Does Junior Inherit?

Refinancing and the Blocking Power of Second Mortgages[1]

Preliminary

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ABSTRACT

Refinancing a first mortgage puts legal principles in conflict when other, junior, liens also exist. On one hand, the principle that seniority follows time priority leaves the new refinancing mortgage junior to mortgages that were junior to the original, refinanced first mortgage. On the other hand, the principle of equitable subrogation gives the refinancing mortgage the seniority of the claim it paid down. States resolve this tension differently, thus differentiating how much a second mortgage impedes refinancing of the first. We exploit this cross-state variation to identify the impact on mortgage refinance, and find refinancing to be significantly less likely in the states not following the principle of equitable subrogation.

JEL: D12, G18, H73, K11

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1. Introduction

Residences in the U.S. often have multiple mortgages. As of March 2012, 23.5% of homes with a mortgage have more than one; as of December 2008 it was 30%.[1] In these cases, the mortgages' relative seniority generally follows a simple rule: seniority follows the mortgages' time order. The mortgage taken out first is the most senior, followed by the next mortgage taken out, and so on. This principle, which we label *time priority*, is convenient and easy to follow, but it has a potentially perverse effect on refinancing a first mortgage, because a replacement for the first of multiple mortgages is newer than, and thus by this principle junior to, mortgages that the original first mortgage was senior to. The originally junior mortgagees can waive this windfall of seniority with *subordination agreements*, i.e. documents affirming their subordination to the replacement mortgage, but they don't have to. Thus, in a refinancing situation, a second mortgagee can wield blocking power over the mortgagor. This paper addresses the effect of this blocking power.

We can identify the effect of the blocking power through its variation across states. This is because a subset of states follows a legal principle known as *equitable subrogation* which targets and largely eliminates the perverse effect. Subrogation is the inheritance by a new creditor of the seniority of the creditor it paid off; equitable subrogation provides that this inheritance occurs when the new mortgage does not disadvantage junior mortgagees, relative to the old mortgage. So if the new mortgage has principal and interest no higher, and maturity no shorter, than the mortgage it extinguished, then it enjoys the old mortgage's seniority, despite the violation of time priority. If the new mortgage, relative to the old, impairs the junior mortgagee on one of these dimensions, then it enjoys seniority to an extent equivalent to that of the old. By eliminating the second mortgage's role in refinancings that do not disadvantage it, equitable

[1] Federal Reserve Bank of New York/Equifax Consumer Credit Panel.

subrogation removes its blocking power, which means we can observe the effect of this power in the contrast in refinancings between those in states that have adopted this principle and those in states adhering to strict time priority.[2]

Whether a refinancing is exposed to this blocking power depends not only on local state law but also on the mortgagor's remaining home equity, reflected in the home's combined loan-to-value (CLTV). If the CLTV is low enough, then the mortgagor can refinance all mortgages at once, thereby avoiding bargaining by extinguishing all bargainers' claims. If the CLTV is high enough, then refinancing any mortgage is unlikely. It is in the middle region where refinancing the first of multiple mortgages arises, and therefore where the second's bargaining power matters. Consequently, the identification takes the differences-in-differences form: the difference across states of the difference between medium-CLTV refinancings and other refinancings.

To run this identification we assemble a database of recent mortgages, starting with 3.9 million mortgages originated between 2003 and 2007 from the LPS Mortgage Dataset. We associate them with junior liens by matching them to credit-bureau data, and we keep our CLTV estimates current by updating house prices with zip-code level indices. Our database of state laws is current as of September, 2008, so we focus on refinancing in 2009. This was a period of significant financial distress, which introduces other issues into refinancing, so to focus on the effect of the legal environment we limit our sample to mortgagors who were current on all mortgages as of December, 2008.

Our principal finding is that refinancing is significantly affected by the legal environment. In the states without equitable subrogation, the probability of refinancing is much

[2] We are grateful to Dale Whitman for assembling and providing the database showing the variation of the legal environment across states.

lower, relative to the other states, when the CLTV is in the medium range between 75% and 100%. There is little or no effect when CLTV is higher or lower, and the difference between the medium-CLTV case and the others is statistically significant. A probit specification finds the probability of refinancing to be 1.3 percentage points higher in the refinancing-friendly environment, relative to the sample average 2009 refinancing probability for homeowners in the middle-CLTV region of 13%.

The rest of this paper is in four sections. In Section 2 we survey the related legal and economic literature, in Section 3 we describe the data, in Section 4 we run and interpret the empirical tests, and in Section 5 we summarize and conclude.

2. Background and Literature

Junior mortgages figure heavily in both pre-crisis borrowing and in subsequent distress. There is an accordingly large and growing literature on the role of junior mortgagees in the resolution of distress. The focus of this literature is not on refinancings that potentially alter seniority, but rather on modifications that preserve seniority while forgiving principal. The main concern this literature addresses is the weak incentive of junior mortgagees to forgive, and the resulting difficulty reducing prohibitive indebtedness. Relevant studies include Agarwal et al 2011, Mayer et al 2009, Cordell et al. 2008 and Agarwal et al 2006.

The principle of time priority that we focus on is summarized in this passage from Schmudde 2004:

> "The first mortgage on a property, being the first recorded, has first priority. All later recorded mortgages applying to a single property are called "junior" mortgages. The basic rule of mortgage priority is that is set by the time of

> recording. Earlier recording grants earlier priority. This can only be changed when a mortgagee who has earlier recorded agrees to subordinate her interest."[3]

The problem arising from this principle is that it ties a potentially deal-breaking wealth transfer to a run-of-the-mill refinancing. If a borrower refinances the senior of two mortgages, the replacement mortgage is newer than the old junior mortgage, making the old junior mortgage now the senior one. So this principle hands the old junior mortgage a large transfer from the entering mortgage without regard to whether the entering mortgage would make the old junior mortgage better off, even without this transfer, which it presumably would if it simply lowered the first mortgage's coupon.

Countervailing the time-priority doctrine is the doctrine of equitable subrogation, also known as legal subrogation. This principle is articulated in §7.6(a) of American Law Institute 1997:

> One who fully performs an obligation of another, secured by a mortgage, becomes by subrogation the owner of the obligation and the mortgage to the extent necessary to prevent unjust enrichment. Even though the performance would otherwise discharge the obligation and the mortgage, they are preserved and the mortgage retains its priority in the hands of the subrogee.[4]

By this principle, which is explicated in depth in Nelson and Whitman 2006, Yoo 2011 and Been, Howell and Willis, 2012, the refinancing mortgage inherits the refinanced mortgage's seniority, with or without subordination agreements from any intervening liens, provided the replacement of the old mortgage with the new does not disadvantage the lienholders.

The principle of Equitable Subrogation is not automatically incorporated into the laws of individual states. The state legislatures and judiciaries choose whether to incorporate it. An

[3]Schmudde (2004), p. 113.
[4] American Law Institute 1997, p. 508.

example of a state that chooses not to is Minnesota. This is spelled out in, for example, an Appeals Court decision filed July 26, 2005:

> Jurisdictions around the country have adopted three different approaches in determining whether to apply equitable subrogation under circumstances in which a third party holds a lien on the property at the time the second lender pays off the former encumbrance. The first approach reasons that actual knowledge of an existing lien precludes the application of equitable subrogation, but constructive knowledge does not. *See, e.g., Osterman v. Baber*, 714 N.E.2d 735, 739 (Ind. Ct. App. 1999). The second approach bars the application of equitable subrogation when the party seeking subrogation possesses either actual or constructive notice of an existing lien. *See, e.g., Harms v. Burt*, 40 P.3d 329, 332 (Kan. Ct. App. 2002).
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> The third approach, adopted by the Restatement, disregards actual or constructive notice and concentrates on whether the junior lienholder will be prejudiced by subrogation. *See* Restatement (Third) of Property: Mortgages § 7.6 (1997). Under the Restatement, a mortgagee will be subrogated when it pays the entire loan of another as long as the mortgagee "was promised repayment and reasonably expected to receive a security interest in the real estate with the priority of the mortgage being discharged, and if subrogation will not materially prejudice the holders of intervening interests in the real estate." *Id*.
>
> Minnesota has adopted the second approach (actual or constructive notice of an existing lien bars equitable subrogation) with the added criterion that when a sophisticated party – such as a professional lender – is seeking subrogation, it will be held to a higher standard for the purpose of determining whether it has acted under a justifiable or excusable mistake of fact in failing to duly investigate prior liens.[5]

In the language of the court, actual notice of a lien means a lender actually knew of it, whereas constructive notice means the lien was properly and promptly registered, so the lender could have known of it. So in Minnesota, a refinancing lender does not inherit the seniority of the refinanced mortgage with respect to an intervening mortgage he knew or could have known about, unless the holder of the intervening lien agrees.

The complete distribution of relevant state law, as of September 17, 2008, is reported in Table 1. In this table, "Restatement" indicates that the state courts have effectively adopted the

[5] State of Minnesota in Court of Appeals A04-1962, available online at http://www.lawlibrary.state.mn.us/archive/ctappub/0507/opa041962-0726.htm

principal of equitable subrogation as spelled out in the Restatement, i.e. American Law Institute 1997, excerpted above. As the table indicates, states that have not adopted the Restatement wholesale exhibit various nuances in the positions they do take. In our empirical tests we do not attempt to capture these nuances; instead we simply contrast the Restatement states with the others. We denote the Restatement states as having "Easy" subrogation laws, and the other states as "Not Easy."[6] The geographic distribution of these states is presented as Figure 1, which shows them to be widely dispersed across the country.

The empirical question we address is whether the blocking power imparted to the second lienholders by the absence of equitable subrogation reduces the incidence of refinancing. It is worth noting that this reduction could occur several ways. It could result from frictions when second lienholders with limited information bargain for rents. For example, a lender unable to distinguish between the various borrowers asking for subordination might make them all the same take-it-or-leave-it offer, which some would leave. Similarly, lenders or borrowers with some information might yet overplay their hands. Alternatively, failure could result from borrowers struggling to contact or even identify their current lenders, or from lenders being willing but unable to subordinate due to contractual restrictions or complications, perhaps arising from securitization agreements. A servicer might also simply have too much paperwork or other time-consuming labor to pay it the proper attention. So it is some combination of these and related hazards peculiar to states without equitable subrogation that we hypothesize to reduce the incidence of refinancing.

3. Data Description

[6] We include the District of Columbia as an easy subrogation state, but our results were robust to this coding.

The dataset consists of mortgages originated between 2003 and 2007, from the LPS Mortgage Dataset. The LPS dataset consists of mortgages serviced by most of the top ten servicers, and covers about 2/3 of all mortgages currently outstanding or originated in recent years. Approximately 4 million of these loans were matched to the Federal Reserve Bank of New York/ Equifax Consumer Credit Panel, a database of consumer credit bureau records, based on loan characteristics at origination. he matching procedure is described in more detail in Elul et al (2010). The importance of this matching for evaluating the effect of equitable subrogation laws is that it provides information on other (second) mortgages held by the same borrower, because these mortgages appear in bureau records.

From LPS we obtain first-mortgage characteristics such as origination FICO score, interest rate, LTV ratio, etc. We also update the LTV using the most current balance on the mortgage, and the Corelogic zip-code level house price index. From the consumer credit bureau data, we obtain the borrower's updated Equifax risk score and information about second mortgage balances.

For those mortgages that terminate (55% of the sample), we use the bureau data to determine whether this termination took place through a refinancing.[8] A terminated mortgage is identified as a refinancing if the borrower did not move in a one-year window spanning the mortgage termination date (based on the address in credit bureau records) *and* a new mortgage account appears in the bureau data with an opening date which is within three months of the

[8] Haughwout et al (2011) use a similar procedure to identify refinancings.

mortgage termination date.[9] For our final sample, approximately one half of all terminations are identified as refinancings, which is consistent with the findings of Clapp et al (2001).

We restrict the sample to those residences that had active and non-delinquent first mortgages as of December 2008 (and if a second mortgage exists, it must also be current). In order to create a more uniform dataset, we also restrict attention to prime, owner-occupied conventional first mortgages, with balances greater than $100,000, and to "primary" Equifax panel members (for whom data is available in every quarter).[10] Table 2 summarizes the matched database along a number of dimensions. It also provides the same statistics for a random sample of mortgages from the LPS data that were not matched to the FRBNY/Equifax data, to help gauge whether the matching procedure biases the sample in any way.

The comparison between mortgage refinancings in Easy and Not-Easy states drives the identification in the empirical tests. To document how the mortgages themselves compare, Table 3 separates the matched sample into Easy vs. Non-Easy states, and reports the mortgage characteristics in each.

4. Empirical Test

[9] The new mortgage must further have a balance which is at least 90% that of the old mortgage just before termination; we also allow the refinancing mortgage to be a second mortgage, in case the legal environment affects how the bureaus code the mortgages. We tested this algorithm out-of-sample on mortgage originations in LPS (for which there is a refinancing flag) and found that it identifies approximately 80% of all refinancings at origination. Conversely, we correctly identify about 75% of all purchase loans at origination.

[10] See Lee and van der Klaauw (2010) for further detail on the FRBNY/Equifax Consumer Credit Panel.

The test design is a probit model, where each observation is a residence, and the dependent variable indicates that the residence's first mortgage was refinanced in 2009.[11] The test statistic is the coefficient on the interaction of three explanatory indicator variables: one that indicates that the residence had a second mortgage, one that indicates that the residence's CLTV was in the middle range, and one that indicates that the state has adopted the principle of equitable subrogation, i.e. is one of the states listed as "Restatement" in Table 1. For convenience we refer to these as the "Easy Subrogation" states.

The independent variables include standard mortgage and borrower characteristics from the LPS dataset (e.g., initial LTV and FICO score), observed at origination. We also estimate the CLTV as of December 2008, dividing the sum of first and second mortgage balances (from the LPS and bureau data, respectively) by an estimate of the current house price. The latter is obtained by updating the house value at origination with the change in the zip-level house price index since origination. From the bureau data, we obtain the mortgage borrower's second mortgage balance.[12] We control for several other likely influences on refinancing, all dated December, 2008: the county-level unemployment rate (from the BLS), the current mortgage interest rate (from LPS), and the updated Equifax risk score (from the bureau data), as well as whether the borrower has a second mortgage. In order to capture the wide variety of cross-state differences, we also include state fixed effects.[14] Since we also include a dummy variable for "easy" refinancing states, we omit one state fixed effect,

[11] We obtained similar results with a logit regression, but the probit allows for a clearer interpretation of the coefficients.
[12] ,This may be from either closed-end home equity installment loans, or revolving home equity lines of credit.
[14] The results were not materially affected by omitting these.

To operationalize the prediction that the blocking power is strongest in the medium range of CLTV, we sort observations by CLTV into low, medium and high buckets.[15] The medium range is CLTV from 75% to 100%, the low range is below that, and high range is above.

To motivate our analysis, we begin by presenting the incidence of refinancing in 2009, sorted by the presence of a second mortgage and by CLTV range. This table gives a sense of the relevant three-way interaction, i.e. whether residing in an easy state makes refinancing more likely, when there is a second mortgage and the CLTV is in the middle range.

Low CLTV Range (CLTV<75)			
	Not Easy	Easy	
No Second	16.8%	15.3%	
Second	17.4%	16.2%	
Middle CLTV Range (75≤CLTV<95)			
	Not Easy	Easy	
No Second	13.8%	11.5%	
Second	13.5%	13.6%	
High CLTV Range (CLTV≥95)			
	Not Easy	Easy	
No Second	8.3%	6.2%	
Second	7.2%	5.8%	

The table shows an interaction in the predicted direction. In the low and high CLTV ranges, there is little marginal impact of being in an easy state on the effect of a second mortgage on the likelihood of refinancing. That is, in the low range, the presence of a second mortgage associates with a 0.6 percentage point higher probability of refinancing in the not-easy states (17.4% with a second mortgage, versus 16.8% without), and 0.9 percentage points higher in the easy states (16.2% versus 15.3%). In the high CLTV range, it associates with a 0.9 percentage point decrease in the refinancing probability in not-easy states, and a 0.4 percentage point decrease in

[15] See also Elul et al (2010), where CLTV buckets are used in a model of mortgage default, and interacted with other borrower characteristics.

the easy states. By contrast, in the middle CLTV range, the effect of being in an easy state on the effect of a second mortgage on refinancing is strongly positive (13.6% versus 11.5%), whereas in the not-easy states it is actually slightly negative.

For a formal hypothesis test, we run a probit model with easy/not-easy, low/mid/high CLTV and second/no-second as explanatory variables, separately and interacted. The model also includes as controls several variables, such as loan balance and interest rate, likely to influence the likelihood of refinancing. The results are in Table 4..

Before getting to the key test statistic, it is worth noting that the variables capturing the benefit of refinancing to the homeowner have the expected signs.[16] Loans with higher interest rates are more likely to be refinanced, as are mortgages with larger balances. Fixed-rate loans, as well as ARMS with long fixed periods, are more likely to be refinanced than ARMS with short fixed-rate periods. Other explanatory variables also enter as expected: loans with high risk scores, be it a FICO score at origination, or the Equifax risk score as updated in December 2008, are more likely to be refinanced, and subprime loans are less likely to be refinanced, as are higher-LTV loans.[18] Loans with balances above the conforming loan limit as of December 2008 (i.e., $417,000) are less likely to refinance, reflecting the tighter underwriting conditions since the financial crisis began.

We now turn to the variables at the center of our analysis: the presence of a second mortgage, the state legal environment, and the CLTV. The high CLTV range is associated with a lower refinancing probability (relative to the omitted category of CLTV<75%.) Borrowers with second mortgages are more likely to refinance, most likely so that they can roll both mortgages

[16] See Elul (2012) for further discussion of the determinants of refinancing, and how these have changed over time.
[18] In addition, 40-year mortgages are less likely to be refinanced, as these loans were typically taken out by riskier, liquidity-constrained borrowers. By contrast, 30-year mortgages are more likely to refinance (relative to the omitted category, 15-year) reflecting the borrower benefit.

into a single, new, loan. The coefficient on easy subrogation laws is negative, but it cannot be interpreted independently of the state fixed effects. Finally, consider the three-way interaction between the CLTVcategory, the second mortgage indicator and easy subrogation laws. This is positive and statistically significant for the middle CLTV region, which confirms our earlier prediction. In particular, in Panel B of this table we compute the marginal effect of a second mortgage on the probability of refinancing. It is only in the middle CLTV region that there is a significant difference in the impact of a having a second mortgage between the easy and not-easy states: in the easy subrogation states borrowers with second mortgages are 2.9 percentage points more likely to refinance in 2009, whereas in the not-easy states the effect of a second mortgage is only 1.6 percentage points.This difference is statistically significant, and also constitutes an economically significant increase in the probability of refinance, as compared to the average refinancing probability for 2009 of 12%..

5. Summary and Conclusion

This paper addresses the conflicting legal principles at stake when a homeowner wishes to refinance the senior of multiple mortgages. It does so by relating the incidence of refinancing to both the cross section of state legal environments and mortgage circumstances, and the key finding is that, in those states that resolve the conflict by allowing the second mortgage to block the refinancing show significantly less such refinancing. This is a potentially significant barrier to refinancing whose economic significance is heighted by today's historically low rates.

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Figure 1

Geographic Distribution of Easy Subrogation States

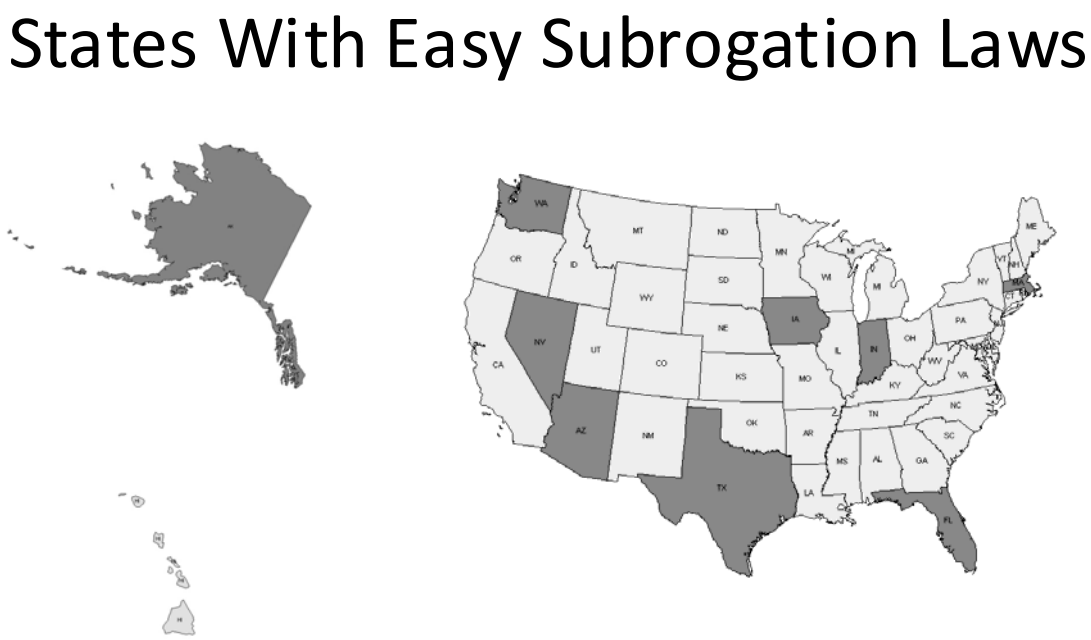

Table 1

Cross Section of State Law Pertaining to Subrogation of Mortgages

This table was compiled by Dale Whitman and was current as of September 17th, 2008. The following notes were included with the table: "Restatement" indicates the court would grant subrogation even if the refinancing lender had actual knowledge of the intervening lien."Yes if constructive notice, no if actual knowledge" indicates the court would grant subrogation if the refinancing lender had only constructive notice from the recording of the intervening lien, but would not do so if the refinancing lender had actual knowledge of it."No if actual or constructive notice" indicates tha the court would not grant subrogation if the refinancing lender had either actual knowledge of the intervening lien or constructive notice from the recording of the intervening lien.

State	Legal position	Controlling case	Notes and comments
Alabama (AL)	Yes if constructive notice, no if actual knowledge.	In re Hubbard, 89 B.R. 920 (Bankr.N.D.Ala.1988)	
Alaska (AK)	Restatement	Rush v. Alaska Mortg. Group, 937 P.2d 647 (Alaska 1997)	Technically not a subrogation case, since prior lender and refinancing lender were the same.
Arizona (AZ)	Restatement	Lamb Excavation, Inc. v. Chase Manhattan Mortgage Corp., 95 P.3d 542 (Ariz.App.2004)	
Arkansas (AR)	Yes if constructive notice, no if actual knowledge.	United States v. Hughes, 499 F.2d 322 (8th Cir.1974)	
California (CA)	Yes if constructive notice, no if actual knowledge.	Lawyers Title Ins. Corp. v. Feldsher, 42 Cal.App.4th 41, 49 Cal.Rptr.2d 542 (1996)	
Colorado (CO)	Restatement (?)	Hicks v. Londre, 125 P.3d 452 (Colo. 2005); AmeriquestMortg. Co. v. Land Title Ins. Corp., 2007 WL 2128203 (Colo.App. 2007).	Ct indicated it might not grant subrog under Rest. to a sophisticated commercial lender
Connecticut (CT)	No if actual or constructive notice	Independence One Mortg. Corp. v. Katsaros, 43 Conn.App. 71, 681 A.2d 1005 (1996)	
Delaware (DE)	Unclear; probably yes if constr. Notice, no if actual knowledge	Stoeckle v. Rosenheim, 10 Del.Ch. 195, 87 A. 1006 (Del.Ch. 1913)	
Dist. Of Columbia (DC)	Restatement (?)	Eastern Savings Bank, FSB, v. Pappas, 829 A.2d 953 (D.C.2003);	The ct.cited Rest. favorably, but did not decide whether to follow the Rest. in an actual knowledge case, as there was none here.
Florida (FL)	Restatement	Suntrust Bank v. Riverside Nat'l Bank of Florida, 792 So.2d 1222 (Fla. App.2001)	Technically not a subrogation case, since prior lender and refinancing lender were the same.

Georgia (GA)	Not if actual or constructive notice	McCollum v. Lark, 187 Ga. 292, 200 S.E. 276 Ga. 1938	
Hawaii (HI)	Unclear; court's analysis is too cursory.	Strouss v. Simmons, 66 Haw. 32, 657 P.2d 1004 (Hawaii,1982)	
Idaho (ID)	Yes if constructive notice, no if actual knowledge.	Metropolitan Life Ins. Co. v. First Security Bank, 94 Idaho 489, 491 P.2d 1261 (1971)	
Illinois (IL)	No if actual or constructive notice	Mortgage Electronics Registration Systems, Inc. v. Phylactos, 2005 U.S. Dist. LEXIS 6295 (N.D. Ill. 3/ 30/05)	But Illinois has been extremely liberal in finding an agreement, leading to "conventional subrogation."
Indiana (IN)	Restatement	Bank of New York v. Nally, 820 N.E.2d 644 (Ind.2005)	
Iowa (IA)	Restatement	Klotz v. Klotz, 440 N.W.2d 406 (Iowa App.1989)	
Kansas (KS)	No if actual or constructive notice	National City Mortg. Co. v. Ross, 117 P.3d 880 (Kan.App.2005)	
Kentucky (KY)	Unclear (but it is clear that court would not allow subrog.ifrefi lender had actual knowledge)	Minix v. Maggard, 652 S.W.2d 93 (Ky.App.1983)	
Louisiana (LA)	No subrogation in favor of a refinancing mortgagee	Pelican Homestead Ass'n v. Security First Nat. Bank, 532 So.2d 397 (La.App.1988)	Louisiana will not grant subrogation if the old first mortgage has been discharged of record.
Maine (ME)	Yes if constructive notice, no if actual knowledge.	United Carolina Bank v. Beesley, 663 A.2d 574 (Me.1995)	
Maryland (MD)	Yes if constructive notice, no if actual knowledge.	Citibank Federal Savings Bank. v. New Plan Realty Trust, 748 A.2d 24 (Md.App.2000)	
Massachusetts (MA)	Restatement	East Boston Sav. Bank v. Ogan, 428 Mass. 327, 701 N.E.2d 331 (1998)	
Michigan (MI)	No subrog.in absence of fraud, mistake, or misconduct by the lender being subordinated.	AmeriquestMortg. Co. v. Alton, 271 Mich.App. 660 (Mich.App.2006)	The Michigan cases are a conflicting mess. Other recent MI cases reject Restatement; see Washington Mut. Bank v. ShoreBank Corp., 703 N.W.2d 486 (Mich.App.2005). No Sup.Ct. case.
Minnesota (MN)	No if actual or constructive notice	Ripley v. Piehl, 700 N.W.2d 540 (Minn.App.2005) (based on much older Sup.Ct. cases.)	
Mississippi (MS)	Yes if constructive notice, no if actual knowledge.	Home Owners' Loan Corporation v. Moore, 185 So. 253 (Miss.1939)	

Missouri (MO)	No if actual or constructive notice	184 Miss. 283, 185 So. 253	
Montana (MT)	No case law	Miss. 1939.	
Nebraska (NE)		American National Bank v. Clark, 660 N.W.2d 530 (Neb.App.2003)	Ostensibly based on "conventional subrogation."
Nevada (NV)	Restatement	Houston v. Bank of America, 78 P.3d 71 (Nev.2003)	
New Hampshire (NH)	Unclear; probably yes if constr. notice, no if actual knowledge	Hammond v. Barker, 61 N.H. 53, 1881 WL 4658 (N.H. 1881)	No modern case law.
New Jersey (NJ)	Yes if constructive notice, no if actual knowledge.	First Union National Bank v. Nelkin, 808 A.2d 856 (N.J. Super. App. Div. 2002)	
New Mexico (NM)	Yes if constructive notice, no if actual knowledge.	In re Beltramo, 367 B.R. 825, 2007 WL 1307917 (Bkrtcy.D.N.M.2007)	A bankruptcy court predicting NM law.
New York (NY)	Yes if constructive notice, no if actual knowledge.	Gerenstein v. Williams, 23 N.Y.S.2d 257 (N.Y. App.Div.2001)	
North Carolina (NC)	No if actual or constructive notice	First Union Nat'l Bank v. Lindley Laboratories, Inc., 510 S.E.2d 187 (N.C.App.1999)	
North Dakota (ND)			
Ohio (OH)	Unclear	First Union Nat. Bank v. Harmon, 2002 WL 1980705 (Ohio App.2002) follows Rest.; contra, see IndyMac Bank v. Bridges, --- N.E.2d ----, 2006 WL 3095774 (Ohio App. 2006); Washington Mut. Bank, FA v. Aultman, 876 N.E.2d 617 (Ohio App.2007)	Unclear whether actual knowledge by lender would have denied subrogation.
Oklahoma (OK)	Yes if constructive notice, no if actual knowledge.	Mortgage Electronic Registration Systems, Inc. v. U.S. ex rel. Internal Revenue Service, 134 P.3d 913 (Okla.Civ.App.2006)	Remanded for determination as to whether refinancing mortgagee exercised due diligence in determining existence of intervening lien.
Oregon (OR)	Yes if constructive notice, no if actual knowledge.	Rusher v. Bunker, 99 Or.App. 303, 782 P.2d 170 (Or.App.1989); Dimeo v. Gesik, 993 P.2d 183 (Or.App.1999)	In Dimeo, ct remanded for finding as to whether lender's reliance on erroneous final title report was negligent.
Pennsylvania (PA)	No subrogation in favor of a refinancing mortgagee	1313466 Ontario, Inc. v. Carr, 954 A.2d 1 (Pa.Super.2008)	The Superior Ct. likes the Rest., but can't adopt it because of old precedent, which treats all refi lenders as "volunteers."
Rhode Island (RI)	No case law		
South Carolina (SC)	Yes if constructive notice, no if actual knowledge.	Pee Dee State Bank v. Prosser, 367 S.E.2d 708 (S.C. 1988)	

South Dakota (SD)			
Tennessee (TN)	Apparently no subrog.in absence of fraud or mistake by the lender being subordinated	Bankers Trust Co. v. Collins, 124 S.W.3d 576 (Tenn.Ct.App.2003)	
Texas (TX)	Restatement	Farm Credit Bank v. Ogden, 886 S.W.2d 305 (Tex.App.1994)	There are several earlier Texas cases taking the same view as early as 1969.
Utah (UT)	No if actual or constructive notice	Richards v. Security Pacific Nat. Bank, 849 P.2d 606 (Utah App.1993)	
Vermont (VT)	Unclear	No modern cases	
Virginia (VA)	No if actual or constructive notice	Centreville Car Care, Inc. v. North American Mortg. Co., 559 S.E.2d 870 (Va.2002)	
Washington (WA)	Restatement	Bank of America v. Prestance Corp., 2007 WL 1631420 (Wash. 2007)	
West Virginia (WV)	No case law		
Wisconsin (WI)	Yes if constructive notice, no if actual knowledge.	Pierner v. Computer Resources & Technology, Inc., 577 N.W.2d 388 (Wis.App.1998)(unpub); Ocwen Loan Servicing, LLC v. Williams, 305 Wis.2d 772, 741 N.W.2d 474 (Wis.App.2007)	The *Pierner*court does not discuss the effect of actual knowledge, as there was none. The opinion is very liberal, and the ct.may yet adopt the Rest.
Wyoming (WY)	Yes if constructive notice, no if actual knowledge.	Countrywide Home Loans, Inc. v. First Nat'l Bank of Steamboat Springs, 144 P.3d 1224 (Wyo.2006)	

Table 2
Data Description and Comparison with Unmatched Sample

The column labeled "Matched Sample Mean" characterizes the mortgages in the sample resulting from the match of LPS data with FRBNY/Equifax data. The column labeled "Unmatched Sample Mean" characterizes a random sample of mortgages drawn from the LPS data, but not matched to the FRBNY/Equifax data.

Variable		Matched Sample Mean	Unmatched Sample Mean
Refinanced in 2009		0.12	
Easy Subrogation State		0.24	0.25
First Mortgage Characteristics (at Orig.)			
FICO Score @ Origination		722	725
Loan Amt.		$246,692	$251,736
LTV @ Orig.		73.34	72.13
First Mortgage Origination Yr.			
	2003	0.12	0.12
	2004	0.15	0.14
	2005	0.22	0.22
	2006	0.20	0.22
	2007	0.31	0.30
Fixed rate		0.85	0.82
ARM	24-mon. fixed period	0.00	0.01
	36-mon.	0.01	0.01
	60-mon.	0.08	0.10
	84-mon.	0.03	0.03
	120-mon.	0.03	0.03
Term			
	180-mon	0.09	0.09
	360-mon.	0.90	0.90
	480-mon.	0.01	0.01
"Investor"			
	Portfolio	0.07	0.07
	GSE	0.75	0.75
	Private Securit.	0.18	0.18
As of Dec 2008			
Second Mortgage		0.31	
Second Mortgage Balance (conditional on having a second)		$57,744	
Combined LTV		85.48	
Cty Unemp. Rate (%)		7.00	7.09
First Mortgage Int. Rate (%)		6.02	6.03
Updated Equifax Risk Score		741	
Jumbo Principal Bal. on 1st (Dec. 2008)		0.10	

Table 3
Mortgage Statistics: Easy vs. Not-Easy States

The column labeled "Not-Easy State" reports the average for the portion of the matched sample representing mortgages of properties in Not-Easy states, as defined in the text. The column "Easy State" addresses the Easy states.

		Not-Easy State	**Easy State**
Refinanced		0.13	0.11
FICO @ Orig.		722	719
LTV @ Orig.		72.92	75.31
Origination Year	2003	0.12	0.11
	2004	0.15	0.14
	2005	0.22	0.22
	2006	0.20	0.21
	2007	0.30	0.32
FRM		0.84	0.87
ARM fixed period (months)	24	0.00	0.00
	36	0.01	0.01
	60	0.08	0.07
	84	0.03	0.03
	120	0.03	0.02
Term (months)	180	0.09	0.08
	360	0.90	0.91
	480	0.01	0.01
Investor:	GSE	0.75	0.78
	Private Securitization	0.19	0.15
	Portfolio	0.07	0.06
Unemployment Rate		7.02	6.91
Jumbo		0.11	0.07
Balance ($)		253,009	228,040
Updated Equifax Risk Score		743	735
Second Mortgage		0.31	0.28
Interest Rate (%)		6.01	6.06
CLTV≤75		0.36	0.31
CLTVϵ(75,95]		0.32	0.31
CLTV>95		0.32	0.38
N		294,454	91,084

Table 4
Probit Model of Refinancing

This table reports the output from a Probit model where each observation is a residence with a first mortgage, and the dependent variable indicates that the senior mortgage was refinanced in 2009. There are 701,856 observations, and "**" indicates statistical significance at the 5% level. State fixed effects included but not reported. Panel A contains the Probit results, showing both coefficients and marginal effects. Panel B uses the Panel A interaction results to report the marginal effect of the presence of a second mortgage on the probability of refinancing.

Panel A

	Coeff.	SE		Marginal	SE	
Easy Subrog.	-0.055	0.088		-0.011	0.015	
FICO @ Orig.	0.001	0.000	**	0.000	0.000	**
LTV @ Orig.	-0.002	0.000	**	0.000	0.000	**
Origination Year: 2004	0.133	0.013	**	0.021	0.002	**
2005	0.083	0.012	**	0.013	0.002	**
2006	0.279	0.014	**	0.048	0.002	**
2007	0.329	0.013	**	0.058	0.002	**
Investor: Private Securitization	-0.132	0.011	**	-0.023	0.002	**
Portfolio	-0.247	0.015	**	-0.041	0.002	**
ARM Fixed Period (months): 24	-0.343	0.079	**	-0.051	0.010	**
36	-0.193	0.042	**	-0.031	0.006	**
60	0.101	0.013	**	0.019	0.003	**
84	0.123	0.018	**	0.024	0.004	**
120	0.082	0.019	**	0.015	0.004	**
Term: 360	0.110	0.012	**	0.019	0.002	**
480	-0.046	0.042		-0.007	0.007	
Second Mort.	0.075	0.012	**	0.018	0.001	**
Unemp. Rate (Dec 2008)	-0.022	0.002	**	-0.004	0.000	**
Int. Rate	0.218	0.007	**	0.040	0.001	**
Jumbo (Dec. 2008)	-0.526	0.016	**	-0.096	0.003	**
ln (loan amt.)	0.303	0.009	**	0.055	0.002	**
Updated Equifax Riskscore	0.004	0.000	**	0.001	0.000	**
CLTVϵ(75,95]	-0.228	0.011	**	-0.048	0.002	**
CLTV>95	-0.679	0.016	**	-0.112	0.002	**
CLTVϵ(75,95]&Second Mort.	0.007	0.018				
CLTV>95&Second Mort.	0.067	0.020	**			
Second Mort. & Easy Subrog.	-0.010	0.029				
CLTVϵ(75,95]&Easy Subrog.	-0.030	0.020				
CLTV>95&Easy Subrog.	-0.017	0.027				
CLTVϵ(75,95]&Second Mort.&Easy	0.084	0.041	**			
CLTV>95&Second Mort.&Easy	0.037	0.044				

Panel B

	Marginal	SE
CLTV≤75&Not Easy Subrog.	0.018	0.003
CLTV≤75&Easy Subrog.	0.015	0.006
CLTVϵ(75,95]&Not Easy Subrog.	0.016	0.003
CLTVϵ(75,95]&Easy Subrog.	0.029	0.005
CLTV>95&Not Easy Subrog.	0.017	0.002
CLTV>95&Easy Subrog.	0.018	0.004