North Carolina's Subprime Home Loan Market After Predatory Lending Reform

A Report from the
Center for Responsible Lending

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About Center for Responsible Lending

The Center for Responsible Lending is a nonprofit research and policy organization that focuses on predatory lending issues. The Center is an affiliate of Self-Help, a leading nonprofit community economic development lender. Over twenty years, Self-Help has provided $1.7 billion in financing to 25,000 small businesses, non-profits, and low-income homeowners.

About the Authors

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Executive Summary

In 1999, North Carolina enacted the nation's first state law to curb predatory mortgage lending with the support of a broad coalition of banks, credit unions, mortgage industry representatives, and consumer advocates. This report is the first comprehensive examination of the effects of North Carolina's predatory lending law. The report uses the largest publicly available mortgage loan database, developed from information reported under the Home Mortgage Disclosure Act (HMDA) to federal regulators. This database includes over 28 million home loans, totaling $3.3 trillion in the 50 states and the District of Columbia, made from 1998 to 2000. Researchers also utilized analyses of both industry pricing data and secondary market data as well as information from the U.S. Census Bureau and the U.S. Department of Housing and Urban Development.

This report presents the following key findings:

(1) Subprime home lending continues to thrive in North Carolina;
(2) North Carolina borrowers, including low-income borrowers, continue to have access to a wide range of choices when selecting a home loan; and
(3) by preventing predatory terms on 31,500 subprime loans made in North Carolina in 2000, the law is estimated to have saved borrowers more than $100 million.

Consequently, **this report concludes that the North Carolina lending reform is beginning to have its intended effect of reducing predatory lending while maintaining full access to a wide range of credit choices for the state's homeowners.**

Key Findings:

(1) <u>Subprime home lending continues to thrive in North Carolina.</u>

? In 2000, borrowers who received a home loan in North Carolina were 20% more likely than borrowers in the rest of the nation to receive a subprime loan.

? North Carolina was the sixth most active state for subprime lending in 2000, measured as a percentage of all loans classified as subprime in each state.

(2) Choice remains unfettered, with North Carolina borrowers continuing to have a wide range of options when selecting a home loan.

? After the reform, no major subprime lender (lenders with more than 1% of the state's 1999 subprime market) exited North Carolina. *Every* major subprime lender (21 in all) that reported new lending anywhere in the US in 2000 also reported new loans in North Carolina.

? An independent analysis by *Inside B&C Lending* (March 5, 2001) found that lenders in North Carolina were continuing to offer a full array of loan products with "little or no variation" in prices of those products when comparing the North Carolina market to other states.

? In a sign that the new law did not drive up prices and force low-income borrowers out of the market in 2000, 1 in every 3 loans to low-income North Carolina borrowers (annual incomes of less than $25,000) was subprime. This is the highest such proportion of subprime to prime loans made to low-income borrowers of any state in the nation.

(3) Reductions in predatory lending are estimated to have generated considerable savings to consumers while preserving continued access to credit under fair terms.

? By preventing predatory terms on the 31,500 subprime loans that were made in North Carolina in 2000, the law is estimated to have saved borrowers at least $100 million.

Introduction

In 1999, North Carolina enacted the nation's first state law to curb predatory lending with the support of a broad coalition of banks, credit unions, mortgage industry representatives, and consumer advocates. The reform was passed as part of an effort to save the state's homeowners an estimated $232 million (based on 1999 loan volume) by prohibiting predatory practices and ensuring that borrowers have relevant information. More specifically, the reform took the following steps:

? prohibited the financing of single premium credit insurance;[1]
? prohibited lenders from refinancing an existing loan when there was no tangible net benefit to a borrower;[2]
? in high-cost home loans, prohibited the financing of fees, balloon payments, negative amortization, and lending without regard to a homeowner's ability to repay, where high-cost was defined generally as loans with fees in excess of 5% or interest rates more than 10% above comparable U.S. Treasury Securities;[3]
? prohibited prepayment penalties on first-lien mortgages of less than $150,000;[4] and
? required that would-be borrowers of high-cost loans receive financial counseling before entering into the transaction.[5]

An affiliated organization has previously estimated that, prior to the new law, more than one-third of all subprime home loans had predatory features that actually stripped equity or imposed unnecessary costs on borrowers.[6] These estimates were based on a review of publicly available data, private sector analyses, and reviews of predatory loan documents.

To evaluate the law's effects, researchers examined the changes taking place within North Carolina's subprime and prime home lending markets in 1999 and 2000 and compared the relative changes in these markets to changes in the rest of the nation. These comparisons were made primarily through an analysis of over 28 million home loans originated for a total of $3.3 trillion in the 50 states and the District of Columbia from 1998 to 2000 and reported under the

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[1]N.C. Sess. Law 1999-332 at Section 5.
[2] Id.
[3] Id. at Section 2.This definition will change slightly on October 1, 2002, as the Fed recently excercised its discretion to expand the number of loans covered under the Home Ownership Equity and Protection Act (HOEPA). The revised HOEPA statute lowered the current interest rate trigger for all first-lien mortgages in this adjustment from 10 annual percent points (APR) to 8 APR above the rate of comparable Treasury securities.
[4] Id. at Section 1.
[5] Id. at Section 2.
[6] Estimates based on data and calculations in Eric Stein, "Quantifying the Economic Cost of Predatory Lending", Coalition for Responsible Lending report (rev. Oct. 30, 2001) (available at http://www.responsiblelending.org).

Home Mortgage Disclosure Act (HMDA). Researchers also utilized analyses of industry pricing data as well as data from the U.S. Census Bureau and the U.S. Department of Housing and Urban Development. Certain data limitations made it difficult for the report to control for a number of extraneous factors, such as the effect of local economic changes, a statewide consumer education campaign and other changes in the relatively young subprime market. In addition, though enacted in 1999, most of the reform's provisions only became effective in mid-2000, the last year for which data are available. Therefore, this report's findings must be treated as initial results rather than final answers. However, since a wide range of evidence points to the same overall conclusion, the findings should be viewed as valid.

This report (1) reviews changes in home lending in North Carolina since the implementation of the new law, (2) examines whether changes in the North Carolina subprime sector have affected borrower choice, and (3) evaluates changes in the North Carolina subprime sector, including estimated savings to consumers, in light of previous estimates of predatory lending. Its methodology can be found in Appendix A.

Analysis

(1) Subprime home lending continues to thrive in North Carolina.

The HMDA data show that home loan borrowers in North Carolina were 20% more likely than borrowers in the rest of the nation to receive a subprime loan in 2000. This increased likelihood follows from the large size of the North Carolina subprime market relative to the rest of the country (see Table 1 and see Appendix B for more detail on this calculation). In addition, North Carolina had 15% more subprime home loans per capita than the rest of the nation in 2000 (see Table 2).

Moreover, in a direct comparison with each of the other 49 states and the District of Columbia, the state's subprime sector posts similarly high numbers. Using share of all home loans that were subprime to measure access to subprime credit, North Carolina ranked 6th out of 51 in 2000 (see Table 3).

As further evidence that subprime lending continues to thrive in North Carolina, a new study by the Center for Community Change points to North Carolina as the only state in the country where all of the metropolitan statistical areas (MSAs) are above the national level for subprime lending.[7] In addition, a recent Morgan Stanley & Co. survey of 280 subprime branch managers and brokers found that tougher predatory lending laws have not reduced subprime residential lending volumes.[8]

Table 1: Subprime and Prime Home Loan Markets, 1998-2000

	NC			Rest of U.S.		
	1998	**1999**	**2000**	**1998**	**1999**	**2000**
Prime Loans per 10,000 residents	379	312	229	387	311	240
Subprime Loans per 10,000 residents	54	54	39	40	42	34

Sources: Home Mortgage Disclosure Act data; Randall M. Scheessele, "Manufactured Home and Subprime Lender List", U.S. Department of Housing and Urban Development (2001); U.S. Bureau of the Census.

Table 2: New Subprime Home Lending per 10,000 Residents, Year 2000

	No. of Loans
North Carolina	39
49 States & D.C.	34
Difference	14.7%

Sources: Home Mortgage Disclosure Act data; Randall M. Scheessele, "Manufactured Home and Subprime Lender List", U.S. Department of Housing and Urban Development (2001); U.S. Census Bureau.

Table 3: Subprime Share of Home Loan Market, 1998-2000

	Share of Home Loans that were Subprime		N.C. Rank (out of 51)
Year	**North Carolina**	**Rest of U.S.**	
1998	12.5%	9.8%	3
1999	14.8%	11.8%	5
2000	14.6%	12.5%	6

[7] "Risk or Race? Racial Disparities and the Subprime Refinance Market," Center for Community Change, May 2002, pg. 15.

[8] "Subprime Lending Stays Strong Despite Fed Warnings, Poll Finds" *The Wall Street Journal*, John Dooley, 08/08/2002, Page D2; "Predatory Laws Not Crimping B&C," *National Mortgage News*, Paul Muolo, 8/15/2002, Page 30.

Sources: Home Mortgage Disclosure Act data; Randall M. Scheessele, "Manufactured Home and Subprime Lender List", U.S. Department of Housing and Urban Development (2001).

<u>(2) North Carolina borrowers continue to have a wide range of choices when selecting a home loan.</u>

In another sign that the state's reform has not reduced access to non-predatory subprime lending, this report finds that North Carolina consumers continue to have a wide range of choices when selecting a home loan.

The data show that *every* lender (21 in all) with more than one percent of the 1999 North Carolina subprime market that reported new lending anywhere in the United States reported originating new loans in North Carolina in 2000 (see Table 4). This evidence strongly suggests that the North Carolina reform did not reduce competition or consumer choice.

As additional evidence that competition in the North Carolina subprime home loan market has remained on par with the rest of the nation, an analysis by a leading industry journal, *Inside B&C Lending*, found that lenders in North Carolina were continuing to offer a full array of loan products and that there was "little or no variation" in the prices of those products when comparing the North Carolina market to other states.[9] If the North Carolina law had reduced the supply of subprime loans, then one would expect the scarcity to bid up the resulting price (in this case the interest rate) to the North Carolina consumer relative to that experienced by consumers in other states. The fact that this has not occurred is strong evidence that the reform has not significantly altered the supply of subprime loans available to borrowers.

[9] Inside B&C Lending (March 5, 2001).

Table 4: Subprime Lending Change in Market Share, 1999-2000

2000 Market Share	2000 Number of Loans	1999 Market Share	1999 Number of Loans	Lender
4.18%	1,317	4.87%	2,026	EQUIFIRST CORPORATION
3.09%	973	4.78%	1,987	NATIONSCREDIT FINANCIAL SVES
2.13%	671	4.16%	1,730	THE MONEY STORE
6.62%	2,085	4.16%	1,729	FIRST UNION HOME EQUITY BK NA
4.59%	1,446	3.13%	1,304	CITIFINANCIAL SERVICES INC-DEL
2.25%	710	3.10%	1,288	SUPERIOR BANK FSB
0.18%	57	2.55%	1,061	CONTIMORTGAGE CORPORATION
1.17%	368	2.19%	911	AMERIQUEST MORTGAGE COMPANY
3.04%	956	2.16%	900	OPTION ONE MORTGAGE CORPORATIO
4.17%	1,313	2.03%	846	FIRST GREENSBORO HOME EQUITY
3.20%	1,007	2.01%	838	CIT GROUP/CONSUMER FINANCE, INC
2.77%	874	2.01%	838	CENTEX CREDIT CORPORATION
3.34%	1,051	1.94%	806	GREEN POINT MORTGAGE FUNDING
2.02%	636	1.68%	700	PINNFUND, USA
0.13%	40	1.63%	676	BANC ONE FINANCIAL SERVICES
0.61%	191	1.54%	639	NEW CENTURY MORTGAGE
1.02%	321	1.50%	625	MORTGAGE LENDERS NETWORK USA
1.35%	424	1.19%	496	TRAVELERS BANK & TRUST, FSB
0.34%	106	1.10%	458	RESOURCE ONE CONSUMER DISCOUNT
0.46%	146	1.07%	445	ADVANTA NB
1.35%	425	1.03%	430	AAMES FUNDING CORPORATION
48.01%	15.117	49.83%	20,773	TOTAL

Sources: Home Mortgage Disclosure Act data; Randall M. Scheessele, "Manufactured Home and Subprime Lender List", U.S. Department of Housing and Urban Development (2001).

Finally, the data do not support the contention that the new law drove up prices and forced low-income borrowers out of the market in 2000. In fact, the data reveal that North Carolina borrowers with annual incomes of less than $25,000 received a higher proportion of subprime to prime loans than borrowers with the same income range in <u>any other state</u> (see Table 5). There was only a slight change in subprime lending to N.C. borrowers with less than $25,000 annual income from 1999 to 2000 compared to N.C. borrowers with annual incomes of over $25,000 (see Table 6).

<u>Table 5:</u> North Carolina Subprime Lending to Low-Income Borrowers (Annual Income less than $25,000), 1998-2000

Year	Percent of all Home Loans	N.C. Rank (Out of 51)
1998	26.2	3
1999	33.5	2
2000	32.9	1

Source: Home Mortgage Disclosure Act data, Randall M. Scheessele, "Manufactured Home and Subprime Lender List", U.S. Department of Housing and Urban Development (2001).

<u>Table 6:</u> North Carolina Subprime Home Lending by Borrower Income, 1999-2000

	1999 Subprime Home Loans		2000 Subprime Home Loans	
Annual Income	Number Subprime	Percent Subprime	Number Subprime	Percent Subprime
Up to $25,000	10,000	24.8	7,300	24.0
Above $25,000	30,200	75.2	23,000	76.0

Source: Home Mortgage Disclosure Act data, Randall M. Scheessele, "Manufactured Home and Subprime Lender List", U.S. Department of Housing and Urban Development (2001).

(3) Reductions in predatory lending are estimated to have generated considerable savings to consumers while preserving access to credit under fair terms.

The 1999 reform provided specific consumer protections from a number of predatory lending practices. These practices were the subject of a previous report by an affiliated organization, which estimated the cost of each to consumers nationally and provided a separate estimate for each state. The total estimated cost of predatory lending to homeowners in NC in 1999 was $232 million (see Table 7).[10]

Table 7: Estimated Pre-Reform Predatory Lending in North Carolina

	North Carolina Subprime Lending, 1999		
Source	**Percent of Loans**	**Number Of Loans***	**Cost to Homeowners (millions of dollars)**
Flipped refinances	12	5,000	25.5
Excess fees	25	10,400	20.4
Single premium credit insurance	20	8,300	53.6
Prepayment penalties	35	14,600	58.7
Excess interest	15	6,200	74.0
Total Cost			**232.2**

*41,600 was the total number of subprime loans in 1999 according to the Home Mortgage Disclosure Act data.
Sources: Eric Stein, "Estimating the Economic Cost of Predatory Lending", Coalition for Responsible Lending (Revised Oct. 31, 2001); Randall M. Scheessele, "Manufactured Home and Subprime Lender List", U.S. Department of Housing and Urban Development (2001).

By considering the prior estimated prevalence and cost of each practice addressed by the reform, and taking into account changes in subprime volume in 2000, this report estimates that the law saved North Carolina homeowners at least $100 million (see Table 8 and Appendix B for more information on this calculation). Consequently, this estimate encompasses changes resulting from the law's consumer protections concerning loan flipping, exorbitant fees, financed single-premium credit insurance, and prepayment penalties. Since the law did not squarely address excess interest, this report has made no attempt to analyze changes in this practice.[11]

[10] Eric Stein, "Estimating the Economic Cost of Predatory Lending", Coalition for Responsible Lending (Revised Oct. 31, 2001). A copy of paper can be found at www. responsiblelending.org.

[11] Researchers chose to omit estimated savings from this practice to be conservative. But, it should be noted that additional savings to consumers from reformed excess interest rates are likely an outgrowth of the law since the subprime home mortgage market, free of overly-restrictive prepayment penalties, will allow a borrower charged an

Table 8: **Estimated Post-Reform Cost-Savings in North Carolina**

North Carolina Subprime Lending, 2000			
Source	**Percent of Subprime Loans Saved from Predatory Term**	**Number of Subprime Loans in 2000**	**Cost-Savings to Homeowners (millions of dollars)**
Preventing flipped refinances with no net tangible benefit to consumers	7	2,900	**18.6**
Cutting excess fees	25	7,900	**10.5**
Eliminating single premium credit insurance	20	6,300	**41.6**
Prohibiting prepayment penalties (loans < $150,000)	35	11,000	**29.7**
Total estimated cost-savings to NC borrowers			**100.4**

Sources: Eric Stein, "Estimating the Economic Cost of Predatory Lending", Coalition for Responsible Lending (Revised Oct. 31, 2001)(see Appendix B for details on these calculations).

Researchers next examined Home Mortgage Disclosure Act data to determine if the North Carolina lending experience in 2000 was consistent with a reduction in predatory lending practices. Since predatory lending is widely acknowledged to be concentrated in the subprime sector,[12] researchers hypothesized that if the law were having its intended effect, the data should show a net drop in subprime lending in North Carolina compared to changes both in the state's prime sector and in the rest of the nation.

The data show that in 2000, the first year in which the state's reform took full effect, North Carolina's prime market production declined by 22.7%, a measure relatively in-line with changes

unnecessarily high interest rate to refinance into a loan with a lower-rate loan that appropriately prices the risk they present.

in the rest of the nation as a whole, where production declined 20.5% (see Table 9). Over the same time period, North Carolina's subprime sector dropped 24.3%, compared to 15.3% in the rest of the nation.

Table 9: Changes in Lending, 1999-2000

	North Carolina		Rest of U.S.	
	Number of Loans	Percent Change	Number of Loans	Percent Change
Subprime	-10,100	-24.3	-168,400	-15.3
Prime	-54,200	-22.7	-1,684,300	-20.5

Sources: Home Mortgage Disclosure Act data; Randall M. Scheessele, "Manufactured Home and Subprime Lender List", U.S. Department of Housing and Urban Development (2001).

While evaluating the significance of the drop in North Carolina's subprime sector it was important to control for changes in the national prime and subprime markets, as well as the North Carolina prime market, all of which should have remained largely unaffected by the state's reform.[13] With these controls in place, researchers estimate that, had the law not taken effect, the North Carolina subprime market would have declined 17.7% from 1999 to 2000. In fact, the data show that the North Carolina subprime market declined 6.6% beyond that predicted solely by the relative decline in other markets (see Table 10 and Appendix B for a fuller description of this calculation).

[12] See, e.g., Federal Reserve Board, Supplementary Information to Truth in Lending Rule, 12 C.F.R. §226, (Dec. 12, 2001) at 3.

[13] First, by controlling for changes in the nation's prime and subprime markets, researchers attempted to account for changes affecting the nation as a whole, such as fluctuations in the overall interest rate environment. For example, 2000 saw interest rates increase, leading to fewer refinancing transactions since borrowers could no longer take advantage of interest savings, and consequently a net drop in total lending for the year. Researchers controlled for both prime and subprime markets since they believed each would exhibit unique responses to changed conditions, with demand among borrowers in the subprime market diminished less by an increase in interest rates than among borrowers in the prime market. Second, by controlling for changes in North Carolina's prime sector, researchers sought to isolate the effect of local factors, such as a downturn in the state's economy.

<u>Table 10:</u> Changes in North Carolina Subprime Lending, 1999 -2000

	Number of Loans	
	Total Number	**Percent Change**
Total observed change	-10,100	-24.3
Change in line with other markets	-7,400	-17.7
Change in excess of other markets	**-2,700**	**-6.6**

Sources: Home Mortgage Disclosure Act data; Randall M. Scheessele, "Manufactured Home and Subprime Lender List", U.S. Department of Housing and Urban Development (2001).

This 6.6% net real decline is consistent with a significant reduction in predatory lending practices in the state. It is in line with the one-year change experienced after the Federal Trade Commission reformed corrupt financing in association with the sale of consumer goods.[14] In addition, it is also well short of the 12% prior estimate for the share of pre-reform subprime loans that were flipping refinance transactions. This suggests that there are still potential benefits to consumers from the law that may be evidenced in future data capturing full implementation of the reform and subsequent enforcement activities, including the extension of the reform to mortgage brokers in a 2001 North Carolina law.[15]

[14] *See*, Kurt Eggert, <u>Held up in Due Course: Codification and the Victory of Form over Intent in Negotiable Instrument Law</u>, 35 CREIGHTON L. REV. 363, 429 n.305 (2002) (reporting that the FTC reform resulted in an estimated 5.5% decline in the amount of consumer credit in the year following the reform) (citation omitted). That reform, while controversial at the time, has enabled purchasers of consumer goods to pursue their rights in transactions where the seller of goods also arranged for financing of the transaction. Further evidence that the reform has been viewed as successful can be found in section 9-403(d) of the National Commissioners on Uniform State Laws 1998 draft of proposed revisions to Article 9 of the Uniform Commercial Code which provides for final implementation of the FTC reform in state law (available at http:// http://www.law.upenn.edu/bll/ulc/ulc_frame.htm).

[15] N.C. Sess. Law 2001-393. A number of other possible explanations exist for this decline, including (1) regression to the mean, where North Carolina's fast growth and early development of a subprime sector appears to be moderating but the effect is more properly attributable to the rest of the nation catching up to North Carolina's development; (2) effects of local economic changes, including layoffs in the state's heavily manufacturing-based economy, that might be detailed with further analysis; and (3) an increased awareness of the problems of predatory lending through news coverage and a consumer education campaign promoted by the North Carolina Attorney General's office that led increased numbers of North Carolina consumers to choose prime loans over subprime loans.

Conclusion

This report has analyzed the largest public data source to evaluate changes in the North Carolina subprime lending sector in the wake of that state's 1999 anti-predatory lending reform. Although not without some limitations, the data and analysis reported here all clearly support the contention that the North Carolina anti-predatory lending reform is beginning to have its intended effect of reducing predatory lending practices, while maintaining full access to a wide range of credit choices for the state's homeowners.

Appendix A: Methodology

Our goal for this report was to use the best publicly available data to provide a preliminary evaluation of the effect that changes in North Carolina laws governing home loans have had on subprime lending in the state and the availability of subprime loans to low-income borrowers. Also, we wanted to estimate the savings that could be expected to inure to North Carolina homeowners as a result of the reform.

We believe that only a preliminary evaluation is possible since most of the reform's provisions became effective in mid-2000, the last year for which data are available. This means that the reform's effects on loan production for 1999 and the first half of 2000 primarily would be limited to those resulting from the following provisions:

? raising maximum loan amount covered by a ban on prepayment penalties from $100,000 to $150,000;[16]
? defining permissible classes of fees paid to lenders in association with a loan secured by real property;[17]
? defining permissible classes of fees paid to third parties in association with a loan;[18] and
? prohibiting the refinancing of consumer home loans without a "reasonable, tangible net benefit" to the borrower (the no flipping provision).[19]

Because we wanted to utilize publicly available data, we adopted an approach that relies on Home Mortgage Disclosure Act (HMDA) data and a variety of secondary sources to explore changes in North Carolina's reported subprime lending through a quasi-experimental framework, where the other 49 states and the District of Columbia were treated essentially as a control group. We defined a subprime home loan as any loan reported to federal regulators under HMDA that met the following criteria:

? The loan was reported as "originated" by a subprime lender previously identified by the U.S. Department of Housing and Urban Development (HUD) for the year in which the loan was reported;[20] and

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[16] North Carolina S.L. 1999-332 Section 1 (effective Oct. 1, 1999).
[17] Id.
[18] Id. at Section 4 (effective Oct. 1, 1999).
[19] Id. at Section 5 (effective July 1, 1999).
[20] HUD's "manufactured housing and subprime lender list" is routinely updated and past versions amended. *See* http://www.huduser.org/datasets/manu.html .

? The loan was reported in one of the 50 states or in the District of Columbia.

The literature suggests it is improper to include both loans reported as "originated" and "purchased" by subprime lenders when compiling a set of data on this market.[21] The downside to including both categories in a set of data is that certain loans may be counted twice. Given this danger and the results from a preliminary analysis, which showed that "originated" loans captured 77.9% of all subprime loans reported from 1997-98, we opted to use only "originated" loans for our analysis.

We defined low-income families as borrowers that reported income of $25,000 per year or less. We opted for an absolute definition of income as opposed to a relative definition because we wanted a clear, easily understood measure. Also, since at least one previous report had used this bracket, we wanted to preserve our ability to compare results.

We recognize the limitations of HMDA data, particularly in efforts to tally subprime lending, rural lending, and to measure lending to borrowers of various income levels.[22] The following limitations were among those relevant to this report:

? Many lenders are exempt from HMDA reporting requirements due to asset size, branch locations, or share of business attributable to home lending.
? Subprime loans may not be recognized in HMDA data because they are made by lenders that primarily make prime loans and are consequently excluded from HUD's list of subprime and manufactured housing lenders.
? HMDA does not mandate reporting of all second mortgages and home equity loans.
? Lenders are not required to report the location of many rural loans.
? Borrowers' income levels often go unreported in loan records.

[21] *See* Randall M. Scheessele, "1998 HMDA Highlights", Housing Finance Working Paper Series, Office of Policy Development and Research, U.S. Department of Housing and Urban Development (Oct. 1999) available at http://www.huduser.org/publications/hsgfin/workpapr9.html.

[22] The following three published articles provide a grounding in the limitations of HMDA data and each provides insight into the limitations associated with using HMDA data to evaluate subprime and manufactured home lending partterns: Randall M. Scheessele, "HMDA Coverage of the Mortgage Market", Housing Finance Working Paper Series, Office of Policy Development and Research, U.S. Department of Housing and Urban Development (July 1998) available at http://www.huduser.org/publications/hsgfin/workpapr7.html; Randall M. Scheessele, "1998 HMDA Highlights", Housing Finance Working Paper Series, Office of Policy Development and Research, U.S. Department of Housing and Urban Development (Oct. 1999) available at http://www.huduser.org/publications/hsgfin/workpapr9.html; and Debbie Gruenstein and Christopher E. Herbert, "Analyzing Trends in Subprime Originations and Foreclosures: A Case Study of the Atlanta Metro Area", Neighborhood Reinvestment Corporation (Feb. 2000).

However, even with these limitations, HMDA data remains the most complete and readily accessible data on U.S. home loans. One particularly competent estimate placed HMDA's total coverage of subprime loans, identified through HUD's list, at between 48 and 79%.[23]

While these ranges might prove troubling for a report intending to catalog all subprime and prime lending, they more than suffice here, where our intended purpose is to measure relative changes in lending patterns over time. Similarly, since it is not expected that any of the limitations listed above has more effect on the data in North Carolina than in the other areas examined, this paper makes no special effort to control for them.

Accordingly, we built the following three HMDA data sets, accounting for a total of 28,843,542 loans made for $3.3 trillion:

? 1998 U.S. subprime and prime home loans;
? 1999 U.S. subprime and prime home loans; and
? 2000 U.S. subprime and prime home loans.

The accuracy of these data sets was confirmed by comparing the total number of individual loan records contained in the data for each lender with the total number each lender calculated and reported to a federal regulatory agency under HMDA along with its transmittal sheets. For more descriptive information on each of the sets of data, see Appendix C.

[23] *See* Randall M. Scheessele, "1998 HMDA Highlights", p10 in Appendix D, Housing Finance Working Paper Series, Office of Policy Development and Research, U.S. Department of Housing and Urban Development (Oct. 1999) available at http://www.huduser.org/publications/hsgfin/workpapr9.html.

Appendix B: Select Calculations

Table 8 Calculations

Flipping cost estimates:

? 12% incidence of flipping from Stein's "Estimating the Economic Cost of Predatory Lending", Coalition for Responsible Lending (Revised Oct. 31, 2001) (hereinafter, "Stein");
? 7% is conservatively used rather than the full 12% pre-reform estimate of flipping since the data do not support the notion that the law resulted in a full 12% decline in these loans that delivered no tangible net benefit to borrowers.
? 2,900 is 7% of 41,600 (the total North Carolina 1999 HMDA reported loans).
? $6,400 is the calculated average cost of fees charged to the borrower in a subprime flipped transaction, all of which is by definition unnecessary
? $18.6 million results from incidence (2,900) multiplied by average cost ($6,400)

Excess fees cost estimates:

? 25% incidence of excess fees 2% greater than North Carolina's laws benchmark of 5% from Stein;
? 7,900 is 25% of 31,500 (the total North Carolina 2000 HMDA subprime reported loans).
? $1,300 is the calculated average cost of unnecessary excess fees to the borrower from Stein;
? $10.5 million results from incidence (7,900) multiplied by average cost ($1,300)

Single credit premium insurance cost estimates:

? 20% incidence of single credit premium insurance from Stein;
? 6,300 is 20% of 31,500 (the total North Carolina 2000 HMDA subprime reported loans).
? $6,600 is the calculated average cost of unnecessary excess single credit premium insurance fees to the North Carolina borrower from Stein;
? $41.6 million results from incidence (6,300) multiplied by average cost ($6,600)

Prepayment penalty fees estimates:

? 35% incidence of prepayment penalty stripped from subprime borrowers' equity from Stein;
? Although the reform only prohibits prepayment penalties for mortgages under $150,000, 96% of subprime loans in North Carolina fall below this amount. The average subprime loan was $70,000 in 2000.
? 11,000 is 35% of 31,500 (the total North Carolina 2000 HMDA subprime reported loans).
? $2,700 is the calculated average cost of prepayment penalty fees to the borrower from Stein;
? $29.7 million results from incidence (11,000) multiplied by average cost ($2,700)

Table 10 Calculations

Variables Defined:

? P_{NC}: Number of prime home loans reported in North Carolina.
? S_{NC}: Number of subprime home loans reported in North Carolina.
? P_{US}: Number of prime home loans reported in any of the other 49 states or the District of Columbia.
? S_{US}: Number of subprime home loans reported in one of the other 49 states or the District of Columbia.

Calculate the cross product odds ratio to find the increased likelihood that North Carolina borrowers will receive a subprime over a prime loan compared to borrowers in the rest of the United States as a whole in 2000:

$(S_{NC2000})(P_{US2000})/(P_{NC2000})(S_{US2000})= \text{Odds Ratio}_{2000} = 1.20$

Perform the same calculation for 1999:

$(S_{NC1999})(P_{US1999})/(P_{NC1999})(S_{US1999}) = \text{Odds Ratio}_{1999} = 1.30$

Note that the increased likelihood of North Carolina borrowers receiving a subprime over a prime loan compared to borrowers in the rest of the United States as a whole decreased from 1999 to 2000:

$(\text{Odds Ratio}_{2000} - \text{Odds Ratio}_{1999})/(\text{Odds Ratio}_{1999})= -8.0\%$

This change can be seen to have occurred due to disparate changes in the state's ratio of subprime-to-prime loans compared to the changes occurring in the nation as a whole. If the North Carolina markets had changed in line with those in the rest of the United States as a whole, the percentage change in the Odds Ratios would have been nil. In fact, setting the percentage change to nil and solving for S_{NC2000} will answer the following question: What change should have been observed in S_{NC2000} if it had changed perfectly in line with changes in the state's prime market and both the rest of the nation's prime and subprime markets?

$(\text{Odds Ratio}_{2000} - \text{Odds Ratio}_{1999})/(\text{Odds Ratio}_{1999})= 0.0\%$

or

$S_{NC2000} = ((P_{NC2000})(S_{US2000})(S_{NC1999})(P_{US1999}))/((P_{NC1999})(S_{US1999})(P_{US2000}))$

Yielding $S_{NC2000} = 34{,}239$ loans.

Comparing this result to the actual observed S_{NC2000} then yields the net change that should not be expected based on changes in the other three markets.

Calculations follow:

Number of Loans

Absolute				Percentage Change		
	1998	**1999**	**2000**		**1998-1999**	**1999-2000**
$\mathbf{S_{NC}}$	40,861	41,600	31,496	$\mathbf{S_{NC}}$	2%	-24.3%
$\mathbf{S_{US}}$	1,047,544	1,101,917	933,524	$\mathbf{S_{US}}$	5%	-15.3%
$\mathbf{P_{NC}}$	286,058	238,542	184,349	$\mathbf{P_{NC}}$	-17%	-22.7%
$\mathbf{P_{US}}$	10,152,677	8,234,641	6,550,333	$\mathbf{P_{US}}$	-19%	-20.5%

	1999	**2000**
Odds Ratio	1.30	1.20
Change in Odds Ratio		-8.0%
S_{NC2000} (Change in Odds Ratio=0)		34,239

	Absolute	**Percentage of 1999 Loans**
Observed S_{NC2000}	31,496	75.7%
Market Predicted S_{NC2000}	34,239	82.3%
Unpredicted Drop S_{NC2000}	2,743	6.6%

Appendix C: Overview of Data