



Borrowers Gain No Interest Rate Benefits from Prepayment Penalties on Subprime Mortgages

A research report by the
Center for Responsible Lending

Principal Investigator: Keith S. Ernst

January 2005



www.responsiblelending.org

Introduction

Homeownership not only supplies families with shelter, it also provides a means of savings, allowing borrowers to build wealth and economic security. Home equity accounts for 76 percent of the median net worth of American households.¹ For those in the subprime market, however, prepayment penalties on home loans can cancel out the positive wealth-building effects of homeownership. When borrowers with subprime loans qualify for a more affordable loan during a prepayment penalty's effective period, they face a choice between depleting savings or staying locked in a higher-cost loan. Understanding the impact of prepayment penalties in subprime home loans on wealth-building is critical, because up to 80 percent of subprime mortgage loans include prepayment penalties, in contrast to only two percent of mortgages in the prime market.²

Industry representatives have long argued that borrowers with subprime loans are compensated for the negative effects of prepayment penalties by receiving a lower interest rate than otherwise would be available. To test this claim, the Center for Responsible Lending (CRL) investigated whether prepayment penalties convey benefits to borrowers commensurate with their costs. The evidence presented here shows that, in fact, borrowers with subprime loans fail to receive lower interest rates and, in some cases, actually pay a **higher** rate than similarly situated borrowers with subprime loans without prepayment penalties. Because a prepayment penalty makes it more difficult for other lenders to refinance a borrower into a better-priced loan, the fact that borrowers receive no interest savings makes prepayment penalties unfair and anticompetitive.

Key Findings

To assess how prepayment penalties affect interest rates in the subprime market, researchers from the Center for Responsible Lending (CRL) examined loan-level data from approximately half a million subprime loans.³ Using multivariate regression models, CRL researchers analyzed fixed-rate, 30-year loans originated during a three-year period. We believe the research presented here is the most complete to date examining this aspect of prepayment penalties:

- In refinance loans, prepayment penalties produced **no statistically significant difference** in the interest paid by borrowers with subprime loans. In other words, borrowers with prepayment penalties paid similar interest rates to similarly situated borrowers who did not have penalties.
- For purchase loans, borrowers who had subprime loans with prepayment penalties paid **higher** interest rates than similarly situated borrowers who had subprime loans without prepayment penalties. For example, in 2002, borrowers with a 30-year, fixed-rate subprime purchase mortgage paid an interest rate that was **40 basis points (0.40%) higher** if their loan included a prepayment penalty than if it did not. As shown in the chart on page 5, these trends were consistent over the three-year period.
- For an estimated 380,000 borrowers that received subprime purchase loans in 2003, the lifetime cost of this higher interest rate is up to \$881 million.

Background

Given the higher interest rates attached to subprime loans compared with prime loans, many prepayments are triggered when borrowers have established a stronger credit history. Prepayment is therefore a positive step for these borrowers, signaling the ability to qualify for a loan with more favorable terms. In the subprime market, however, prepayment penalties may alter this dynamic and harm borrowers in several ways:

1. Draining equity. Many homeowners with subprime loans have worked hard for years to accumulate equity in their homes. A prepayment penalty, routinely amounting to thousands of dollars, directly drains home equity when a borrower refinances.
2. Creating a high-cost trap. Sometimes borrowers simply cannot afford the cost of the prepayment penalty. In such cases, they may be forced to continue paying a higher interest rate when they could otherwise refinance and qualify for a more affordable loan.
3. Providing an incentive for kickbacks. When brokers deliver loans at a higher interest rate than the lender requires, the lender typically pays the broker a kickback, known as a “yield spread premium.” Because lenders want to recoup the cost of the kickback even if the borrower pays off early, they are more willing to pay yield spread premiums on loans with prepayment penalties. For this reason, prepayment penalties facilitate brokers charging higher interest rates for borrowers who could otherwise qualify for lower rates.

Prepayment penalties have become increasingly common in the subprime market in recent years, at a level far out of proportion to the prime mortgage market. The wide disparity between the two markets raises substantial doubts as to whether consumer choice explains the prevalence of prepayment penalties in the subprime market, especially given these borrowers’ incentive to build a good credit history and refinance as soon as feasible.

Prepayment rates are a significant issue for investors in both the prime and subprime markets, yet the two sectors manage prepayments in different ways. Those who originate, invest in, and purchase loans base their decisions on anticipated cash flows. Mortgage prepayments disrupt the expected stream of income and make it more challenging to project revenues over time. In the competitive prime market, where refinances are commonplace and prepayment penalties are rare, the market adjusts the pricing on loans and securities to account for prepayments. In the subprime market, lenders choose to manage early payoffs by using prepayment penalties to lock borrowers into loans or ensure additional revenues (through the cash received from the penalty itself) if borrowers do refinance.

In the prime mortgage market, prepayment risk is allocated among all borrowers, lenders and investors, and borrowers who can qualify for more affordable loans can do so without paying a penalty. In the subprime market, lenders and investors are able to minimize their own

prepayment risk at the expense of a large subset of borrowers who receive the burden of penalties without any offsetting interest rate benefit.

Current Regulation of Prepayment Penalties

Numerous states have passed laws and issued regulations that prohibit or restrict the use of prepayment penalties in the mortgage market. Currently, laws banning prepayment penalties are effective in at least nine states, including states that allow for limited exceptions.⁴ Other states have imposed specific limits, including limits on (1) the amount of fees associated with the penalties; (2) permissible loan types; or (3) additional lender disclosure requirements.

A recent regulatory decision by the Office of Thrift Supervision has ensured that such state laws are in effect for state-based mortgage lenders, such as finance companies. Freddie Mac and Fannie Mae both have announced that they will not invest in subprime home loans with prepayment penalties that remain in effect for more than three years. These restrictions have had no discernible effect on the availability of subprime mortgages or the rapid growth of the subprime market. In 2000, the subprime mortgage market was \$138 billion. Only three years later, the market had more than doubled, reaching \$332 billion.⁵ Today, one in every five mortgages is a subprime loan.⁶

Data and Methodology

To measure the effect of prepayment penalties on subprime mortgage interest rates, CRL researchers used multivariate regression models to estimate separate results for each year 2000-2002 and for fixed-rate loan products (30-year purchase mortgages and 30-year refinances). The study relied on a relevant subset from the Loan Performance Asset-Backed Securities Database (ABS Database) of securitized subprime loans.⁷ The database contains an array of variables at the loan level, including many variables not available in other national mortgage databases such as FICO scores, loan-to-value ratios, debt-to-income ratios, and the length of prepayment penalty terms.

A potential confounding factor is that borrowers may choose a particular loan-to-value ratio (LTV) to achieve a desired interest rate. To better isolate the association between interest rates and prepayment penalties, it was necessary to use a specific statistical technique (least squares instrumental variables estimation) to better estimate the effect of variables correlated with LTV. This method increases confidence that the results accurately reflect relationships between prepayment penalties and loan pricing, rather than the effects of LTV.

Characteristics of Subprime, 30-Year, Fixed Rate Mortgages in ABS Database

Number of loans	1,190,500
Origination period	2000 – 2002
Refinances	65%
Single-family residences	74%
Mean loan amount	\$171,956
Loans with prepayment penalties	40%

Variables*

- Geography
- Loan-level underwriting factors, (e.g., credit score, LTV)
- Individual loan characteristics (e.g., loan amount, adjustable vs. fixed, level of documentation)
- Residence type

* For a complete list of variables, see Appendix 1.

Findings

Interest Rate Effects of Prepayment Penalties

For 30-year, fixed-rate subprime purchase loans, the prepayment penalty coefficient is positive and statistically significant in all models, indicating that the presence of a prepayment penalty is associated with an increase in interest rates. For 30-year, fixed-rate subprime refinances, the presence of a prepayment penalty had no consistent, meaningful impact on interest rates.

For complete results on both types of loans, see Appendix 2.

These initially counter-intuitive results contrast with the other variables analyzed, which consistently produce the expected results. For example, FICO

scores and interest rates have a strong negative relationship: a 100-point increase in a FICO score decreases the interest rate by 90 - 120 basis points, all other things equal. Similarly, LTVs and debt-to-income ratios were positively associated with interest rates on loans, meaning that higher LTVs and debt-to-income ratios increased rates borrowers received.

The Effect of Prepayment Penalties on Subprime Mortgage Interest Rates

Interest Rate Changes Associated with Penalties (in rounded basis points)

Loan Type	2000	2001	2002
30-yr. FRM refinances	-9*	+2	0
30-yr. FRM purchases	+39*	+51*	+40*

*Statistically significant at a 99.9% confidence level ($p < 0.001$ level).

The Costs of Higher Interest Rates Associated with Prepayment Penalties

Higher interest rates associated with prepayment penalties on subprime purchase loans impose significant additional cost on families over time. Assuming a 30-year subprime purchase loan of \$120,000 with a fixed interest rate of 8.4 percent (versus the 8 percent rate the borrower likely would have received without a prepayment penalty), borrowers would pay more than \$2,000 in additional interest over a five-year period if their loan included a prepayment penalty. If held to maturity, borrowers would pay more than \$12,000.

The cost implications become even more compelling when considered in the context of the entire subprime market. We estimate that borrowers who took out subprime purchase loans with prepayment penalties in 2003 will pay up to \$881 million in extra interest alone over the life of their loans, without even considering the cost of the prepayment penalty fee.

This estimate is derived from an analysis of a subset of the ABS Database,⁸ which shows that 60,000 borrowers would pay \$139 million in extra interest over the life of their loans.⁹

Extending that result to the larger ABS Database and then to the subprime market as a whole, and adjusting for actual market volume,¹⁰ we arrive at the estimate of up to \$881 million in extra interest for borrowers with subprime purchase loans.

This extra cost is imposed on borrowers who must, in addition, pay a substantial fee if they refinance during the penalty term. While this analysis does not project the total prepayment penalty fees borrowers with subprime loans will incur as a result of early loan payoffs, we note that 2003 borrowers' total exposure to potential subprime prepayment penalties is \$7.0 billion.¹¹

Even for subprime refinance mortgages, which showed neither an interest benefit nor a cost associated with subprime prepayment penalties, CRL's findings stand in sharp contrast to claims touting the benefits of such penalties. For example, Countrywide Financial Corporation is among the lenders who imply that prepayment penalties help keep interest rates relatively low for subprime borrowers, and that eliminating penalties will contribute to "significantly higher interest rates and monthly payments for borrowers who can least afford them."¹² However, our analysis shows that borrowers in the subprime market fail to realize the purported interest rate benefits of prepayment penalties while relinquishing valuable savings from their home equity.

Conclusion and Comments

While lenders may discount interest rates to brokers for loans with prepayment penalties, this research suggests that borrowers in the subprime market do not receive these benefits. In fact, prior research has identified a “principal-agent” issue that finds brokers seizing on similar benefits for themselves at the expense of borrowers.¹³ With respect to prepayment penalties, the expense is also shared by other lenders that will find it more difficult, if not impossible, to compete to offer a rate low enough to entice a rational borrower with a prepayment penalty to refinance. In this light, prepayment penalties operate to reduce competition in the mortgage market.

One interesting aspect of our findings is the marked difference in the results for subprime purchase and refinance loans. Prepayment penalties are associated with a significant increase in interest rates on subprime purchase loans, but have no meaningful impact on subprime refinances. One possible explanation for this difference lies in the typical financial positions of borrowers in the purchase and refinance markets. Borrowers who seek purchase loans in the subprime market likely have the minimum amount of assets needed to get a loan.¹⁴ Faced with the reality that the borrower has little or no excess equity, brokers and others involved in the transaction have a strong motive to seek alternative ways to get paid, including yield-spread premiums based, at least indirectly, on prepayment penalties. For refinancing borrowers, the motivation to seek such forms of compensation may be weaker, since the borrower typically has accumulated equity that can be used as a resource to pay up-front fees. Still, findings show that in a subprime refinance transaction, borrowers are receiving no benefit from the prepayment penalty in the form of reduced interest.

CRL’s findings strongly suggest that prepayment penalties in subprime loans are not serving borrowers’ best interests. The data here indicate that the purported tradeoff between prepayment penalties and interest rates in subprime loans is essentially nonexistent as borrowers receive the burdens of penalties without compensating benefits. Once the penalty is in place, the borrower’s ability to build wealth is significantly hampered since the borrower either continues to pay excess interest or gives up accumulated home equity to get a better loan.

Finally, we believe the issue of prepayment penalties should be viewed in light of longstanding policies designed to support and facilitate affordable mortgage credit. Homeownership provides one of the most accessible ways that lower-income, working families can achieve sustainable economic security. By burdening such families with prepayment penalties, the subprime mortgage market perpetuates a practice that is directly counter to these important national priorities.

About the Center for Responsible Lending

The Center for Responsible Lending is a nonprofit, nonpartisan research and policy organization dedicated to protecting home ownership and family wealth by working to eliminate abusive financial practices. CRL is affiliated with Self-Help, one of the nation’s largest community development financial institutions.

For additional information, please visit our website at www.responsiblelending.org.

Notes

¹ Shawna Orzechowski and Peter Sepielli, “Net Worth and Asset Ownership of Households: 1998 and 2000,” U.S. Department of Commerce, Economics and Statistics Administration – U.S. Census Bureau (P70-88), May 2003, p. 15.

² See Standard & Poor’s, “NIMS Analysis: Valuing Prepayment Penalty Fee Income,” at <http://www.standardandpoors.com> (January 3, 2001); see also Standard & Poor’s, “Legal Criteria Reaffirmed for the Securitization of Prepayment Penalties,” at <http://www.standardandpoors.com> (May 29, 2002); “Prepayment penalties prove their merit for subprime and ‘A’ market lenders,” <http://www.standardandpoors.com> (January 3, 2001); see also “Freddie offers a new A-, prepay-penalty program,” *Mortgage Marketplace*, at 1-2 (May 24, 1999); see also Joshua Brockman, “Fannie revamps prepayment-penalty bonds,” *American Banker* at 16 (July 20, 1999).

³ The regression analyses in this report were performed by Christopher A. Richardson. The conclusions presented are those of the Center for Responsible Lending and should not be attributed to Mr. Richardson. Our data source was the Loan Performance Asset-Backed Securities database (ABS database). For more information on this data set, see John Farris and Christopher A. Richardson, “The Geography of Subprime Mortgage Prepayment Penalty Patterns” in *Housing Policy Debate* (Fannie Mae Foundation), vol. 15, issue 3 (2004).

⁴ For example, in North and South Carolina, the ban on prepayment penalties is limited to loan amounts less than \$150,000.

⁵ *Mortgage Statistical Annual*, March 2004.

⁶ *Inside Mortgage Finance’s Inside B&C Lending*, November 15, 2004 (vol. 9, issue 23), p. 3.

⁷ See note 3.

⁸ Fixed-rate, 30-year subprime loans originated in 2003 and recorded in the database.

⁹ We assume an average loan life of 3.6 years based on subprime prepayment curves from Standard & Poor’s and Fitch Ratings.

¹⁰ To extend the analysis to the full ABS Database, we assume that the remaining purchase loans not studied exhibit the same increase in interest rates. Next, to extend the results to the full market, we multiply this figure by the proportion of total estimated 2003 subprime volume (as listed in the Mortgage Statistical Annual) divided by the total volume of loans in the ABS Database.

¹¹ This figure is calculated as the product of the following three conservative estimates: \$332 billion total subprime market volume in 2003, 70 percent of subprime loans with prepayment penalties, three percent average maximum prepayment penalty fee. In 2001, CRL estimated that borrowers of subprime home loans cumulatively paid \$2.3 billion in penalties each year. See Eric Stein, “Quantifying the Economic Cost of Predatory Lending,” Coalition for Responsible Lending (2001) at <http://www.responsiblelending.org>.

¹² See, e.g., testimony of Sandy Samuels on behalf of Countrywide Financial Corporation and the Housing Policy Council of the Financial Services Roundtable before the Subcommittees on Financial Institutions and Housing – U.S. House of Representatives, March 30, 2004.

¹³ See, e.g., Howell E. Jackson & Jeremy Berry, “Kickbacks or Compensation: The Case of Yield Spread Premiums” (January 2002) at http://www.law.harvard.edu/faculty/hjackson/pdfs/january_draft.pdf. See also William C. Apgar and Allen J. Fishbein, “The Changing Industrial Organization of Housing Finance and the Changing Role of Community-Based Organizations,” (May 2004) at www.jchs.harvard.edu/publications/finance/babc/babc_04-9.pdf, p.9.

¹⁴ In fact, among loans examined for this study, borrowers with refinances had almost twice as much equity available as the purchase loan borrowers.

APPENDIX 1

Definition of Variables

Variable Name	Description
Prepayment Penalty	
PPP	Loans with prepayment penalty
Borrower's Creditworthiness	
FICO	Borrowers' credit score at origination
DTI	Borrowers' debt to income ratio
Borrower's Share of Equity	
LTV	Origination loan to value ratio
Jumbo Mortgages	
Jumbo	Loans with amounts larger than the Fannie Mae/Freddie Mac conforming loan limit, which is \$300,700, \$275,000, and \$252,700 for 2002, 2001 and 2000, respectively.
Minority Concentration	
Min%	Percentage of residents in each zip code who are, not single-race Caucasian. Latinos and multiracial individuals are classified as minority even if one of the races they self-identify as is Caucasian. Zip code information is from LP database. Minority percentage is from the Summary File 2 (SF2) database of the 2000 Census.
Loan Documentation Level	
Low-doc	Low loan documentation level
No-doc	No loan documentation
Mortgage Property Type	
Condo	Condo
Coop	Coop
2-4 unit	2-4 unit residence
TH	Townhouse
PUD	Planned unit development
MH	Manufactured housing
Origination Seasonal Effects	
Feb-Dec	February to December dummies

APPENDIX 2

Full results for the ordinary least squares (OLS) and instrumental variables (IV) regressions are presented on the following pages. For reasons detailed in the methodology sections, the reported results in the paper rely on the output from the IV regressions.

In each case, the reported coefficients represent the estimated change in interest rate for a one-unit change in each variable. In the case of variables with a continuous distribution, such as FICO scores, results should be understood to mean changes in interest rate holding other variables constant. In the case of dummy variables (variables that describe discrete categories, such as whether or not a loan has a prepayment penalty), the coefficient represents the estimated change in interest rate when the dummy variable changes from an omitted reference category to the indicated status holding other variables constant.

For example, since the IV coefficient for 30-year fixed rate purchase loan borrowers with prepayment penalties in 2002 (PPP in the third column of the first table of Appendix 2) is 0.403, we can say that the model estimates that these borrowers' interest rates were 0.403 percentage points higher than those of borrowers without prepayment penalties. In other words, the change in status here associated with the dummy variable is from a loan without a prepayment penalty to a loan with a prepayment penalty.

For each coefficient, it is also interesting to observe the associated confidence level, revealed by the t-statistic. A t-statistic with an absolute value of 3.3 indicates that the estimated coefficient differs from zero by a statistically significant amount at a 99.9 percent confidence level. Similar measurements of 2.6 and 2.0 indicate that the measurement is different from zero by a statistically significant amount at a 99 and 95 percent confidence level, respectively.

Finally, readers wishing to understand the extent to which variables in the models explain the variation in interest rate on home loans in the dataset should review the line at the bottom of each regression set that lists the associated adjusted R-squared measurement. For example, looking again at the first IV regression column in the first table, the adjusted R-squared measurement of 0.536 indicates that the model explained 53.6% of all variation in interest rates. This suggests that while the model could benefit from the inclusion of other unknown variables that may also explain differing interest rates, it nonetheless explains a majority of the variation in interest rates.

Appendix 2 (cont.)

30-Year Fixed Rate Purchases

	2002				2001				2000			
	OLS		IV		OLS		IV		OLS		IV	
	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat
Const.	13.45	146.2	12.288	105.7	15.292	105.4	13.532	75.1	14.713	104.6	13.263	77.4
PPP	0.411	59.5	0.403	57.2	0.474	48.5	0.507	49.4	0.374	34.5	0.386	34.6
FICO*	-0.009	-174.0	-0.009	-168.4	-0.01	-144.0	-0.011	-134.8	-0.009	-119.3	-0.009	-108.4
LTV*	0.02	72.1	0.035	37.0	0.018	46.7	0.042	29.3	0.01	23.6	0.032	21.7
DTI*	0.002	6.8	0.002	9.9	0.004	11.4	0.005	16.0	0.006	18.7	0.007	20.2
Jumbo	-0.102	-11.5	-0.047	-4.9	-0.225	-19.7	-0.145	-11.5	-0.188	-15.0	-0.121	-8.9
Min%*	0.302	20.6	0.24	15.6	0.447	23.2	0.361	17.6	0.36	17.7	0.291	13.6
Low	0.21	31.1	0.294	34.7	0.219	22.1	0.364	27.7	0.128	12.1	0.247	18.7
No	0.665	52.2	0.735	53.9	0.675	33.6	0.803	36.5	0.706	26.6	0.825	29.1
Condo	0.05	4.5	0.0526	4.6	0.069	4.5	0.077	4.9	0.07	4.2	0.088	5.1
Coop	0.518	8.2	0.625	9.7	0.332	5.5	0.512	8.1	0.515	8.3	0.691	10.6
2-4 unit	0.124	9.6	0.119	9.0	0.161	8.8	0.159	8.4	0.044	2.4	0.032	1.7
TH	0.046	1.2	0.029	0.8	0.032	0.7	0.014	0.3	0.047	1.2	0.062	1.6
PUD	-0.151	-17.5	-0.14	-15.8	-0.156	-13.1	-0.136	-11.1	-0.142	-10.1	-0.111	-7.6
MH	0.378	12.3	0.429	13.6	0.425	12.3	0.487	13.6	0.355	10.4	0.427	12.1
Feb	-0.105	-6.1	-0.109	-6.2	-0.22	-9.8	-0.218	-9.5	0.033	1.5	0.012	0.5
Mar	-0.214	-13.0	-0.223	-13.3	-0.339	-16.1	-0.333	-15.3	0.081	3.7	0.062	2.7
Apr	-0.198	-12.5	-0.21	-13.0	-0.431	-20.5	-0.425	-19.6	0.102	4.5	0.062	2.7
May	-0.34	-21.9	-0.346	-21.9	-0.425	-20.9	-0.421	-20.0	0.251	11.7	0.207	9.2
Jun	-0.49	-31.9	-0.507	-32.3	-0.408	-20.2	-0.411	-19.7	0.264	12.7	0.218	10.1
Jul	-0.635	-41.5	-0.658	-42.0	-0.48	-24.0	-0.495	-23.9	0.219	10.3	0.17	7.6
Aug	-0.786	-51.4	-0.805	-51.5	-0.576	-29.7	-0.583	-29.1	0.181	8.5	0.133	6.0
Sep	-0.922	-59.7	-0.945	-59.8	-0.714	-35.0	-0.72	-34.2	0.133	6.1	0.076	3.4
Oct	-1.012	-65.9	-1.03	-65.6	-0.926	-46.7	-0.944	-46.1	0.061	2.8	0.002	0.1
Nov	-1.046	-65.9	-1.064	-65.5	-1.08	-53.7	-1.102	-52.9	0.048	2.2	-0.003	-0.1
Dec	-1.099	-70.6	-1.113	-70.0	-0.871	-42.7	-0.904	-42.8	-0.116	-5.3	-0.175	-7.6
# obs.	77,491		77,491		60,806		60,806		50,636		50,636	
Adj. R ²	.556		0.536		.556		.536		.537		0.522	

Appendix 2 (cont.)

30-Year Fixed Rate Refinances

	2002				2001				2000			
	OLS		IV		OLS		IV		OLS		IV	
	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat
Const.	15.621	170.2	14.424	141.3	18.302	124.7	16.96	103.4	17.516	123.0	14.84	73.4
PPP	0.033	4.8	-0.001	-0.1	0.023	2.7	0.015	1.6	-0.043	-3.6	-0.092	-6.8
FICO*	-0.011	-260.4	-0.012	-254.3	-0.013	-237.4	-0.014	-229.6	-0.012	-147.6	-0.012	-132.6
LTV*	0.009	50.2	0.027	45.4	0.005	18.8	0.023	25.0	-0.004	-12.3	0.037	18.6
DTI*	0	2.5	-0.001	-2.9	0.002	7.0	0.001	5.3	-0.002	-5.7	-0.003	-9.3
Jumbo	-0.231	-28.3	-0.223	-26.4	-0.302	-28.7	-0.289	-26.7	-0.335	-19.2	-0.369	-19.1
Min%*	0.321	27.1	0.268	21.7	0.474	33.4	0.443	30.2	0.489	27.7	0.431	21.9
Low	0.139	23.4	0.22	33.0	0.174	21.5	0.273	28.5	0.139	11.6	0.371	21.6
No	0.271	15.4	0.355	19.3	0.535	20.0	0.64	22.9	0.482	10.4	0.768	14.5
Condo	0.084	5.9	0.064	4.4	0.111	5.3	0.104	4.8	0.115	3.5	0.065	1.8
Coop	0.964	10.0	1.064	10.7	0.628	6.4	0.813	8.1	0.815	6.2	1.256	8.5
2-4 unit	0.042	3.3	0.072	5.5	0.109	5.8	0.151	7.8	0.006	0.3	0.065	2.5
TH	0.085	2.2	0.069	1.7	0.144	3.7	0.136	3.4	0.355	9.5	0.31	7.5
PUD	-0.142	-13.6	-0.158	-14.8	-0.118	-8.2	-0.129	-8.7	-0.136	-5.4	-0.178	-6.4
MH	0.477	23.7	0.516	24.8	0.443	19.2	0.481	20.3	0.307	11.7	0.363	12.5
Feb	0.083	5.7	0.075	5.0	-0.321	-17.8	-0.315	-17.0	0.034	1.6	0.046	2.0
Mar	0.044	3.1	0.039	2.7	-0.496	-29.1	-0.493	-28.1	0.133	6.5	0.139	6.1
Apr	0.019	1.4	0.013	1.0	-0.62	-36.3	-0.612	-34.8	0.219	10.0	0.225	9.3
May	-0.019	-1.4	-0.029	-2.0	-0.675	-40.2	-0.662	-38.4	0.27	12.5	0.267	11.2
Jun	-0.128	-9.2	-0.145	-10.1	-0.649	-38.0	-0.638	-36.3	0.371	17.1	0.365	15.3
Jul	-0.249	-18.4	-0.279	-20.0	-0.655	-39.1	-0.645	-37.4	0.384	17.4	0.38	15.5
Aug	-0.441	-33.8	-0.471	-35.0	-0.737	-44.3	-0.737	-43.1	0.337	15.8	0.318	13.4
Sep	-0.527	-41.7	-0.559	-42.8	-0.832	-46.7	-0.834	-45.6	0.358	16.3	0.343	14.1
Oct	-0.663	-52.6	-0.692	-53.2	-1.081	-64.1	-1.088	-62.8	0.237	11.3	0.218	9.4
Nov	-0.744	-59.6	-0.771	-59.8	-1.225	-70.9	-1.224	-69.0	0.185	8.8	0.159	6.8
Dec	-0.838	-68.2	-0.854	-67.4	-1.194	-69.2	-1.187	-67.0	0.116	5.5	0.088	3.8
# obs.	141,661		141,661		103,229		103,229		66,538		66,538	
Adj. R ²	.559		.544		.611		.598		.480		.432	