+ Loan Term + Days Delinquent+ Days2 + Log Days + EIS (early indicator score) + EIS2 + Government Insured Loan+ Gov't*ARM + Time since last contact+ Time2 + Low Documentation Loan + Warehouse Loan (lender could did sell to 2ndary market)*ARM + Low Doc *ARM +Unpaid Balance+ Unpaid2 + ARM*Unpaid + Loan Amount+ Loan2 + Prepayment Penalty + FICO score + Refinance Loan + ARM*Refi + Warehouse + Number Co-borrowers + Year of Loan + Warehouse*Year + Census Region + Region*ARM + Made After 2004*ARM + Error

Using a probit model, the probability of receiving a letter offering third-party counseling was predicted ($\hat{\beta}$.) based on baseline data. The predicted value of the probit model was then used to create 20 strata of predicted values or propensity scores. Within each stratum, each comparison group loan (that is, a borrower that did not receive the offer of counseling) was assigned a weight relative to the number of borrowers that did receive the letter offering counseling within that stratum. For example, if there were 5 times as many borrowers that received the letter relative to those that did not, the weight on each comparison group borrower in this stratum would be 5. Weights ranged from 0.89 to 95.8. As a robustness check, the means of over 20 variables were tested between treatment and control groups using these weights. Only one difference was statistically significant at the .10 level or better at baseline: unpaid balance (t=2.29). More than 50 different specifications were tested, including as many as 45 covariates. The significance and magnitude of results were stable across these variations and similar to the final model (using the 30 covariates listed above in Eq. 1). The 6,000 loans in the comparison group were weighted based on the propensity score (mean weight: 4.38; standard deviation: 9.34), while the group receiving the counseling letter were each given a weight of 1. Table 8 shows the weighted and unweighted means for the comparison group relative to the counseling letter group.

<u>Outcomes</u>

The outcomes tested include:

Start	Foreclosure is filed, starting the legal process (0-1)
Completion	Foreclosed home, ending the legal process and loss of home (0-1)
Cure	Loan is active, current and no longer delinquent (0-1)
Modification	Loan terms are formally modified (rate, term, balance) (0-1)
Contact	Borrowers not in contact make contact with lender (0-1)
Delinquency	Number of Days loan is past due as of March 31, 2008
Counseled	Borrower completes counseling conditional on offer of counseling (0-1)[4]

<u>Specifications</u>

Three models are used in this analysis. The first model focuses exclusively on the effects of state laws and policies—including the use judicial proceedings, the existence of a right of redemption, and the existence of statewide foreclosure intervention strategies—on the likelihood of a foreclosure being started or completed, whether the loan is modified, whether borrowers seek loss mitigation options, or whether the delinquency is cured. This analysis is conducted on the entire pool of 32,000 loans and does not employ any weights or propensity scores to account for differences in the groups receiving the offer of counseling and those that did not receive this offer. The second set of models assesses the effect of the offer of counseling on the likelihood of the same outcomes using weights derived from a propensity score estimator with and without additional explanatory variables. The third set of models then tests the effects of the counseling offer in combination with state laws and policies. Each of these models is described more below.

1. State Law Model

Each outcome, Y, is tested against state laws, L, using a series of dummy variables indicating if a state, s, has a particular law or not, as well as a matrix of variables, X, controlling for loan level, i, characteristics at the start of the study. Due to unobservable market level factors which may also contribute to foreclosures, MSA fixed effects, γ, are also included for the 321 metro areas in the data. For areas outside of an MSA, state fixed effects are substituted. Standard errors are also clustered at the state level.

[4] Estimated for the group mailed the counseling letter only.

$$\text{Eq. 2} \quad Y^{i,s}_{Mar08} = \beta 1 \mathbf{X}^{\mathbf{i}}_{Jan07} + \beta 2 \mathbf{L}^{\mathbf{s}}_{Law..} + \beta_{\varphi}\gamma^{\mathbf{s/msa}}_{\text{fixed effect}}. + \beta 3 \mathbf{R}^{\mathbf{i}} + \gamma^{\mathbf{i,s}}$$

Where Y include the outcomes discussed above and the matrix X includes early indicator score (EIS - an industry scale of how likely the loan will suffer a loss), unpaid balance on the loan, if the loan is insured by the FHA or VA, days the loan is past due as of the baseline date of January 1, 2007, an indicator that the loan has an adjustable rate (ARM), an indictor that the loan is labeled by the lender as being subprime, an indicator that the loan is a refinance (versus a home purchase) loan, an indicator that the loan has a prepayment penalty provision, an indicator that the loan did not require full income documentation levels and an indicator that the loan had a modification in place as of baseline (January 1, 2007). The matrix L consists of three indicator variables whether the state had a judicial foreclosure process, a redemption period, and/or a foreclosure prevention program. Finally $\beta 3\mathbf{R}^{\mathbf{i}}$ is an indicator if the loan is outside an MSA.

2. Counseling Outcome Model

In Equation 3, the outcome, Y, is tested using a weighted regression-adjusted impact estimate (Orr 1999). The estimated model is of the following form, where a borrower receiving a letter promoting counseling is indicated by the dichotomous variable, D:

$$\text{Eq. 3} \quad Y^{\mathbf{i}}_{Mar08} = \beta D^{\mathbf{i}}_{Letter} + \gamma^{\mathbf{i}}$$

The model tests if the outcome is effected by the treatment, D, where the treatment is a borrower being mailed a letter promoting counseling, When the β coefficient on D_{Letter} is significant, this suggests receiving the letter has an effect.

$$\text{Eq. 4} \quad Y^{\mathbf{i}}_{Mar08} = \beta D^{\mathbf{i}}_{Letter} + \beta Y^{i}_{Jan07} + \gamma^{\mathbf{i}}$$

Equation 4 displays a variation of this model which adds controls for each borrower's baseline state, so that a borrower's outcome is relative to their status in January 2007 (adding βY^{i}_{Jan07} to the right-hand side of the equation). These models are run using weights derived from propensity scores to address the bias in using a non-randomized control group.

It is important to note that the treatment is receiving a letter offering counseling, not receiving counseling—so we are examining the intent to treat. Lenders cannot effectively force borrowers to take counseling. Promoting counseling to borrowers might have a direct effect in that borrowers receive help and improve their payment behaviors. Other borrowers might not call for counseling immediately but seek help at a later time, which cannot be observed in these data. Others might seek help from another source. The offer of counseling could also serve as a signal to the borrower that they need to take some action to better manage their delinquency. It might also serve as a signal that the lender wants the borrower to succeed.

3. State Laws-Counseling Offer Interaction Model

The third model uses the propensity score weighted data and the first state policy model with the addition of an indicator, D, that a counseling letter was sent and then an interaction between state laws and the offer of counseling.

Eq. 5 $\quad Y^{i,s}_{Mar08} = \beta 1 \mathbf{X}^{i}_{Jan07} + \beta 2 \mathbf{L}^{s}_{Law} . + \beta 3 D^{i}_{Letter} \; \beta 4 (\mathbf{L}^{s}_{Law} * D^{i}_{Letter}) + \beta_{\varphi 1..50} \gamma^{s}_{fixed\ fx} + \gamma^{i,s}$

All models use robust standard error corrections to correct for heteroskedastic error terms and standard errors are clustered at the state level except where noted. In general OLS linear probability specifications are used (Green, 2003). Probit models are used for counseling letter offer outcomes, with coefficients reported in the log of probability units, although marginal effects are discussed in the text. When using interactions of dichotomous variables the OLS linear probability models are preferred (Norton, Wang, & Ai, 2004; Hoetker, 2007).

IV. Findings

Table 2 shows the results of the policy models, pooling borrowers across those receiving the letter offering counseling and those not receiving that letter, with no weights using state fixed effects. There no evidence foreclosure proceedings are more or less likely in states with judicial proceedings. States with rights of redemption are associated with a decreased likelihood of loans being cured (no longer in default) by about 2 percentage points or a marginal effect of 7.9%. States with rights of redemption are also associated with loans being about 15 more days delinquent (about a 9% marginal effect). This likely reflects lenders extending foreclosure timelines in these states. States with rights of redemption show an increase in the take up of counseling when it was offered by 0.9 percentage points (28% marginal effect). States with anti-foreclosure initiatives are associated with about a 3.5 percentage point decrease in borrowers cure rates and 9 days fewer days delinquent. In sum, state laws do not appear to have particularly strong effects across borrower outcomes.

The model predicting the take up of counseling among the borrowers receiving a letter offering the service is interesting to note. These data suggest a strong selection effect where the riskiest borrowers seek counseling. Borrowers with worsened foreclosure status and riskier loan terms, such as low documentation loans and adjustable rate loans (ARMs), are more likely to take up counseling services. This suggests studies examining the outcomes of default counseling must carefully consider potential selection biases.

Table 3 shows the quasi-experimental results of borrowers receiving a letter offering counseling with and without controls for borrower and loan characteristics at the time the offer of counseling was made. The results of both models indicate that borrowers who were offered counseling in January 2007 were less likely to have a loan medication by March 31, 2008 but also had almost 22 fewer days delinquent by the end of the period (a 14% marginal effect). Making contact with the lender and cure of the loan had positive coefficients but were not significant at standard levels. Figure 1 shows that days delinquent (using propensity score weights) was similar for the counseling letter and non-counseling letter groups as of January 2007, with days delinquent increasing for both groups at a similar rate overall. In the first two quarters after the offer of counseling, the slope for the group offered counseling suggests a lower rate of delinquency. This may be a result of borrowers pursuing forbearance with their lender as a result of the counseling session. The lender may reduce payments or interest for a short period to allow the borrower to catch up on payments. This could also explain the lower rate of loan modifications, as these borrowers were using less formal forbearance agreements rather than legal changes to the loan contract. Adding in baseline controls to the model reduces the magnitude of the effects and the significance, but the results remain robust.

While at first blush it may seem inconsistent that days delinquent would be lower while modifications are less likely. One potential explanation is that the lenders do not actively pursue loan modifications (less than 8% of loans had any form of modification in place) and instead promote forbearance or payment plans as the primary solution. This could result in the loan being more likely to have lowered payments (for a short time) and therefore the borrower has a better chance of catching up on late payments even if they do not 'cure' the default entirely. The lender is unlikely to re-configure a payment plan for a modification until the payment plan has had time to perform or it becomes clear the loan needs to be restructured as a loan modification. Borrowers with modifications will be the most severe cases, and may be those least likely to have previously called their lender for payment plan options.

Table 3 also shows a model without propensity score weights, simply to illustrate the role of the weights. Because the counseling letter was sent to a significantly more risky pool of borrowers, the effects of the letter dummy are strongly negative. Adding baseline controls improves the results, but still does not account for the variation in assignment.

Table 4 shows the results of interactions between the dummy variable designating if a state has a foreclosure intervention program and if the borrower received a letter offering counseling. The results suggest borrowers receiving a letter offering counseling in a state with a foreclosure initiative are about 7 percentage points less likely to experience a foreclosure start or initial filing, all else equal (35% as a marginal effect). These borrowers are also more likely to make contact with their lender, suggesting an 11% increase at the mean. Borrowers are also about 18 days fewer days behind. However, there is no statistically significant difference in the cure rate or incidence of loan modifications associated with receiving the counseling letter.

Table 5 suggests there are no interactions between state judicial foreclosure procedures or rights of redemption and the offer of counseling. It is possible these provisions might create additional opportunities for seeking out help, or added incentives to explore alternative actions. Models including all three policy variables (judicial, redemption and foreclosure prevention) all interacted with each other and the offer of counseling were attempted, but as might be expected multicollinearity problems yielded poor results.

Tables 6 includes an indicator of a loan being located in an MSA bordering a state without a state foreclosure prevention strategy. This provides a crude comparison when combined with state fixed effects to exploit housing markets divided by a political boundary. To the extent an MSA is more homogenous, it could be expected that the state law might have a stronger effect in these areas. Adding the border-state policy variable has a modest positive effect on the coefficients relative to Table 4. More robust border pair models might focus only on areas within border states using distance weightings from the border to match loans, as suggested by Pence (2006) and others. However, the sample is relatively small in border areas. This approach provides a weaker form of a robustness check and re-affirms the findings of Table 4.

Table 7 includes an additional state law variable for the 9 states with statewide loan funds or grant pools aimed at borrowers in foreclosure. States offering these programs tend to be those with the most severe foreclosure problems. Controlling for these states generates similar to Table 4. Foreclosure starts are less frequent in these states, but completions more frequent.

V. Discussion and Conclusions

More than half of the borrowers in foreclosure in this database have had no contact with their lender since they defaulted on their mortgage. By delaying contact with their lender, these borrowers may have missed opportunities to explore some alternatives to foreclosure. Our analysis of these data suggests that the lender's voluntary strategy of offering third-party counseling is more effective when combined with state-level initiatives promoting alternatives to foreclosure, foreclosure rescue funds or other foreclosure mitigation strategies. State foreclosure procedures and rights of redemption do not appear to support improved outcomes of foreclosure either alone or in combination with lender offers of counseling.

State foreclosure prevention initiatives also are not associated with significant differences in borrower outcomes. This might be expected since most state programs are small in scale, many were launched only in the last few years, and tend to be concentrated in states with the most severe foreclosure problems.

The offer of counseling did have a positive effect on the number of days borrowers were delinquent on their loans, reducing days behind about 14% on average. This could be related to an increased used of payment plans as borrowers engage in a budgeting exercise with a counselor and are then connected to their lender. Yet loan cures and borrower-lender contact rates were not impacted, at least in the 15 month period analyzed in these data. Loan modifications in general tend to be rare in these data (less than 7.4% of all loans as of March 2008), but the effects of counseling are also not significant on this outcome.

Interacting state foreclosure prevention policies and the offer of counseling are more promising. The effects of the offer of counseling in states with foreclosure programs are consistent using MSA fixed effects and state clustering of standard errors and suggest about a 35% decrease in foreclosure starts, an 11% increase in borrower-lender contact rates and 12% reduction in the number of days delinquent. These results suggest lender voluntary offers of counseling may be best offered in combination with state and local policies. It is likely states with such efforts generate publicity and encourage the public to become more aware of the potential for alternatives to foreclosure. This is consistent with earlier research that has found that borrowers are more likely to engage with lenders to find a resolution to their delinquency if they are aware that there are approaches that could be used to help address their financial problems.

These results have several limitations. These data are derived from one lender during the initial phase of what is clearly one of the more challenging periods in the history of the mortgage lending and servicing industry. The period of analysis was prior to the collapse of several well-known subprime lenders and increased media, regulator and investor scrutiny on servicing practices. State and federal polices and regulatory functions are evolving and may not be consistent with the period of this analysis. Also, the lack of findings regarding cured loans and foreclosure completions may be an artifact of the relatively short time period analyzed. These outcomes may require more than 15 months to occur.

Future analysis might better control for state and local housing market effects, including the role of property value trends and the dispersion or concentration of defaulted loans. With the addition of longitude and latitude to each loan record, the relative distance of borrowers across state lines could be estimated, providing an opportunity for a discontinuity model as utilized by Pence (2006), although the sample size may be limiting.

Overall these results suggest little evidence judicial procedures or rights of redemption result in improvements in borrower outcomes. In combination with a voluntary lender effort to offer counseling, state foreclosure programs have some positive associations with improved borrower outcomes in the short-run, however.

To the extent policy makers seek to slow the foreclosure process, facilitate borrowers in default to contact their lender and the develop alternatives to foreclosure, the coordination of state policies and lender efforts may provide the stronger effects than policies or voluntary efforts alone.

References

Apgar, W., & Duda, M. (2004). "Preserving Homeownership: Community-Development Implications of the New Mortgage Market." Neighborhood Housing Services of Chicago <downloaded 10/12/2008 from www.nhschicago.org>

Collins, J. M. (2007). Exploring the Design of Financial Counseling for Mortgage Borrowers in Default. *Journal of Family and Economic Issues* 28 (2):207-226.

Cutts, A.C. and Merrill, W. (2008).,"Interventions in Mortgage Defaults: Problems and Practices to Prevent Home Loss and Lower Costs," Freddie Mac Working Paper.

Ding, L., Quercia, R. G., & Ratcliffe, J. (Forthcoming)."Post-purchase Counseling and Default Resolutions Among Low-and Moderate-Income Borrowers." *Journal of Real Estate Research.*

Elliehausen, G., E. C. Lundquist, and M. E. Staten. (2007). The Impact of Credit Counseling on Subsequent Borrower Behavior. *Journal of Consumer Affairs* 41 (1):1-28.

Green, W. H. (2003). *Econometric Analysis: 5th edition*. New Jersey: Prentice Hall, .

Hartarska, V., and C. Gonzalez-Vega. (2005). Credit Counseling and Mortgage Termination by Low-Income Households. *The Journal of Real Estate Finance and Economics* 30 (3):227-243.

Hirad, A., P. M. Zorn, Studies Joint Center for Housing, and University Harvard. (2001). A Little Knowledge is a Good Thing: Empirical Evidence of the Effectiveness of Pre-purchase Homeownership Counseling: Joint Center for Housing Studies of Harvard University.

Hoetker, G. (2007). The use of logit and probit models in strategic management research: Critical issues. *Strategic Management Journal, 28*(4), 331-343.

Imbens, G. W. (2004). Nonparametric Estimation of Average Treatment Effects Under Exogeneity: A Review. *Review of Economics and Statistics, 86*(1), 4-29.

LaLonde, R. J. (1986). Evaluating the Econometric Evaluations of Training Programs with Experimental Data. *The American Economic Review* 76 (4):604-620.

Morgan, S. L., & Harding, D. J. (2006). Matching Estimators of Causal Effects: Prospects and Pitfalls in Theory and Practice. *Sociological Methods & Research, 35*(1), 3.

Norton, E. C., Wang, H., & Ai, C. (2004). Computing interaction effects and standard errors in logit and probit models. *The Stata Journal, 4*(2), 103-116.

Orr, L. L. (1999). *Social Experiments: Evaluating Public Programs With Experimental Methods*: Sage Publications.

Orr, L., Lam, K., and S. Bell. (2007) *Long-term Impacts of the New Deal for Disabled People (NDDP) Program*. Final Report prepared for the U.K. government's Department of Work and Pensions.

Pence, K. M. (2006). Foreclosing on Opportunity: State Laws and Mortgage Credit. *Review of Economics and Statistics*, 88(1), 177-182.

Pew Charitable Trusts (2008) *Defaulting on the Dream: States Respond to America's Foreclosure Crisis* <downloaded on 10/12/2008 from www.pewtrusts.org/>

Robins, J. M., and A. Rotnitzky. (1995) Semiparametric efficiency in multivariate regression models with missing data. *Journal of the American Statistical Association* 90:122–29.

Schill, Michael H. (1991). An Economic Analysis of Mortgage Foreclosure Laws. *Virginia Law Review* 77(3):489-538.

Appendix: Letters sent to Borrowers

Comparison Group Letter

Dear______,

________ takes great pride in helping people achieve the dream of homeownership. It's more than just our business; it's our passion. We also endeavor to try to keep hard working people in their homes when they face a crisis that makes it difficult for them to make their payments.

Sometimes things occur beyond anyone's control that makes it difficult, if not impossible, for homeowners to meet their obligations. The reasons for financial setbacks are varied. Whatever the cause, ________ is committed to working with homeowners to find solutions. There are ways to preserve the dream of homeownership.

If you are experiencing a hardship and are worried about making your monthly loan payments, **we urge you to call 1-888-555-7777**. ________'s homeownership preservation team is helps people to keep their homes. Our Homeownership Preservation counselors are eager to assist you and provide you with options 24 hours a day, seven days a week.

When a homeowner calls **1-888-555-7777**, you will have a chance to talk to a Homeownership Preservation counselor about your situation. You won't be judged about your problems, but you will get a chance to understand what you can do. Calling will not hurt your standing with ________.

We want to help you find the right solution. Delaying your call may limit the options available to you. ________ is eager to assist you in maintaining the dream of homeownership and avoiding the nightmare of foreclosure. We look forward to hearing from you soon.

Counseling Group Letter

________ takes great pride in helping people achieve the dream of homeownership. It's more than just our business; it's our passion. We also endeavor to try to keep hard working people in their homes when they face a crisis that makes it difficult for them to make their payments.

Sometimes things occur beyond anyone's control that makes it difficult, if not impossible, for homeowners to meet their obligations. The reasons for financial setbacks are varied. Whatever the cause, ________ is committed to working with homeowners to find solutions. There are ways to preserve the dream of homeownership.

If you are experiencing a hardship and are worried about making your monthly loan payments, **we urge you to call 1-866-903-6218**. The hotline is sponsored by the Homeownership Preservation Foundation, a non-profit organization dedicated to keeping more people in their homes. The advice and assistance they offer is free and is available 24 hours a day, seven days a week.

When a homeowner calls **1-866-903-6218**, counselors are trained to set up a plan of action designed especially for you and your situation. You won't be judged, you won't pay a dime for advice or assistance, and most of all, you won't be disappointed.

We want to help you find the right solution. Delaying your call may limit the options available to you. Even if you feel like you are too far behind already, calling right now could be the difference between keeping your home and being forced out of it.

Figure 1:

Days delinquent for borrowers receiving offer of counseling and comparison group using propensity score matching

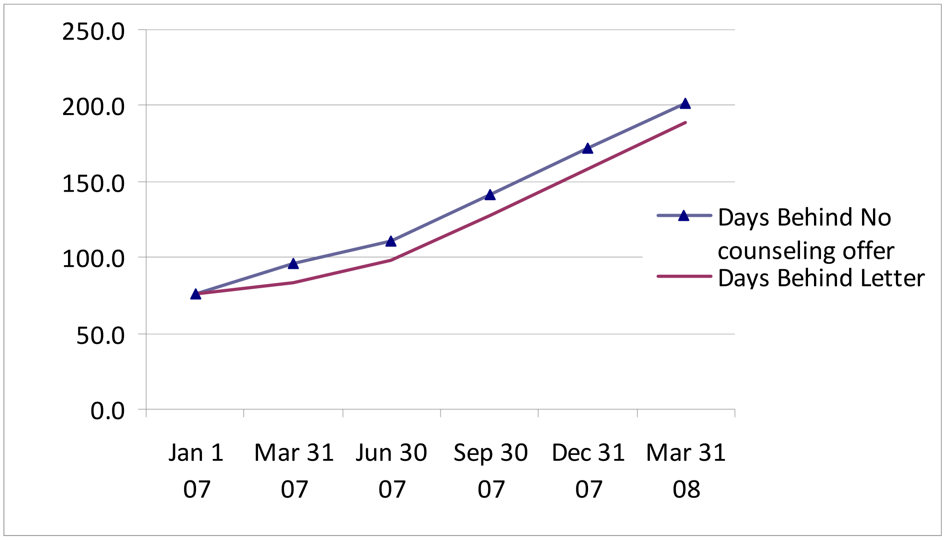

Table 1
State Law Summary

State	State foreclosure program	State loan/grant program	Judicial only	Right of Redemption	Obs	No. in comparison group as % of no. in group sent letter offering counseling
Alabama	NO	NO	NO	YES	498	0.22
Alaska	NO	NO	NO	YES	30	0.10
Arizona	NO	NO	NO	YES	493	0.18
Arkansas	NO	NO	NO	YES	217	0.16
California	YES	NO	NO	YES	2,313	0.14
Colorado	YES	NO	NO	NO	714	0.22
Connecticut	YES	YES	YES	NO	286	0.14
Delaware	YES	YES	YES	NO	103	0.11
District Of Columbia	NO	NO	NO	NO	51	0.14
Florida	NO	NO	YES	NO	1,809	0.16
Georgia	NO	NO	NO	NO	1,753	0.23
Hawaii	NO	NO	NO	NO	52	0.29
Idaho	NO	NO	NO	YES	122	0.19
Illinois	YES	NO	YES	YES	1,361	0.19
Indiana	YES	NO	YES	NO	1,018	0.20
Iowa	NO	NO	NO	YES	179	0.15
Kansas	NO	NO	YES	YES	253	0.21
Kentucky	NO	NO	YES	YES	433	0.23
Louisiana	NO	NO	YES	NO	57	0.11
Maine	NO	NO	YES	YES	80	0.19
Maryland	YES	YES	YES	NO	545	0.21
Massachusetts	YES	YES	YES	NO	546	0.14
Michigan	YES	YES	NO	YES	2,994	0.23
Minnesota	YES	NO	NO	YES	605	0.14
Mississippi	NO	NO	NO	NO	58	0.12
Missouri	YES	NO	NO	YES	1,009	0.15
Montana	NO	NO	NO	NO	31	0.23
Nebraska	NO	NO	YES	NO	86	0.20
Nevada	YES	NO	NO	NO	365	0.14
New Hampshire	YES	NO	NO	NO	106	0.08
New Jersey	YES	YES	YES	YES	747	0.15
New Mexico	NO	NO	YES	YES	152	0.19
New York	YES	YES	YES	NO	1,191	0.19
North Carolina	YES	NO	NO	NO	1,279	0.24
North Dakota	NO	NO	YES	YES	11	0.18
Ohio	YES	YES	YES	NO	1,518	0.23
Oklahoma	NO	NO	NO	NO	366	0.22
Oregon	NO	NO	NO	YES	215	0.20
Pennsylvania	YES	YES	YES	NO	1,620	0.23
Rhode Island	YES	NO	NO	NO	85	0.13
South Carolina	NO	NO	YES	NO	477	0.27
South Dakota	NO	NO	NO	YES	18	0.17
Tennessee	NO	NO	NO	YES	956	0.20
Texas	NO	NO	NO	NO	3,152	0.22
Utah	NO	NO	NO	NO	286	0.21
Vermont	NO	NO	YES	YES	18	0.11
Virginia	NO	NO	NO	NO	678	0.16
Washington	NO	NO	NO	NO	477	0.19
West Virginia	NO	NO	NO	NO	109	0.17
Wisconsin	NO	NO	NO	YES	406	0.19
Wyoming	NO	NO	NO	YES	27	0.07

Table 2
Policy Models: 321 MSA Fixed Effects, Robust Errors Clustered at State Level
As of March 31, 2008 from Jan 1 2007

	Foreclosure start	Foreclosure Complete	Cure	Modification	Make Contact | None	Days Delinquent	Complete Counsel | Offer
	(OLS)	*(OLS)*	*(OLS)*	*(OLS)*	*(OLS)*	*(OLS)*	*(OLS)*
Judicial Only Law	0.027	0.004	0.01	0.025	-0.04	11.493	0.005
	0.7	1.33	0.59	1.7	-1.3	0.93	0.79
Redemption Law	0.012	0.001	**-0.019**	-0.01	-0.007	**15.351**	**0.009**
	1.7	0.31	**-2.06**	-0.81	-0.49	**3.25**	**3.06**
State Fcl Program	-0.033	-0.004	**-0.035**	0.002	0.023	**-9.268**	-0.006
	-1.63	-0.86	**-2.24**	0.2	0.74	**-1.25**	-0.95
EIS (early indicator score)	-0.001	0	0.001	0	0	-0.445	0
	-12.82	2.85	11.34	-2.3	-2.45	-18.59	-1.86
Unpaid Bal (000)	0.000	0.000	0.000	0.000	0.000	0.137	0.000
	5.87	-2.65	-9.85	1.15	3.47	11.38	-0.69
FHA/VA Loan	-0.024	0	-0.003	0.067	0.001	-6.272	-0.001
	-3.39	-0.1	-0.35	12.01	0.09	-1.71	-0.21
Days Delinquent Baseline	0.003	0	-0.002	0.001	-0.002	2.065	0
	10.83	3.2	-10.78	5.7	-4.76	16.62	2.04
ARM Loan	0.032	0.001	-0.053	-0.029	-0.021	39.77	0.011
	4.82	1.04	-6.64	-4.99	-2.02	11.35	4.29
Subprime Loan	-0.045	-0.006	-0.031	0.025	0.115	-6.349	0.008
	-3.87	-2.85	-3.86	7.76	16.04	-1.57	2.15
Refi Loan	-0.016	0.001	0.018	-0.008	-0.008	-5.4	0.008
	-2.77	1.36	2.31	-1.97	-0.75	-3.18	2
Prepay Provision	0.021	0	-0.029	-0.01	0.004	18.747	0.005
	1.84	0.39	-4.4	-1.66	0.34	3.36	1.26
Low Doc Loan	0.008	0.003	-0.029	0.002	-0.013	13.622	0.008
	0.9	1.21	-3.48	0.82	-1.02	3.26	2.16
Modification in Place - Baseline	0.019	-0.002	-0.058		0.056	27.463	0.016
	1.97	-2.28	-5.46		4.56	8.03	2.76
Non-metro	0.037	0.004	-0.006	0.027	0.063	2.464	0.014
	1.97	2.48	-0.28	2.4	2.52	0.26	1.79
Constant	0.305	-0.004	0.323	0.012	0.66	106.374	0.012
	11.56	-0.78	14.82	0.45	16.68	8.28	0.92
N	32393	32393	32393	32393	26010	29905	26010

Table 3
Counseling Offer Models: Propensity Scores Specification, Robust Errors
As of March 31, 2008 from Jan 1 2007

	Start	Complete	Cure	Mod	Make Contact | None	Days Delinquent
NO BASELINE CONTROLS, Weighted						
	(probit)	*(probit)*	*(probit)*	*(probit)*	*(probit)*	*(OLS)*
Counseling Letter	-0.058	-0.144	0.066	**-0.12**	0.084	**-21.733**
	-1.38	-1.34	1.58	**-3.02**	1.84	**-3.65**
Constant	-0.749	-2.58	-0.796	-1.454	0.184	**181.533**
	-18.18	-26.2	-19.51	-39.41	4.13	31.09
NO BASELINE CONTROLS, Un-weighted						
Counseling Letter	**0.187**	-0.089	**-0.123**	**-0.497**	0.032	**26.504**
	9.01	-1.31	**-6.55**	**-21.38**	1.47	**10.66**
Constant	-0.996	-2.554	-0.605	-1.084	0.236	133.12
	-52.78	-42.88	-36.08	-55.46	11.98	60.17
NO BASELINE CONTROLS, Weighted						
Counseling Letter	**0.012**	-0.001	-0.012	**-0.077**	0.017	**5.112**
	2.34	-0.88	-1.92	**-16.85**	1.93	**2.11**
Constant	0.288	-0.004	0.35	0.116	0.734	80.94
	11.94	-1.11	14.8	7.03	21.93	7.57
WITH CONTROLS, Weighted						
Counseling Letter	-0.017	-0.109	0.03	**-0.086**	0.064	**-12.635**
	-0.4	-0.97	0.71	**-2.07**	1.4	**-2.26**
EIS (early indicator score)	-0.003	0.003	0.001	-0.001	-0.001	-0.324
	-8.2	2.99	2.96	-3.75	-1.42	-6.56
Unpaid Bal $ (00)	0.001	-0.001	-0.001	0	0	0.001
	6.54	-1.65	-4.79	3.61	-0.05	7.45
FHA/VA Loan	0.002	-0.184	-0.042	0.32	-0.113	6.53
	0.04	-1.24	-0.79	5.9	-1.92	0.92
Days Delinquent Baseline	0.007	0.012	-0.006	0.011	-0.009	2.108
	5.07	2.86	-4.04	7.25	-5.62	10.47
ARM Loan	0.346	-0.004	-0.312	-0.331	-0.201	72.073
	6.41	-0.03	-5.05	-5.77	-3.3	9.37
Subprime Loan	-0.253	-0.254	-0.099	0.11	0.15	0.387
	-3.79	-1.78	-1.72	1.25	2.19	0.05
Refi Loan	0.043	0.1	0.062	-0.05	-0.135	0.018
	0.62	0.72	1.05	-0.76	-2.03	0
Prepay Provision	0.082	-0.017	-0.084	-0.191	-0.035	11.379
	1.42	-0.1	-1.28	-2.88	-0.52	1.47
Low Doc Loan	0.029	0.011	-0.105	-0.01	-0.047	11.953
	0.41	0.06	-1.56	-0.12	-0.64	1.41
Modification in Place - Baseline	0.123	-0.588	-0.142		0.112	20.047
	2.17	-2.51	-2.42		1.85	2.54
Constant	-0.563	-4.098	-0.29	-2.125	1.058	56.995
	-2.98	-7.12	-1.31	-10.11	4.59	2.16
N	31928	22375	31928	22375	22375	29472

Table 4
Counseling-Policy Interaction Models: Propensity Scores Specification, 321 MSA Fixed Effects Robust Errors Clustered at State Level
As of March 31, 2008 from Jan 1 2007

Variable	Start	Complete	Cure	Mod	Contact | None	Days Delinquent
	(OLS)	*(OLS)*	*(OLS)*	*(OLS)*	*(OLS)*	*(OLS)*
Counseling Letter	**0.028**	0	0.026	**-0.01**	-0.005	-1.476
	2.1	-0.04	1.57	**-2.31**	-0.21	-0.42
State Fcl Program	0.062	-0.001	-0.019	0.001	0.001	10.795
	1.75	-0.35	-0.79	0.09	0.01	0.84
Counseling * St Fcl Program	**-0.069**	0	-0.033	-0.003	**0.064**	**-18.373**
	-3.16	0.01	-1.59	-0.54	**2.17**	**-2.96**
Judicial Only Law	0.002	0.004	0.001	0.03	-0.013	1.473
	0.04	1.29	0.07	2.96	-0.43	0.09
Redemption Law	0.006	-0.002	0.005	-0.014	-0.016	21.699
	0.43	-1.28	0.31	-1.09	-0.56	4.11
EIS (early indicator score)	-0.001	0	0	0	0	-0.382
	-7.72	2.62	4.85	-2.77	-1.3	-7.16
Unpaid Bal $(000)	0.00	0.00	0.00	0.00	0.00	0.147
	2.86	-1.57	-3.5	4.69	1.87	4.52
FHA/VA Loan	-0.005	-0.002	-0.018	0.046	-0.024	6.259
	-0.38	-1.6	-1.11	6.59	-1.34	0.86
Days Delinq Baseline	0.002	0	-0.002	0.001	-0.003	1.991
	3.89	2.88	-4.84	7.28	-4.27	8.79
ARM Loan	0.09	0	-0.081	-0.033	-0.05	64.114
	4.2	0.04	-6.21	-4.14	-2.85	8.28
Subprime Loan	-0.064	-0.005	-0.027	0.015	0.061	-1.552
	-2.89	-1.76	-1.69	2.7	2.17	-0.2
Refi Loan	0.013	0.002	0.007	-0.012	-0.016	0.986
	0.59	0.8	0.38	-1.62	-0.78	0.12
Prepay Provision	0.011	0	-0.017	-0.016	-0.012	7.582
	0.44	-0.15	-0.85	-2	-0.44	0.7
Low Doc Loan	0.018	0.002	-0.04	-0.004	-0.026	15.616
	0.69	0.59	-1.84	-0.69	-0.91	1.41
Modification in Place -Jan	0.039	-0.003	-0.045		0.037	25.144
	2.09	-2.83	-2.77		1.32	3.18
Non-Metro	0.084	0.003	0.014	0.032	0.031	9.832
	3.87	2.25	0.32	3.45	0.52	0.61
Constant	0.296	-0.014	0.312	-0.016	0.835	79.898
	5.5	-1.67	4.86	-0.77	6.69	2.65
N	32393	32393	32393	32393	22679	29905

Table 5:
Counseling-Policy Interaction Models: Propensity Scores Specification, 321 MSA Fixed Effects Robust Errors Clustered at State Level
As of March 31, 2008 from Jan 1 2007

	Start	Complete	Cure	Mod	Contact | None	Days Delinquent
	(OLS)	*(OLS)*	*(OLS)*	*(OLS)*	*(OLS)*	*(OLS)*
Counseling Letter	-0.018	0	0.011	-0.012	0.038	-13.278
	-0.9	0.41	0.76	-3.44	1.73	-2.08
Judicial Only Law	-0.008	0.004	0.007	**0.029**	-0.002	0.086
	-0.18	1.49	0.31	**2.64**	-0.08	0.01
Counseling * Judicial Only Law	0.016	-0.001	-0.01	0.002	-0.016	2.341
	0.62	-0.68	-0.52	0.25	-0.6	0.29
Constant	0.322	-0.014	0.321	-0.015	0.811	85.984
	6.02	-1.71	4.95	-0.71	6.22	2.89
N	32393	32393	32393	32393	22679	29905
Controls	Yes	Yes	Yes	Yes	Yes	Yes

	Start	Complete	Cure	Mod	Contact| None	Days Delinquent
Counseling Letter	0.003	0	0.009	-0.013	0.04	-8.32
	0.22	-0.17	0.77	-3.24	2.29	-1.97
Redemption Law	0.025	-0.003	0.007	-0.017	-0.008	**27.139**
	1.08	-1.27	0.34	-1.2	-0.24	**3.62**
Counseling * Redemption Law	-0.037	0	-0.004	0.004	-0.019	-9.799
	-1.32	0.25	-0.21	0.71	-0.58	-1.17
Constant	0.31	-0.014	0.322	-0.014	0.811	83.19
	5.84	-1.68	5.12	-0.67	6.45	2.75
Controls	Yes	Yes	Yes	Yes	Yes	Yes
N	32393	32393	32393	32393	22679	29905

Table 6:
MSA-Cross Border Model: Counseling-Policy Interaction, Propensity Scores Specification, 321 MSA Fixed Effects Robust Errors Clustered at State Level
As of March 31, 2008 from Jan 1 2007

	Foreclosure start	Foreclosure Complete	Cure	Modification	Make Contact | None	Days Delinquent
Counseling Letter	0.024	0	0.025	0	-0.003	-3.003
	1.87	0.09	1.52	0.02	-0.12	-0.83
State Fcl Program	0.068	-0.002	-0.017	0.002	-0.003	13.797
	1.87	-0.46	-0.72	0.14	-0.07	1.01
Counseling * St Fcl Program	**-0.078**	0.001	-0.036	-0.004	**0.069**	**-21.975**
	-3.16	0.28	-1.71	-0.68	**2.26**	**-3.16**
Judicial Only Law	0.002	0.004	0.002	0.03	-0.014	1.758
	0.06	1.27	0.08	2.97	-0.46	0.11
Redemption Law	0.006	-0.002	0.004	-0.014	-0.016	21.41
	0.39	-1.26	0.3	-1.1	-0.56	4.24
EIS (early indicator score)	-0.001	0	0	0	0	-0.381
	-7.76	2.61	4.86	-2.77	-1.31	-7.14
Unpaid Bal $(000)	0	0	0	0	0	0.148
	2.86	-1.57	-3.5	4.69	1.87	4.51
FHA/VA Loan	-0.005	-0.002	-0.018	0.046	-0.024	6.232
	-0.39	-1.6	-1.11	6.58	-1.34	0.86
Days Delinq Baseline	0.002	0	-0.002	0.001	-0.003	1.977
	3.75	2.85	-4.8	7.32	-4.24	8.69
ARM Loan	0.09	0	-0.081	-0.033	-0.05	64.223
	4.21	0.04	-6.17	-4.14	-2.87	8.32
Subprime Loan	-0.064	-0.005	-0.027	0.015	0.061	-1.642
	-2.89	-1.76	-1.7	2.71	2.18	-0.22
Refi Loan	0.013	0.002	0.007	-0.012	-0.015	0.885
	0.58	0.81	0.37	-1.62	-0.76	0.11
Prepay Provision	0.011	0	-0.016	-0.016	-0.012	7.805
	0.46	-0.16	-0.85	-2	-0.45	0.73
Low Doc Loan	0.018	0.002	-0.04	-0.005	-0.026	15.481
	0.68	0.59	-1.85	-0.69	-0.9	1.39
Modification in Place -Jan	0.039	-0.003	-0.045		0.037	25.089
	2.08	-2.83	-2.77		1.32	3.17
Non-metro	0.083	0.003	0.014	0.032	0.032	9.641
	3.88	2.26	0.31	3.44	0.52	0.6
State w/Foreclosure program bordering non-program state	0.033	-0.002	0.011	0.003	-0.019	14.212
	1.34	-0.68	0.45	0.41	-0.55	1.36
Constant	0.294	-0.014	0.312	-0.016	0.836	78.81
	5.53	-1.66	4.87	-0.78	6.7	2.6
N	32393	32393	32393	32393	22679	29905

Table 7
Counseling-Policy Interaction Models: Propensity Scores Specification, 321 MSA Fixed Effects Robust Errors Clustered at State Level

As of March 31, 2008 from Jan 1 2007

	Foreclosure start	Foreclosure Complete	Cure	Modification	Make Contact | None	Days Delinquent
	(OLS)	*(OLS)*	*(OLS)*	*(OLS)*	*(OLS)*	*(OLS)*
Counseling Letter	**0.027**	0	0.026	**-0.01**	-0.005	-1.569
	2.09	-0.01	1.56	**-2.32**	-0.21	-0.45
State Fcl Program	**0.12**	**-0.007**	-0.011	0.001	0.003	30.539
	3.25	**-2.05**	-0.4	0.05	0.05	1.62
Counseling * St Fcl Program	**-0.069**	0	-0.033	-0.003	**0.064**	**-18.447**
	-3.18	0.01	-1.59	-0.54	**2.16**	**-2.99**
Judicial Only Law	0.07	-0.003	0.011	**0.03**	-0.01	23.09
	1.24	-0.55	0.41	**2.4**	-0.18	1.07
Redemption Law	0.008	-0.002	0.005	-0.014	-0.016	21.589
	0.5	-1.44	0.32	-1.1	-0.57	4.08
State Fcl Loan/Grant Program	**-0.151**	**0.014**	-0.021	0	-0.006	-49.011
	-2.05	**2.2**	-0.49	0.01	-0.07	-1.5
EIS (early indicator score)	-0.001	0	0	0	0	-0.383
	-7.72	2.62	4.83	-2.77	-1.3	-7.15
Unpaid Bal (000)	0	0	0	0	0	0.147
	2.83	-1.53	-3.52	4.7	1.87	4.49
FHA/VA Loan	-0.005	-0.002	-0.018	0.046	-0.024	6.188
	-0.39	-1.59	-1.12	6.59	-1.34	0.85
Days Delinquent Baseline	0.002	0	-0.002	0.001	-0.003	1.991
	3.89	2.88	-4.84	7.28	-4.27	8.78
ARM Loan	0.09	0	-0.081	-0.033	-0.05	64.08
	4.2	0.04	-6.21	-4.14	-2.85	8.27
Subprime Loan	-0.064	-0.005	-0.027	0.015	0.061	-1.529
	-2.89	-1.77	-1.69	2.7	2.17	-0.2
Refi Loan	0.013	0.002	0.007	-0.012	-0.016	0.935
	0.58	0.81	0.37	-1.62	-0.78	0.12
Prepay Provision	0.01	0	-0.017	-0.016	-0.012	7.399
	0.43	-0.14	-0.85	-2	-0.44	0.69
Low Doc Loan	0.018	0.002	-0.04	-0.004	-0.026	15.58
	0.68	0.6	-1.84	-0.69	-0.91	1.4
Non-metro	0.084	0.003	0.014	0.032	0.031	9.779
	3.86	2.26	0.32	3.45	0.52	0.61
Modification in Place - Baseline	0.039	-0.003	-0.045		0.037	25.146
	2.09	-2.83	-2.77		1.32	3.18
Constant	0.283	-0.012	0.311	-0.016	0.834	75.893
	5.13	-1.56	4.92	-0.76	6.67	2.48
N	32393	32393	32393	32393	22679	29905

Table 8: Descriptive Statistics *(Bolded=significant difference at .10 or greater)*

	(A) ALL LOANS			(B) Received Counseling Letter			(C) Comparison Group - Unweighted			(D) Comparison – Weighted		
	mean	sd	N	mean	sd	N	mean	sd	N	mean	sd	N
Baseline Data												
EIS (servicing score) (1-1-07)	324	62	31928	**321**	**62**	**25651**	**339**	**58**	**6277**	314	63	6277
Unpaid balance (1-1-07)	137299	100131	31928	**144212**	**104281**	**25651**	**109052**	**74614**	**6277**	**138341**	**95581**	**6277**
FHA-VA Loan	0.3219	0.4672	31928	**0.3017**	**0.459**	**25651**	**0.4045**	**0.4908**	**6277**	0.2933	0.4553	6277
Days Delinquent (1-1-07)	75.615	12.6661	31928	**75.5295**	**12.6589**	**25651**	**77.7109**	**14.7669**	**6277**	75.9642	12.6902	6277
ARM Loan	0.2935	0.4554	31928	**0.3189**	**0.4661**	**25651**	**0.1894**	**0.3919**	**6277**	0.367	0.482	6277
Subprime Loan	0.8846	0.3196	31928	0.8873	0.3163	25651	0.8735	0.3324	6277	0.8932	0.3089	6277
Refi Loan	0.1679	0.3738	31928	**0.1586**	**0.3653**	**25651**	**0.206**	**0.4045**	**6277**	0.1534	0.3604	6277
Loan with Prepay provision	0.2723	0.4452	31928	**0.3038**	**0.4599**	**25651**	**0.1435**	**0.3507**	**6277**	0.3381	0.4731	6277
Low Doc Loan	0.1057	0.3074	31928	**0.1166**	**0.321**	**25651**	**0.061**	**0.2394**	**6277**	0.0938	0.2915	6277
Mod in place (1-1-07)	0.0732	0.2604	31928	**0.0569**	**0.2317**	**25651**	**0.1396**	**0.3466**	**6277**	0.0658	0.248	6277
Received Counseling Letter	0.8034	0.3974	31928	1	0	25651	0	0	6277	0	0	6277
Follow Up												
Loan Cured (3-31-08)	0.2384	0.4261	33895	0.2325	0.4225	25651	0.2724	0.4452	6277	0.2129	0.4094	6277
Mod in Place (3-31-08)	0.0702	0.2555	33895	0.0569	0.2317	25651	0.1396	0.3466	6277	0.0658	0.248	6277
Completed Counseling	0.0259	0.1588	31928	0.0322	0.1765	25651	0	0	6277	0	0	6277
Days Delinquent (3-31-08)	157.2633	176.8224	31298	159.7996	176.1499	23699	133.5618	169.8741	5773	181.5328	189.1635	5773
Late Pays / last 12 (3-31-08)	8.4757	3.188	33614	8.4944	3.1802	25469	8.4037	3.1977	6205	8.4915	3.277	6205
Contacted lender (as of 3-31-08)	0.5471	0.4978	33895	0.5846	0.4928	25651	0.5654	0.4957	6277	0.5592	0.4965	6277
Foreclosure Completed (3-31-08)	0.004	0.063	33895	0.0039	0.0626	25651	0.0054	0.0734	6277	0.0043	0.0653	6277
Foreclosure Start (3-31-08)	0.1884	0.391	33895	0.2098	0.4072	25651	0.1599	0.3666	6277	0.2269	0.4189	6277
State Laws												
State Judicial Only Fcl	0.3873	0.4871	33895	0.3862	0.4869	25651	0.383	0.4862	6277	0.3976	0.4894	6277
State Right of Redemption	0.4121	0.4922	33895	0.4167	0.493	25651	0.3859	0.4868	6277	0.3874	0.4872	6277
State Pred Lending Law	0.8904	0.3124	33895	0.8881	0.3153	25651	0.9035	0.2954	6277	0.8935	0.3085	6277
State Foreclosure Program	0.5956	0.4908	33895	0.5982	0.4903	25651	0.5875	0.4923	6277	0.5869	0.4924	6277