

1998 HMDA Highlights¹

I. Introduction

Lower interest rates caused a surge in mortgage lending activity in 1998 that was reflected in HMDA data by a 59.6 percent increase in applications. Lenders reported 19,362,315 home purchase and refinance applications under HMDA in 1998.² Home purchase applications increased by 17.8 percent and home refinance applications increased by 112 percent from 1997 totals. Although mortgage lending activity increased in 1998 because of lower interest rates, trends reflected in the HMDA data since 1993 continued into 1998. This paper describes home purchase and refinance mortgage market trends at the national level using HMDA data on mortgage denials and originations from 1998 and earlier.³

One important contribution of this paper is the recognition of the different segments of the mortgage market when analyzing mortgage market trends using HMDA data. For example, we show the importance of recognizing manufactured home lenders that report to HMDA. We identify 21 lenders that specialize in manufactured home lending. Although these lenders accounted for only 7.9 percent of home purchase originations, they accounted for 1,029,180 of the total 1,975,978 conventional home purchase denials. We go a step further by identifying approximately 200 lenders that specialize in subprime and niche lending. In 1998, these lenders accounted for 206,977 of the 3,576,732 conventional home purchase originations and 789,696 of the 6,154,195 conventional home refinance originations.⁴

¹ The author would like to thank Harold Bunce for insights on the mortgage market and suggestions for material to include in this analysis. The author would also like to thank Bill Reeder for suggestions on an earlier version of the paper. The credit for errors belongs to the author.

² This paper excludes loans purchased by lenders and home improvement and multi-family applications. This paper also excludes 1,654 home purchase applications taken by PNC MORTGAGE CORP OF AMERICA in 1993. PNC did not provide the type of application (e.g., conventional, FHA) and denied all of the applications.

³ This paper updates data reported in the author's "1997 HMDA Highlights" paper. Some of the 1993-1997 data reported in the earlier paper differs from 1993-1997 data reported here because there have been updates and corrections in the author's list of manufactured home and subprime lenders that report to HMDA.

⁴ HMDA data does not identify manufactured home and subprime loans. We have compiled a list of lenders that specialize in manufactured home or subprime loans from trade publications and phone conversations with lenders. The list of lenders and their HMDA identification codes are in Appendix D. We estimate that the 21 manufactured home lenders and 200 subprime lenders accounted for approximately 50 percent of the total (new and used) manufactured home market and subprime loan market, respectively, in 1998. See Appendix D for more information on the manufactured home and subprime lenders that report to HMDA or on the estimates of HMDA coverage of the manufactured home and subprime market.

For the remainder of the paper, we use the following nomenclature to describe the different segments of the mortgage market. The manufactured home (subprime) market includes applications of those 21 (200) lenders that we have identified as specializing in manufactured home (subprime) lending.⁵ The non-manufactured home loan market includes all conventional applications except manufactured home loan applications. The conventional prime market includes all conventional applications except manufactured home and subprime applications. The government-insured market includes FHA, VA, and Rural Housing Service (RHS) applications.

The rest of this section summarizes the main findings of the paper. Sections II and III contain a more complete set of findings for the home purchase and refinance markets for 1993 through 1998. A complete set of tables describing trends in the home purchase and refinance markets are in Appendix A and B, respectively. Appendix C provides denial rate and origination data at the state level. Appendix D explains how we identified the manufactured home and subprime lenders and provides the list of lenders with their HMDA respondent identification numbers.

A. Summary: Home Purchase Loans

Although mortgage lending increased in 1998 because of lower interest rates, trends in the mortgage market identified by analyses of earlier HMDA data continued into 1998. This paper has five main findings with respect to HMDA data and mortgage market trends for the home purchase market.

(1) Conventional denial rates have increased from 17.2 percent in 1993 to 29.3 percent in 1998 primarily because of the growing share of conventional applications accounted for by manufactured home applications and the increasing manufactured home loan denial rate. After controlling for manufactured home loan applications, the conventional denial rate only increased from 14.3 percent in 1993 to 18.4 percent in 1998.

The manufactured home loan share of conventional applications increased from nearly 10 percent (or 332,428 applications) in 1993 to approximately 24 percent (or 1,594,689 applications) in 1998.

The majority of conventional home purchase denials reported to HMDA continue to be manufactured home loan denials. Manufactured home loan denials accounted for 52.1 percent (or 1,029,180 denials) of the 1,975,978 conventional home purchase denials in 1998.

The manufactured home loan denial rate increased from 43.8 percent in 1993 to 64.5 percent in 1998.

⁵ The subprime list in Appendix D contains more than 200 lenders because of subsidiaries and affiliates.

(2) Subprime applications have increased in the last few years as these loans have become popular sources of funds for borrowers that do not meet conforming underwriting criteria. As the subprime market grows, more lenders have been required to report these loans to HMDA.

The number of loan applications from subprime lenders increased from 47,694 in 1993 (or 1.4 percent of all conventional applications) to 688,994 applications (or 10.2 percent of all conventional applications) in 1998.

Subprime denials accounted for 2.2 percent (or 13,104 denials) of all conventional denials in 1993 and 11.6 percent (or 228,757 denials) of all conventional denials in 1998.

The subprime denial rate has ranged from 21 percent to 33 percent, depending on the types of subprime and niche lenders that reported to HMDA in a given year.

After controlling for manufactured home and subprime applications, prime conventional denial rates have increased from 14.1 percent in 1993 to 16.1 percent in 1998.

(3) Large disparities continued to exist in conventional prime home purchase mortgage denial rates, with Black and Hispanic⁶ borrowers experiencing over twice the denial rates of White borrowers. These disparities persist even at higher levels of applicant income.

The conventional prime denial rate for Black (Hispanic) borrowers was 2.3 (1.8) times and 2.7 (1.7) times the denial rate for White borrowers in 1993 and 1998, respectively.

In 1998, the conventional prime denial rate for lower-income Black (Hispanic) borrowers was 1.9 (1.5) times the denial rate for lower-income White borrowers; the conventional prime denial rate for upper-income Black (Hispanic) borrowers was 2.5 (2.0) times the denial rate for upper-income White borrowers.⁷

(4) Lower interest rates provided a favorable environment for growth in home purchase lending for all mortgage products but only the subprime and FHA shares of total mortgage lending changed significantly between 1997 and 1998.

⁶ For HMDA purposes, mortgage applicants must classify themselves with respect to race and Spanish heritage by choosing one of six possible classifications: American Indian, Asian or Pacific Islander, Black, Hispanic, White, or Other. These categories are mutually exclusive. That is, applicants who classified themselves as Hispanic do not appear in other categories such as Black or White.

⁷ HMDA data alone are insufficient to explain the disparity in denial rates. Differences in credit behavior among borrowers of different racial or ethnic groups and discrimination are often cited as reasons for this disparity.

Total originations of home purchase loans increased by 15.0 percent in 1998. Conventional originations increased by 17.8 percent and government-insured originations increased by 4.2 percent. Among conventional home purchase products, prime products increased by 16.4 percent, manufactured home loans increased by 11.5 percent, and subprime loans increased by 56.3 percent.

The conventional prime and manufactured home shares of the overall mortgage market remained steady at 68 percent and 6 percent, respectively. The subprime share of home purchase loans increased from 3.3 percent in 1997 to 4.5 percent in 1998. The government loan share of the market decreased from 23.2 percent in 1997 to 21.4 percent in 1998.

(5) The growth in conventional prime lending in 1994 was primarily due to low interest rates. In addition, the success of CRA and GSE housing goals have often been cited as important factors explaining the growth in lending to minority and lower-income borrowers in 1994. The gains made in minority and lower-income lending between 1995 and 1997, however, can largely be attributed to growth in FHA, manufactured home, and subprime lending. The gains in conventional prime lending to minority and lower-income borrowers in 1998 were mainly due to low interest rates.

Loans originated for Blacks and Hispanics were at record levels in 1998. After sluggish growth in lending to Blacks and Hispanics in 1996 and 1997 (following double-digit growth in 1994 and 1995), lending to Black and Hispanic borrowers increased by 8.5 percent and 15.8 percent, respectively, in 1998; lending to White borrowers increased by 12.9 percent in 1998.

Although the growth in lending to Black and Hispanic borrowers was significant in 1998, the types of loans obtained by these borrowers differed remarkably from White borrowers. Conventional prime lending for Black borrowers remained below its 1994 level and only slightly exceeded its 1994 level for Hispanic borrowers.

The additional loans originated in 1998 for Blacks and Hispanics above their 1994 levels were mainly FHA and subprime mortgages for Blacks and FHA mortgages for Hispanics. FHA and subprime loans accounted for 48.9 percent and 34.1 percent, respectively, of the additional loans originated for Blacks; FHA accounted for 63.5 percent of the additional loans originated for Hispanics. The increase in overall lending for Whites above its 1994 level was predominantly due to conventional prime lending. Conventional prime loans accounted for 53.3 percent of additional loans originated for Whites.

B. Summary: Home Refinance Loans

Lower interest rates caused a surge in refinance activity in 1998 that eclipsed trends in the home refinance market. This paper discusses both the increase in refinance

activity in 1998 and recent trends in the refinance market. The paper has five main findings that summarize HMDA data and mortgage market trends for the home refinance market.

(1) The 1998 refinance market resembled the 1993 market as the number of refinance loans increased because of lower interest rates.

The conventional prime refinance volume fluctuates with the interest rate environment. The number of conventional prime originations in 1993 and 1998 - years with low interest rates - exceeded 5 million loans. Total conventional originations in 1993 and 1998 differed mainly because of the higher subprime share of refinance loans in 1998.

(2) The subprime market was the fastest growing segment of the refinance market since 1993.

In 1998, subprime refinance loans accounted for 12.8 percent (or 789,696 loans) of all conventional refinance loans.

The number of subprime refinance loans reported to HMDA increased every year since 1993. The growth in subprime originations has slowed since 1995 but continues to grow by over 40 percent each year. Subprime refinance loans increased by 102 percent in 1996, 72 percent in 1997, and 43 percent in 1998.

(3) The denial rate for conventional prime refinance loans decreased in 1998 reflecting the higher percentage of borrowers that took advantage of lower interest rates to lower monthly mortgage payments.

The denial rate for conventional prime refinance loans increases as the interest rate increases reflecting the greater proportion of borrowers that refinance for reasons other than lowering their monthly mortgage payments (e.g., cash out home equity). The conventional prime refinance denial rate increased from 10.4 in 1993 to 18.0 percent in 1997, before declining to 12.3 percent in 1998.

(4) Denial rate patterns by racial or ethnic group for conventional prime refinance loans were similar to denial rate patterns for home purchase prime loans. In particular, Black and Hispanic borrowers had significantly higher denial rates for conventional prime refinance loans.

In 1998, the disparity in conventional prime refinance denial rates was highest for upper-income Black borrowers. The conventional prime refinance rate for lower-income Black borrowers was 2.2 times the denial rate for lower-income White borrowers; the conventional prime refinance denial rate for upper-income Black

borrowers was 2.9 times the denial rate for upper-income White borrowers.⁸ The conventional prime refinance denial rate for Hispanic borrowers was approximately twice the denial rate for White borrowers at all income levels.

(5) FHA and subprime loans accounted for a larger share of Black and Hispanic refinance loans than White refinance loans.

In 1998, FHA accounted for 11.6 percent and 15.7 percent of Black and Hispanic refinance loans, respectively, compared to 4.2 percent of White refinance loans. Subprime loans accounted for 32.8 percent and 13.2 percent of Black and Hispanic refinance loans, respectively, compared to 7.6 percent of White refinance loans.

II. Home Purchase Loans

The following analysis of mortgage market trends in the home purchase loan market is divided into five main sections. The first section describes denial rate trends for manufactured home and subprime loan applications. The second section discusses denial rate trends for conventional prime (i.e., after controlling for manufactured home and subprime applications) and FHA loan applications. The third section describes the growth in overall lending and lending to minority and lower-income borrowers and borrowers in minority and lower-income neighborhoods. The fourth section discusses the types of mortgage products used by different borrower groups. Finally, the fifth section provides insights on applications with missing data. Data reported in this section are drawn from tables on home purchase lending in Appendix A.

A. Manufactured Home and Subprime Applications

This section demonstrates the importance of separating out manufactured home and subprime loan applications when analyzing home purchase denial rate trends. The conventional denial rate for home purchase mortgages increased from 17.2 percent in 1993 to 29.3 percent in 1998. After controlling for manufactured home loan applications, the non-manufactured home loan conventional denial rate only increased from 14.3 percent in 1993 to 18.4 percent in 1998. After controlling for subprime applications, the conventional prime denial rate increased from 14.1 in 1993 to 16.1 percent in 1998.

1. Manufactured Home Lending

⁸ Conclusions about the reasons for this disparity cannot be drawn from HMDA data alone. Researchers have shown that mortgage scores are independent of a individual's income. These disparity rates may reflect the fact that a higher proportion of upper-income Black borrowers have more past credit problems than upper-income White borrowers and lower-income Black borrowers.

Increases in the manufactured home share of conventional applications and increases in the manufactured home loan denial rate were the primary reason for increases in the overall conventional home purchase denial rate between 1993 and 1998. The role of manufactured home applications has not often been cited in analyses of HMDA data as the reason for increasing conventional denial rates. Higher conventional denial rates are often attributed to lenders increased efforts to attract lower-income and minority borrowers. These efforts, it is argued, attract more marginal borrowers that fail to meet conventional underwriting standards. Although lenders have increased their lending to minority and lower-income borrowers and these efforts may have contributed to higher denial rates, the primary reason for higher mortgage denial rates was manufactured home applications.

Overall. The number of manufactured home applications more than quadrupled between 1993 and 1997 and increased by 19.4 percent in 1998. In 1998, there were nearly 1.6 million manufactured home loan applications. Manufactured home loan applications accounted for 9.7 percent (or 332,428 applications) of conventional applications and 24.9 percent (or 145,668 denials) of conventional denials in 1993; by 1998, they accounted for 23.7 percent of conventional applications (or 1,594,689 applications) and 52.1 percent of conventional denials (or 1,029,180 denials).

The growth in manufactured home loan applications can be explained by demand and supply factors. On the demand side, manufactured homes have become an important means of attaining homeownership for a significant number of households.⁹ On the supply side, the amount of funding and the variety of loan products available for financing manufactured homes increased in this decade as lenders and investors have been attracted to the high returns from these loans.¹⁰

The denial rate for manufactured home loan applications has increased from 43.8 percent in 1993 to 64.5 percent in 1998.¹¹ One reason for the increase in manufactured

⁹ First, manufactured housing costs less than site built housing. Second, the industry has improved the quality of manufactured homes and developed products with greater amenities that rival the quality and amenities of site built homes. Third, manufactured homes provide an important alternative housing choice for first-time homebuyer and elderly households. Fourth, communities increasingly view manufactured homes as an important source of affordable housing and are eliminating barriers that prevent their use.

¹⁰ Investors have been attracted to the industry because of the high returns from manufactured home loans and the development of the asset backed securities market. Entry into the industry is easy because of greater funding sources but staying in the industry is difficult because competition among lenders is intense. A few large firms dominate the industry and command large market shares. The established firms often have formed alliances with major established manufactured home retailers. New entrants into the industry must compete with established lenders by offering a broader variety of loan products, accepting more marginal applicants and lowering interest rates.

¹¹ Although manufactured home denial rates increased from 61.8 percent to 64.5 percent between 1997 and 1998, the manufactured home share of total applications remained steady in 1998 at approximately 24 percent. Therefore, the effect of manufactured home applications on the overall conventional denial rate

home applications and their denial rate is multiple mortgage applications. Multiple mortgage applications sent to different lenders for the same borrower are more likely for manufactured homes than site built homes.¹² Manufactured home retailers typically send the same application to many lenders simultaneously.¹³ Competition among retailers and lenders has led to an increase in both applications for marginal borrowers and multiple applications for the same borrower as retailers have tried to maintain sales and lenders have tried to maintain loan volume.¹⁴

Other High Denial Rate Lenders. Four other lenders had high denial rates but their origination portfolios were mainly comprised of conventional prime and FHA loans.¹⁵ These four lenders were Bank of America, FSB, Chase, IndyMac, and Residential Funding Corporation.¹⁶ Two of these lenders, Bank of America, FSB and Chase, reported that the majority of their conventional loan denials were for manufactured homes. Bank of America, FSB reported that 80-90 percent of its denials come from its manufactured home subsidiary and Chase reported that 78 percent of its denials came from its manufactured home division.¹⁷

In 1998, these four lenders accounted for 330,002 (or 16.7 percent) of the 1,975,978 conventional denials but only 595,593 (or 8.8 percent) of the 6,738,006 conventional applications.¹⁸ The denial rate for these four lenders - 48.6 percent in 1993

was less than in earlier years; as a result, the conventional denial rate increased less in 1998 than in previous years.

¹² Mortgage brokers may also send multiple applications for the same borrower who seeks a site built home.

¹³ High returns from manufactured housing sales have attracted additional retailers into the industry. Competition on the retail side of the industry is as intense as the competition on the lending side of the industry as new retailers must compete with existing retailers for manufactured home sales and sources of loans for their customers. New and existing lenders are eager to attract new retailers that have the potential for staying in the industry.

¹⁴ Retailers and lenders have tried to maintain volume even as sales of new manufactured homes decreased in 1997. Sales rebounded in 1998 because of lower interest rates.

¹⁵ See Appendix D for more information on these lenders.

¹⁶ Other lenders reported that they originated manufactured home and subprime loans but their HMDA applications did not significantly affect their overall HMDA denial rates. The majority of HMDA lenders likely originate real estate manufactured home loans. There are also a significant number of small community banks that accept applications for manufactured home loans. Some of these community banks may be important sources of manufactured home loans in their communities and their manufactured home loan applications explain their high HMDA denial rates.

¹⁷ Bank of America, FSB confirmed that 85-90 percent of its 1998 denials were manufactured home applications. Bank of America, FSB sold its manufactured home division to GreenPoint in 1998. The 78 percent reported for Chase is a 1997 estimate from Chase staff. For more information on these lenders, see Appendix D.

¹⁸ These four lenders accounted for 139,431 (or 3.9 percent) of the 3,576,732 conventional originations.

and 55.4 percent in 1998 - reflected the manufactured home component of their applications.¹⁹ These denial rates were close to the denial rates of specialized manufactured home lenders which were 43.8 percent in 1993 and 64.5 percent in 1998. If these lenders' applications and denials were excluded from other conventional applications, the conventional denial rate would decrease to 12.6 percent in 1993 and 13.6 percent in 1998.

The four lenders' applications and denials are grouped with conventional prime lenders when reporting non-manufactured home conventional prime denial rates in this paper. The reader should keep in mind, however, that these lenders have a significant impact on overall conventional denial rates.

Distribution by State. The distribution of total manufacturing housing loan applications across the nation reflected the actual shipment of manufactured home loans. Ten states accounted for 57.3 percent of the manufactured home shipments in 1997.²⁰ The ten states are: Texas (10.8 percent), North Carolina (9.6 percent), Georgia (6.2 percent), South Carolina (5.8 percent), Florida (5.5 percent), Alabama (5.0 percent), Tennessee (4.5 percent), Michigan (3.4 percent), Kentucky (3.4 percent), and Mississippi (3.1 percent). With the exception of Kentucky and Mississippi, the same states had the highest share of HMDA manufactured home applications and denials. California and Arizona had higher numbers of manufactured home applications and denials than Kentucky and Mississippi. The ten states with the most manufactured home applications and denials in 1998 accounted for 66.7 percent of the 806,808 geocoded manufactured home loan applications and 64.9 percent of the 487,225 geocoded manufactured home loan denials.²¹

Borrower Racial or Ethnic Group. Conventional denial rates increased from 34.0 percent in 1993 to 53.7 percent in 1998 for Black borrowers, 25.1 percent in 1993 to 38.7 percent for Hispanic borrowers, and 15.3 percent in 1993 to 26.0 percent in 1998 for White borrowers. Manufactured home loan applications and their increasing denial rates were the primary reasons for the increase in Black, Hispanic, and White denial rates.

¹⁹ IndyMac and RFC are reported as large subprime lenders in trade publications. IndyMac staff told us that approximately 5 percent of its originations are subprime originations and although these loans account for a small part of their portfolio, they account for a significant share of the subprime market. RFC staff told us that it does not originate manufactured home loans and has entered the subprime market in the last couple of years. Both lenders are conduits and purchase most of their loans.

²⁰ National Conference of States on Building Codes and Standards.

²¹ In 1998, manufactured home loan applications accounted for more than 30 percent of conventional home purchase applications in twelve states: Alabama, Arkansas, Louisiana, Mississippi, Montana, New Mexico, North Carolina, Oklahoma, South Carolina, Texas, West Virginia, and Wyoming.

For Blacks, manufactured home loan applications increased from 19.5 percent of the 157,863 total conventional applications in 1993 to 42.0 percent of the 551,396 total conventional applications in 1998. For Hispanics, manufactured home loan applications increased from 8.4 percent of the 153,375 total conventional applications in 1993 to 30.0 percent of the 383,508 total conventional applications in 1998. For Whites, manufactured home loan applications increased from 9.8 percent of the 2,729,354 total conventional applications in 1993 to 22.8 percent of the 4,751,012 total conventional applications in 1998.

In 1993, manufactured home loan denials accounted for 33.5 percent of the 53,707 total conventional denials for Blacks, 16.7 percent of the 38,560 total conventional denials for Hispanics, and 26.6 percent of the 418,498 total conventional denials for Whites. In 1998, manufactured home loan denials accounted for 59.4 percent of the 296,367 total conventional denials for Blacks, 52.6 percent of the 148,543 total conventional denials for Hispanics, and 53.9 percent of the 1,236,448 total conventional denials for Whites.

Increases in the manufactured home share of total applications and their denial rates explain most of the increase in denial rates by racial or ethnic group. The following example using Black applications illustrates the reason for the increasing conventional denial rate. The manufactured home share of total applications for Blacks increased from 19.5 percent in 1993 to 42.0 percent in 1998 and the manufactured home loan denial rate for Blacks increased from 58.3 percent in 1993 to 76.1 percent in 1998. It is not surprising to find that the overall denial rate for Blacks increased from 34.0 percent in 1993 to 53.7 percent in 1998. Furthermore, the small 0.7 percentage point increase in overall denial rates for Black borrowers in 1998 was the result of the decrease in the manufactured home loan share of total Black conventional applications. The manufactured home loan share of total conventional applications for Blacks decreased slightly from 42.7 percent in 1997 to 42.0 percent in 1998 while the manufactured home loan denial rate for Blacks increased from 74.5 percent in 1997 to 76.1 percent in 1998.

Borrower Income. The conventional denial rate was 21.5 percent in 1993 and 35.6 percent in 1998 for lower-income borrowers, compared with 12.1 percent and 19.3 percent for moderate-income borrowers, and 9.2 percent and 10.0 percent for upper-income borrowers.²²

Higher conventional denial rates are often attributed to an increase in the percentage of total applications accounted for by lower-income borrowers. Higher conventional denial rates are cited as evidence of increased efforts by lenders to attract lower-income borrowers. Lower-income borrowers accounted for 25.0 percent of all conventional applications in 1993 and 32.6 percent of all conventional applications in

²² Lower-income borrowers have incomes that do not exceed 80 percent of area median income. Moderate-income borrowers have incomes between 80 percent and 120 percent of area median and upper-income borrowers have incomes greater than 120 percent of area median.

1998.²³ The primary factor causing higher conventional denial rates for all income groups, however, has been the increase in manufactured home loan applications. After controlling for manufactured home loan applications, the lower-income share of non-manufactured home conventional applications and denials has ranged from 23-25 percent and 35-39 percent, respectively since 1993.

Manufactured home loan applications accounted for a growing share of applications and denials for lower-income borrowers until 1998 when these shares declined slightly. The manufactured home loan share of total conventional applications increased from 11.3 percent in 1993 to 34.3 percent in 1998 for lower-income borrowers, from 4.1 percent in 1993 to 16.7 percent in 1998 for moderate-income borrowers, and from 1.2 percent in 1993 to 4.8 percent in 1998 for upper-income borrowers. The manufactured home loan share of total conventional denials increased from 24.8 percent in 1993 to 62.4 percent in 1998 for lower-income borrowers, from 12.9 percent in 1993 to 48.3 percent for moderate-income borrowers, and from 3.8 percent in 1993 to 22.7 percent in 1998 for upper-income borrowers.²⁴

After controlling for manufactured home loans, the conventional denial rate increased from 17.4 percent in 1993 to 17.9 percent in 1998 for lower-income borrowers and from 10.8 percent in 1993 to 11.0 percent in 1998 for moderate-income borrowers and decreased from 8.9 percent in 1993 to 7.7 percent in 1998 for upper-income borrowers.²⁵

Neighborhood Group. The 1998 conventional denial rate in low-minority neighborhoods was 18.5 percent compared to 29.0 percent in high-minority neighborhoods.²⁶ After controlling for manufactured home applications, the conventional

²³ The shares of total applications accounted for by each income group that are reported here are for loan applications where both borrower income and property geocode were reported. Loans with missing borrower income or geocode data have higher denial rates than other applications. In particular, a significant percentage of non-geocoded applications are manufactured home loan applications in non-metropolitan areas. One reason for missing borrower income is the lender did not consider income when evaluating the application. We have grouped these no-documentation loans as subprime in the analysis since they have higher denial rates than other applications since the application is evaluated on home equity.

²⁴ These percentages are lower bounds for the manufactured home share of denials since they do not include applications and denials of the four other high denial rate lenders.

²⁵ After controlling for manufactured home and subprime loans, conventional denial rates for lower-income borrowers are highest in southern and southwest states. The ten states with the highest conventional prime denial rates for lower-income borrowers include: Louisiana (24.0 percent), West Virginia (24.0 percent), Mississippi (23.6 percent), Maine (21.6 percent), Arkansas (20.3 percent), Oklahoma (19.5 percent), New Mexico (19.4 percent), Florida (18.4 percent), South Carolina (18.3 percent), and Texas (18.3 percent).

²⁶ The categorization of a neighborhood by income parallels the borrower income definition. For example, if the median census tract income does not exceed 80 percent of 1990 area median income then

denial rate was 8.2 percent in low-minority neighborhoods and 14.1 percent in high-minority neighborhoods. The 1998 conventional denial rate in lower-income neighborhoods was 32.2 percent compared to a 11.7 percent denial rate in upper-income neighborhoods. After controlling for manufactured home applications, the conventional denial rate was 15.2 percent in lower-income neighborhoods and 6.6 percent in upper-income neighborhoods.

2. Subprime Lending

Subprime applications, although a secondary reason for increasing denial rates, have accounted for an increasing share of conventional home purchase applications since 1993. The number of subprime applications increased by 587 percent between 1993 and 1997 and increased by 110 percent in 1998. In 1998, there were 688,994 subprime loan applications. Subprime home purchase loan applications accounted for 10.2 percent of conventional applications and 11.6 percent of conventional denials in 1998, compared with 1.4 percent of conventional applications and 2.2 percent of conventional denials in 1993. As explained in Section III, subprime loan applications accounted for a larger percentage of conventional home refinance applications than conventional home purchase applications.

The growth in subprime loan applications in recent years reflects an increase in the popularity of these loans and an increase in the number of subprime lenders that are required to report to HMDA. Subprime lending is broadly defined here to include lending for borrowers with less than perfect credit histories and lending for borrowers that do not satisfy all the underwriting standards set by the government sponsored enterprises (GSEs), Fannie Mae and Freddie Mac. Although subprime loans have increased in the 1990s as households use these loans to tap home equity for debt consolidation, education, medical expenses, or major purchases, subprime mortgages have also become an increasing source of funds for home purchase.²⁷

the census tract is a lower-income neighborhood. A high-minority neighborhood is defined as a tract where minorities comprise at least 30 percent of the population.

²⁷ There are three types of borrowers that use subprime loans to finance home purchase. First, borrowers may have little or no credit in the past or may have blemished credit histories. These borrowers may postpone homeownership until their credit histories improve or they may pay a higher interest rate now with the possibility of refinancing in the future. Second, lenders typically verify that the borrower has the capacity to make mortgage payments but lenders offer no-documentation loans that do not require income verification for borrowers that are unable or unwilling to verify their income. Borrowers that qualify for these loans generally have good credit, put down 20 to 30 percent, and pay one-half to one percentage point higher interest rates than conventional borrowers. These loans, however, are not necessarily originated for borrowers with good credit. See "A Bank's Higher-Risk Mortgages Force Evictions of Paying Tenants." The New York Times. July 5, 1996. Pages B1, B4. Self-employed borrowers and borrowers who work in service occupations are more likely than other borrowers to apply for no-documentation loans. A self-employed borrower, because of allowable tax deductions, may appear to earn more than reported on a tax return, a typical verification documentation for self-employed borrowers. Consequently, self-employed borrowers appear not to have the required income to prove capacity to pay the mortgage. For a good reference on the documentation requirements for self-employed borrowers, see

Traditional finance companies and depositories have provided loans for borrowers with less than perfect credit or special loan needs.²⁸ In the past, depositories have been limited in their ability to originate subprime mortgages because of regulatory review and concerns about risk. Finance companies have been limited by their ability to attract private investors. As in the manufactured home loan industry, however, the development of the asset backed securities market has attracted investors to the subprime market.²⁹

The denial rate for subprime mortgages have ranged from a low of 21.4 percent in 1997 to a high of 33.2 percent in 1998. The fluctuation in subprime denial rates can be explained by a variety of factors. First, the subprime lenders that report to HMDA may not be representative of the subprime market since the subprime market is less concentrated than the manufactured home loan industry. Second, we define the subprime market broadly to include Alt-A, no documentation, and other niche lenders. Third, the list of lenders that report to HMDA varies each year because of mergers and consolidation in the subprime market. Third, some of the subprime lenders also originate prime loans and niche products and their product mix varies according to borrower demand, investor interest, and the interest rate. Fourth, the decrease in denial rates may have resulted from increased competition in the subprime industry in 1997 that led to more flexible underwriting and lower denial rates until the shakeout in the subprime industry in 1998 that led to more conservative underwriting standards.

Black borrowers and borrowers in minority or lower-income neighborhoods than other borrowers were more likely to apply for a subprime mortgage than other borrowers. In 1998, Black borrowers accounted for 9.9 percent of all mortgage applications but 17.6

“Loan Documentation: Self-Employed Borrowers and Government Loans.” National Mortgage Broker. June 1997. Page 60 and 62. Similarly, persons employed in service industries (e.g., hair stylists, waiters) often have higher incomes than reported on their paychecks and W-2 forms. These borrowers may not report all their income to the IRS. Finally, bonus and overtime pay are often important sources of income for some households. The borrower may have a hard time documenting for the lender that these earnings are not transitory. Third, borrowers may require an Alternative-A loan or a loan that does not meet all the underwriting criteria of the GSEs. Alt-A mortgages include investor loans for single one-to-four family properties, loans with high debt-to-income ratios, mortgages for certain types of property (e.g., farms), and mortgages with no verification of assets, except cash for closing. The average loan size for Alt-A mortgages is \$133,000, 20 percent are investor properties, 3 percent are second homes, at least 10 percent are 2-4 unit homes, and at least 55 percent have less than full documentation. See “Lenders Looking to Carve Out Niche Between Conforming A and B&C Loans: ‘Alternative A’,” Inside Mortgage Finance. Page 3. June 27, 1997.

²⁸ Banks and thrifts traditionally funded these mortgages through their deposits and hold these mortgages in portfolio. Finance companies have traditionally provided loans for borrowers with subprime credit and funded these loans through unsecured debt.

²⁹ For example, IndyMac securitized the first MBS pool backed by Alternative-A loans in 1994. The major conduits have all become involved in securitizing the product and some lenders specialize in this niche product. For example, Headlands specializes in the product and securitizes its own originations. Inside Mortgage Finance. “Lenders Looking to Carve Out Niche Between Conforming A and B&C Loans: ‘Alternative A’,” Page 3. June 27, 1997.

percent of subprime applications. Borrowers in lower-income (minority) neighborhoods accounted for 15.3 percent (19.4 percent) of all applications but 24.0 percent (30.9 percent) of subprime applications.

B. Conventional Prime and FHA Denial Rate Trends

Controlling for manufactured home and subprime loan applications allows for a more accurate comparison of conventional prime and FHA denial rates for home purchase loans. This section has three main points. First, the FHA denial rate was lower than the conventional prime denial rate since FHA underwriting standards were more flexible than conventional underwriting standards and because FHA insures lenders against mortgage default. Second, FHA has increasingly become an attractive loan program for Black, Hispanic, and lower-income borrowers as the conventional prime denial rate has increased more than the FHA denial rate for these borrowers. Third, disparities continued to persist between Black, Hispanic, and White denial rates for conventional prime and FHA denial rates.

1. Conventional Prime Denial Rate Trends

After controlling for manufactured home and subprime applications, the conventional prime denial rate has remained in the 14-18 percent range during the 1993 through 1998 period. The conventional prime denial rate decreased from 14.1 percent to 13.2 percent in 1994 as conventional lenders targeted affordable lending and minority borrowers. Conventional prime denial rates increased from 14.8 percent in 1995 to 17.9 percent in 1997. Much of this increase was attributable to an increase in applications and denials from the four high denial rate lenders discussed earlier. The conventional prime denial rate decreased in 1998 to 16.1 percent because of lower interest rates.

Borrower Racial or Ethnic Group. The conventional prime denial rate increased from 28.1 percent in 1993 to 36.9 percent in 1998 for Blacks, 22.7 percent in 1993 to 24.3 percent in 1998 for Hispanics, and 12.4 percent in 1993 to 13.9 percent in 1998 for Whites. In 1997, the conventional prime denial rate was 22.2 percent for Blacks, 17.8 percent for Hispanics, and 9.4 percent for Whites.

The increase in denial rates for Black, Hispanic, and White borrowers was partially attributable to prime lenders that also originate manufactured home and subprime loans. For example, if you control for the four high denial rate lenders discussed above, the denial rate for Black, Hispanic, and White borrowers were at their lowest levels ever in 1998. After controlling for the high denial rate lenders, the conventional prime denial rate for Black, Hispanic, and White borrowers was 20.1 percent, 15.8 percent, and 8.4 percent, respectively.

Borrower Income. In 1998, the conventional prime denial rate for lower and moderate-income borrowers was approximately at their 1993 levels. The denial rate for upper-income borrowers was 1.8 percentage points below its 1993 level. The

conventional prime denial rate increased for borrowers at all income levels between 1994 and 1997, before falling in 1998.

Neighborhood Group. The conventional prime denial rates for borrowers in minority and lower-income neighborhoods in 1998 were lower than in 1993. The conventional prime denial rate for borrowers in lower-income neighborhoods was 19.4 percent and 17.6 percent in 1993 and 1998, respectively. The conventional prime denial rate for borrowers in minority neighborhoods was 19.1 percent in 1993 and 16.0 percent in 1998.

2. FHA Denial Rate Trends

The FHA denial rate decreased from 13.7 percent in 1993 to 9.0 percent in 1997 and 8.3 percent in 1998. The denial rate for Black borrowers, lower-income borrowers, and borrowers in minority and lower-income neighborhoods have decreased by more than the denial rates for Hispanic and White borrowers between 1993 and 1998. The denial rate decreased from 22.3 percent in 1993 to 12.0 percent in 1998 for Black borrowers, 13.8 percent in 1993 to 8.7 percent in 1998 for lower-income borrowers, and 15.5 percent (15.5 percent) in 1993 to 10.3 percent (9.9 percent) for borrowers in minority (lower-income) neighborhoods. The FHA denial rate for Hispanic (White) borrowers decreased from 14.2 percent (11.8 percent) in 1993 to 9.4 percent (6.8 percent) in 1998.

Since 1995, lower-income and Hispanic borrowers have accounted for an increasing proportion of FHA applicants. Lower-income applicants accounted for 42.8 percent of applicants in 1995 compared to 49.2 percent of applicants in 1998. Hispanic applicants accounted for 13.7 percent of applicants in 1995 and 17.8 percent of applicants in 1998. FHA loans typically have lower downpayments, more compensating factors, higher front-end and back-end ratios, and smaller loan amounts than conventional prime loans. Lower-income borrowers find these features of FHA loans particularly attractive. In addition to these features, Hispanic applicants choose FHA because they are more likely to live in high cost areas and have non-traditional or shorter credit histories than other borrowers.³⁰

3. Denial Rate Disparity

The disparity between Black and White conventional prime denial rates increased from 2.3 in 1993 to 2.7 times in 1998; the disparity between Hispanic and White

³⁰ It is inaccurate, however, to characterize FHA borrowers as subprime borrowers. The subprime denial rate was approximately 2 to 4 times the FHA denial rate each year since 1993. Bunce et al (1999) arrived at the same conclusion from an analysis of FHA FICO scores. See Bunce, Harold L., Reeder, William J., and Scheessele, Randall M. "Understanding Consumer Credit and Mortgage Scoring: A Work in Progress at HUD." Prepared for the Fannie Mae Research Roundtable Series. June 30, 1999. PD&R. Department of Housing and Urban Development.

conventional prime denial rates decreased from 1.8 in 1993 to 1.7 in 1998.³¹ The disparity in denial rates probably results from several factors but the fact that disparity patterns have remained constant since 1993 suggests that these reasons are fundamental. Unfortunately, the reasons for the disparity in denial rates cannot be studied with HMDA data alone since these data do not include the borrower's credit history or the borrower's downpayment.³²

The disparity pattern for Black, Hispanic, and White denial rates for FHA loan applications was similar to the disparity pattern for conventional prime loan applications. Black and Hispanic borrowers were 1.9 times and 1.4 times as likely, respectively, to be denied a FHA loan as a White borrower. The Black-White disparity rate has remained constant since 1993 while the disparity rate between Hispanic and White borrowers increased steadily from 1.1 in 1995 to 1.4 in 1998.

Borrower Race by Income. One reason conventional prime and FHA denial rates were higher for Black and Hispanic borrowers than for White borrowers was proportionally more Black and Hispanic borrowers have low incomes. With respect to conventional prime applicants, lower-income applicants accounted for 41.9 percent of Black applicants, 36.7 percent of Hispanic applicants, and 23.3 percent of White applicants in 1998. With respect to FHA applicants, lower-income borrowers accounted for 61.2 percent of Black applicants, 51.1 percent of Hispanic applicants, and 46.6 percent of White applicants.

The income distributions of Black and White conventional prime applicants has not changed significantly other than a slight increase in the lower-income shares of conventional prime loans in 1994. The distribution of Hispanic conventional prime applicants, however, has changed since 1993. Lower-income borrowers accounted for an increasing share of Hispanic conventional prime applicants until 1996; after 1996, upper-income borrowers accounted for an increasing share of Hispanic conventional prime applicants. Lower-income applicants accounted for 30.1 percent of Hispanic conventional prime applicants in 1993, 39.5 percent in 1996, and 36.7 percent in 1998. Upper-income applicants accounted for 41.7 percent of Hispanic conventional prime applicants in 1993, 32.5 percent in 1996, and 37.5 percent in 1998.

Lower-income borrowers accounted for an increasing proportion of FHA borrowers - Black, Hispanic, and White - in most years since 1993. Lower-income applicants accounted for 54.3 percent of Black FHA applicants in 1993, 57.8 percent in 1996, and 61.2 percent in 1998. Lower-income applicants accounted for 42.1 percent of

³¹ After controlling for the high-denial rate lenders, the disparity ratio between Black and White borrowers increased from 2.3 in 1993 to 2.4 in 1998 and the disparity ratio between Hispanic and White borrowers decreased from 2.0 in 1993 to 1.9 in 1998.

³² The disparity in conventional prime denial rates can be partially explained by the fact that Black and Hispanic borrowers are more likely to apply for mortgages with very low or very high loan-to-income ratios than White borrowers. The disparity in conventional prime denial rates between Blacks, Hispanics, and White borrowers, however, cannot be fully explained by higher loan-to-income ratios.

Hispanic FHA applicants in 1993, 52.0 percent in 1996, and 51.1 percent in 1998. Lower-income applicants accounted for 41.6 percent of White FHA applicants in 1993, 42.5 percent in 1996, and 46.6 percent in 1998.

Even controlling for differences in income, Black and Hispanic borrowers experienced higher conventional prime denial rates.³³ For lower-income borrowers, the conventional prime denial rate for Black (Hispanic) borrowers was 1.9 (1.5) times the denial rate for White borrowers in 1998.³⁴ For upper-income borrowers, the conventional prime denial rate for Black (Hispanic) borrowers was 2.5 (2.0) times the denial rate for White borrowers.³⁵

In 1998, the FHA denial rates for lower-income Black and Hispanic borrowers were 1.7 times and 1.3 times, respectively, the FHA denial rate for lower-income White borrowers. For upper-income borrowers, the Black FHA denial rate was twice the FHA denial rate for White borrowers and the Hispanic FHA denial rate was 1.6 times the denial rate for White borrowers.

C. Origination Trends

There has been substantial growth in home purchase mortgage lending for all borrowers in the 1990s but the growth has been highest for minority and lower-income borrowers and borrowers in minority and lower-income neighborhoods. A strong economy and historically low interest rates underlie the increases in overall lending and the increases in minority and lower-income lending in the 1990s. Growth in minority and lower-income lending also increased in the 1990s because of regulatory pressure on lenders through CRA and on the GSEs through regulatory housing goals, the use of manufactured homes as a source of affordable homes, and investor interest in loan markets for borrowers with subprime credit or special credit needs. Although the growth in

³³ There are differences in the income distribution of Black, Hispanic, and White applicants within these broadly defined income groups. For example, White upper-income borrowers have higher incomes, on average, than Black and Hispanic upper-income borrowers.

³⁴ Disparity in conventional denial rates by borrower race or ethnic group and income are distorted by the presence of manufactured home and subprime loan applications. For example, the overall conventional lower-income Black denial rate was 1.5 times the White denial rate. The manufactured home loan disparity rate between Black, Hispanic, and White borrowers is small since manufactured home lenders deny the majority of applications.

³⁵ A higher proportion of upper-income White borrowers have jumbo mortgages and jumbo mortgages have higher denial rates. Therefore, the disparity between Black, Hispanic, and White upper-income borrowers was higher for conforming conventional mortgages than for conventional mortgages overall. The conventional prime denial rate for jumbo mortgages was lower than the conventional prime denial rate for conforming mortgages for Black, Hispanic, and White borrowers. But the conventional prime denial rate for jumbo mortgages was higher than the conventional prime denial rate for conforming mortgages for Black, Hispanic, and White borrowers at each income level. That is, jumbo loans with missing income or missing geocodes have lower denial rates for all three groups.

lending in 1994 to these groups was mainly attributable to increases in conventional prime lending, subsequent growth in lending since 1994 was primarily the result of growth in FHA, manufactured home, and subprime lending.

1. Overall Lending Trends

Total home purchase lending increased by 42.7 percent between 1993 and 1998 and with the exception of 1995 when lending decreased by 1.2 percent, lending has increased each year since 1993. The growth in lending by mortgage product was as follows: conventional prime lending increased by 18.3 percent between 1993 and 1997 and 16.4 percent in 1998³⁶; manufactured home lending increased 137 percent between 1993 and 1997 and 11.5 percent in 1998³⁷; subprime lending increased 452 percent between 1993 and 1997 and 56.3 percent in 1998³⁸; and FHA lending increased 21.8 percent between 1993 and 1997 and 4.2 percent in 1998³⁹.

Borrower Racial or Ethnic Group. Lending to Blacks and Hispanics has increased more than lending to any other racial or ethnic group since 1993. Lending to Black, Hispanic, and lower-income borrowers increased by 71.9 percent, 87.2 percent, and 64.1 percent, respectively, between 1993 and 1998. There has been annual growth in home purchase mortgages for Black and Hispanic borrowers since 1993 even though growth rates have slowed to more sustainable rates than the double-digit growth rates in 1994. Lending to Black (Hispanic) borrowers increased by 34.4 percent (28.0 percent) in 1994, 10.1 percent (7.2 percent) in 1995, 3.1 percent (13.4 percent) in 1996, 3.9 percent (3.8 percent) in 1997, and 8.9 percent (15.8 percent) in 1998. Lending to White borrowers increased by 8.8 percent in 1994, decreased by 3.1 percent in 1995 and increased by 8.1 percent in 1996, 2.0 percent in 1997, and 12.9 percent in 1998.⁴⁰

³⁶ In 1998, ten states accounted for 56.5 percent of total geocoded conventional prime home purchase loans: California (12.9 percent), Florida (8.4 percent), Texas (6.9 percent), Illinois (5.0 percent), New York (4.6 percent), Ohio (4.2 percent), Michigan (3.9 percent), Pennsylvania (3.7 percent), New Jersey (3.6 percent), and Georgia (3.2 percent).

³⁷ In 1998, six states accounted for approximately 50 percent of all geocoded manufactured home loans reported to HMDA: Texas (15.9), North Carolina (9.9 percent), Florida (8.1 percent), South Carolina (5.5 percent), Michigan (5.4 percent), and Alabama (5.1 percent).

³⁸ In 1998, six states accounted for over 47 percent of the geocoded subprime home purchase originations in HMDA: California (22.4 percent), Florida (9.6 percent), New York (6.0 percent), Texas (5.5 percent), and Illinois (3.6 percent).

³⁹ In 1998, ten states accounted for 56.5 percent of geocoded FHA loans: California (14.9 percent), Texas (8.7 percent), Florida (7.5 percent), Maryland (4.2 percent), Illinois (3.9 percent), New York (3.7 percent), Ohio (3.6 percent), Virginia (3.5 percent), Colorado (3.3 percent), and Michigan (3.2 percent).

⁴⁰ In 1998, ten states accounted for 63.4 percent of all geocoded Black loans: Florida (8.7 percent), Georgia (8.7 percent), Maryland (7.6 percent), Texas (6.8 percent), California (6.7 percent), Illinois (5.5 percent), North Carolina (5.5 percent), New York (5.3 percent), Virginia (4.8 percent), and Ohio (4.0 percent). Ten states accounted for 85.6 percent of all geocoded Hispanic loans: California (27.4 percent), Texas (16.4 percent), Florida (15.0 percent), Puerto Rico (7.2 percent), Illinois (5.1 percent), Arizona (4.2

Borrower Income. Loans for borrowers at all income levels has increased significantly since 1993 but growth in lower-income lending has outpaced lending to other borrowers. Loans for low-income borrowers increased by 64.1 percent compared to 40.8 percent and 45.7 percent for moderate and high-income borrowers. Since 1993, lower-income lending has increased each year except in 1995. Lower-income lending increased by 15.0 percent in 1994, decreased by 5.1 percent in 1995, and then increased by 19.4 percent, 6.0 percent, and 18.9 percent in 1996, 1997, and 1998, respectively.

Neighborhood Group. Lending in all neighborhoods increased in 1994 but growth in lending was highest in minority and lower-income neighborhoods. Lending in minority (lower-income) neighborhoods increased by 16.4 percent (14.9 percent) in 1994 compared to 8.4 percent (7.6 percent) in low-minority (upper-income) neighborhoods. In 1995, lending in lower-income neighborhoods increased by 5.9 percent and declined in all other neighborhoods. Since 1995, lending in minority and lower-income neighborhoods has increased but growth in lending has often lagged behind growth in other neighborhoods. Lending increased by 37.6 percent and 40.3 percent, respectively, in minority and low-minority neighborhoods since 1995. Lending increased by 34.8 percent, 37.3 percent, and 45.3 percent in lower, moderate, and upper-income neighborhoods, respectively, since 1995.

2. Conventional Prime Lending

Borrower Racial or Ethnic Group. In 1994, conventional prime lending to Black and Hispanic borrowers increased by 51.1 percent and 39.4 percent, respectively. This one-time double-digit growth in conventional prime lending to Black and Hispanic borrowers reflected low interest rates and an increase in affordable lending efforts by lenders and the GSEs in 1994.

After 1994, growth in conventional prime lending slowed and in some years declined for Black and Hispanic borrowers. Loans originated for Black (Hispanic) borrowers increased by 3.1 percent (1.1 percent) in 1995 before decreasing by 5.0 percent (3.5 percent) in 1996 and 4.8 percent (6.8 percent) in 1997. Although low interest rates led to a rebound in conventional prime lending to Black and Hispanic borrowers in 1998 (4.6 percent for Blacks and 18.6 percent for Hispanics), conventional prime lending was 2.5 percent below its 1994 level for Blacks and only 7.9 percent above its 1994 level for Hispanics.

percent), New York (3.1 percent), Colorado (2.7 percent), New Jersey (2.6 percent), and New Mexico (2.0 percent). Ten states accounted for 51.8 percent of all geocoded lower-income loans: California (9.2 percent), Florida (7.8 percent), Texas (7.2 percent), Illinois (5.1 percent), Michigan (4.6 percent), Ohio (4.3 percent), Georgia (3.6 percent), Pennsylvania (3.4 percent), North Carolina (3.4 percent), Virginia (3.3 percent).

Borrower Income. Conventional prime lending to lower-income borrowers also increased in 1994 by 23.7 percent. Lending for borrowers at every income level decreased in 1995 but it decreased the most (11.4 percent) for lower-income borrowers. Conventional prime lending to lower-income borrowers increased in 1996 but remained below its 1994 level until lower interest rates resulted in a 22.5 percent increase in lending in 1998.

An examination of state level trends offers additional insights on conventional prime lending.⁴¹ Although conventional prime lending for lower-income borrowers declined nationally in 1995, lending for these borrowers increased in Texas, Georgia, Alabama, Tennessee, South Carolina, Louisiana, Arkansas, West Virginia, Mississippi, North Dakota, and Wyoming.

One explanation for this loan growth in 1995 was manufactured home loans originated by conventional prime lenders. The states cited above are mainly located in the South, a region where manufactured homes are popular housing alternatives. As stated earlier, Bank of America, FSB is a large manufactured home lender. Bank of America, FSB accounted for a large percentage of lower-income loans in these states in 1995 and after. For example, Bank of America, FSB accounted for 22.2 percent of 1995 conventional prime loans for lower-income borrowers in Alabama. This example suggests that the national growth in conventional prime lending to lower-income borrowers reported above may overstate the actual growth in conventional prime lending.

Neighborhood Group. Conventional prime ending in minority and lower-income neighborhoods followed similar trends. Lending increased sharply in 1994, remained relatively steady until 1998 when lower interest rates led to increased lending. Lending in minority (lower-income) neighborhoods increased by 22.4 percent (22.8 percent) in 1994 compared to 12.6 percent (10.2 percent) in low-minority (upper-income) neighborhoods. Overall growth in conventional prime lending since 1993 was slightly lower in minority neighborhoods (42.8 percent) than in low-minority neighborhoods (45.5 percent) and slightly higher in lower-income neighborhoods (45.6 percent) than in upper-income neighborhoods (44.7 percent).

3. FHA Lending

Borrower Racial or Ethnic Group. In 1995 through 1997, there was double-digit growth in FHA lending for Black and Hispanic borrowers. Between 1993 and 1997, FHA lending to Black and Hispanic borrowers increased 63.8 percent and 96.1 percent, respectively. Lending to these borrowers increased in 1998 but growth slowed as some Black and Hispanic borrowers were able to take advantage of lower interest rates and

⁴¹ A more complete set of data on origination trends at the state level are in Appendix C.

chose conventional loans. In 1998, FHA lending to Black and Hispanic borrowers increased by only 2.2 percent and 8.4 percent, respectively.

The growth in lending to Black and Hispanic borrowers since 1994 has largely been attributable to growth in FHA lending. In 1995, FHA loans accounted for 39.7 percent (65.9 percent) of additional Black (Hispanic) loans. In 1997, total lending would have only increased marginally for Black borrowers and would have decreased for Hispanic borrowers from 1995 levels if not for increases in FHA loans to these two groups. In 1997, conventional lending to Black (Hispanic) borrowers increased (decreased) by 1.1 percent and 1.6 percent from their 1995 levels. Over the 1995 through 1997 period, overall lending to Blacks and Hispanics increased by 7.1 percent and 17.7 percent, respectively because of FHA loans.

Borrower Income. FHA lending to lower-income borrowers grew by 55.8 percent between 1993 and 1998. After declining by 4.9 percent in 1994, FHA lending for lower-income borrowers remained constant in 1995 and then increased each year since then. FHA lending for lower-income borrowers increased by 31.6 percent in 1996, 15.6 percent in 1997, and 7.6 percent in 1998.

Neighborhood Group. Since 1994, FHA loans have accounted for a larger share of the growth in lending in minority and lower-income neighborhoods than any other loan product. FHA accounted for 37.6 percent (31.1 percent) of all additional loans originated in minority (lower-income) neighborhoods between 1994 and 1998.

4. Manufactured Home and Subprime Lending

Borrower Racial or Ethnic Group. Manufactured home and subprime loan growth have accounted for all of the growth in conventional lending to Black borrowers and most of the growth in conventional lending to Hispanic borrowers since 1994. Overall conventional lending to Black borrowers increased by 25.8 percent between 1994 and 1998. Manufactured home and subprime loans accounted for 58.9 percent and 41.1 percent, respectively, of additional conventional Black loans during this period. Overall conventional lending to Hispanic borrowers increased by 25.2 percent since 1994. Conventional prime, manufactured home, and subprime loans accounted for 28.9 percent, 31.4 percent, and 39.7 percent, respectively, of the additional conventional Hispanic loans.⁴²

Borrower Income. In 1995, manufactured home lending for lower-income borrowers increased by 58.4 percent partially offsetting the 11.1 percent decline in

⁴² In 1998, manufactured home loans accounted for at least 15 percent of Black conventional loans in South Carolina (43.6 percent), North Carolina (33.1 percent), Alabama (29.4 percent), Arkansas (25.7 percent), Louisiana (24.8 percent), Mississippi (22.3 percent), and Texas (15.9 percent). Manufactured home loans accounted for at least 15 percent of Hispanic conventional loans in North Carolina (46.7 percent), New Mexico (35.5 percent), Texas (22.4 percent), and Arizona (16.2 percent).

conventional prime lending to lower-income borrowers. In 1996, conventional prime lending to lower-income borrowers increased by 11.1 percent compared to 15.3 percent increase for overall conventional lending. Most of the difference was attributable to manufactured home loan growth. In 1997, growth in overall conventional lending to lower-income borrowers was attributable to growth in manufactured home and subprime loans only as conventional prime loans for lower-income borrowers remained at their 1996 level.⁴³

Neighborhood Group. Manufactured home and subprime loans have accounted for large shares of the additional lending in minority and lower-income neighborhoods since 1994. Manufactured home and subprime loans comprised 13.2 percent and 23.9 percent, respectively, of all additional loans originated in minority neighborhoods since 1994 and 13.5 percent and 25.3 percent, respectively, of the increase in loans in lower-income neighborhoods since 1995.

D. Market Shares

As discussed in the last section, the conventional prime share of the market for Black, Hispanic, lower-income, and borrowers in minority and lower-income neighborhoods increased sharply in 1994 but decreased since then because growth in conventional prime lending has not kept up with overall growth in lending to these borrowers. This section shows this result more directly by analyzing market shares where a market share is defined as the percentage of a market (e.g., Black borrowers) accounted for by a particular loan product.⁴⁴

Overall. Conventional prime and government-insured lending comprised the majority of loans overall but their total share of loans has decreased since 1993 because of the increasing shares accounted for by manufactured home and subprime lending. The total conventional prime and FHA share of originations decreased from 95.8 percent in 1993 to 89.3 percent in 1998 as the subprime share increased from 0.8 percent in 1993 to

⁴³ In 1998, manufactured home loans accounted for more than 30 percent of conventional low-income loans in North Carolina (37.4 percent), South Carolina (37.3 percent), Alabama (36.8 percent), New Mexico (35.4 percent), Oklahoma (31.5 percent), Texas (30.8 percent), Arkansas (30.8 percent), Montana (30.8 percent), Louisiana (30.7 percent), and Mississippi (30.2 percent).

⁴⁴ We present unadjusted market shares for each loan product overall and by borrower and neighborhood subgroups. That is, these shares have not been adjusted for different rates of HMDA coverage. HMDA does not include all mortgage originations and HMDA coverage rates differ by product type. Researchers disagree on HMDA coverage rates (see Scheessele (1998) and Berkovec and Zorn (1996)) but HMDA covers FHA loans slightly better than conventional prime loans. HMDA also covers a high percentage of manufactured home loans but likely omits a large percentage of subprime mortgages. The increase in the subprime share of loans should be interpreted carefully since part of the growth in subprime lending reported to HMDA may reflect more subprime lenders reporting to HMDA rather than more subprime loans.

4.5 percent in 1998 and the manufactured home loan share increased from 3.4 percent in 1993 to 6.2 percent in 1998.⁴⁵

As interest rates decrease, more borrowers qualify for conventional prime loans thereby decreasing the government-insured share of the market. The conventional prime share of originations increased from 70.3 percent in 1993 to 73.1 percent in 1994, decreased to 67.0 percent in 1997, and increased to 67.8 percent in 1998. The FHA share of total loans decreased from 18.1 percent in 1993 to 14.7 percent in 1994, then increased to 17.8 percent in 1997, before declining to 16.1 percent in 1998.

Borrower Racial or Ethnic Group. Conventional prime lending accounted for the highest share of loans for Black loans in 1994 and 1995 but government-insured loans accounted for the highest share of Black loans in 1993 and in 1996 through 1998. The conventional prime share of Black originations increased from 44.5 percent in 1993 to 50.0 percent in 1994 before steadily declining each year to 38.1 percent in 1998. The government-insured share of Black originations decreased from 49.9 percent in 1993 to 42.3 percent in 1994, increased to 45.7 percent in 1997, and decreased to 43.3 percent in 1998.

Conventional prime loans accounted for the highest share of Hispanic loans until 1997. In 1997 and 1998, government-insured lending accounted for more Hispanic loans than conventional prime lending. The conventional prime share of Hispanic originations increased from 54.7 percent in 1993 to 59.7 percent in 1994, decreased to 42.9 percent in 1997, and increased to 44.0 percent in 1998. The government-insured share of Hispanic originations decreased from 42.0 percent in 1993 to 35.6 percent in 1994, increased to 47.9 percent in 1997, and decreased to 44.9 percent in 1998.

Increases in the lower-income shares of Black and Hispanic loans provides one reason for the popularity of government-insured loans for these borrowers. Lower-income borrowers increased from 43.2 percent (33.6 percent) of all Black loans in 1993 to 47.7 percent (41.6 percent) in 1998. The front-end and back-end ratios for FHA and conventional prime mortgages are 29/41 and 28/36, respectively. A one percentage point difference in the front-end ratio translates into an approximate 3.5 percent decrease in the income required to qualify for a FHA loan. As the proportion of lower-income borrowers increase, a lower proportion of borrowers are able to meet the conventional prime payment-to-income ratio requirement and choose FHA loans.

The manufactured home and subprime share of loans increased more for Black borrowers than Hispanic and White borrowers. The manufactured home (subprime) loan share increased from 4.4 percent (1.2 percent) in 1993 to 9.9 percent (8.7 percent) in 1998 for Black borrowers; from 2.4 percent (0.9 percent) in 1993 to 5.7 percent (5.4 percent) in

⁴⁵ Subprime loans accounted for the highest share of conventional originations in Nevada (14.2 percent), California (10.3 percent), Utah (10.2 percent), Missouri (9.0 percent), and Rhode Island (8.7 percent).

1998 for Hispanic borrowers; and from 3.6 percent (0.6 percent) in 1993 to 6.4 percent (3.5 percent) in 1998 for White borrowers.

Borrower Income. Conventional prime lending accounted for the highest share of loans for lower-income borrowers in all years from 1993 to 1998. Although the conventional prime share increased in 1994 and 1998 primarily because of lower interest rates, the conventional prime share has declined from its 1993 level. The conventional prime share of lower-income originations increased from 57.4 percent in 1993 to 61.7 percent in 1994, decreased to 50.5 percent in 1997, and increased to 52.0 percent in 1998.

Manufactured home loans became more important for borrowers at every income level but more important for lower-income borrowers. The manufactured home share increased from 3.1 percent in 1993 to 8.9 percent in 1998 for lower-income borrowers, from 1.3 percent in 1993 to 4.2 percent in 1998 for moderate-income borrowers, and from 0.5 percent in 1993 to 1.6 percent in 1998 for upper-income borrowers. Subprime loans accounted for higher shares of loans for borrowers at every income level in 1998 but there was no significant difference in their subprime shares. Subprime loans accounted for 4.2-4.3 percent of loans for borrowers at every income level in 1998.

Neighborhood Group. Conventional prime lending accounted for the highest share of loans for borrowers in lower-income and minority neighborhoods in all years from 1993 to 1998. The conventional prime share of loans in minority and lower-income neighborhoods decreased from approximately 60 percent in 1993 to 53 percent in 1998.

Manufactured home and subprime lending have become more important in minority and lower-income neighborhoods. The manufactured home share of loans in minority (lower-income) neighborhoods increased from 1.4 percent (2.2 percent) in 1993 to 5.4 percent (7.9 percent) in 1998. The subprime share of loans in these neighborhoods increased from approximately 1 percent in 1993 to 8 percent in 1998.

E. Loans With Missing Information

Loans with missing race, income, or census tract location data make it difficult to interpret minority and lower-income lending patterns.⁴⁶ The percentage of applications

⁴⁶ A depository institution need not report borrower race, sex, or income if it has assets of \$30 million dollars or less. A lender is not required to request race information if the application is taken by telephone. If an application is received by mail, the lender must request race information, but the borrower does not have to provide it. Lenders need not report borrower income, sex, or race for loans purchased from other lending institutions. A lender does not report borrower income information if it does not take income into account when making the credit decision (e.g., FHA streamline refinance loans.) Lenders need not geocode loan application data from properties located in metropolitan areas in which it does not have a home or branch office or for properties in non-metropolitan areas. Beginning in 1996, banks and savings associations with total assets of \$250 million or more and bank and savings associations that are subsidiaries of holding companies with banking or thrift assets of \$1 billion or more as of December 31 for each of the immediately preceding two years must report the property location of all loans, both metropolitan and non-metropolitan loans.

where the race was not provided by the applicant increased from 3.8 percent in 1993 to 8.6 percent in 1998.⁴⁷ The percentage of applications with missing borrower income (geocode) has remained steady at approximately 2-3 percent (26-27 percent) for most years between 1993 and 1998.⁴⁸

Borrower Race. Subprime applications accounted for a disproportionate share of applications where race was not provided by the applicant because they were more likely to have come from telephone or mail applications. In 1998, subprime applications accounted for 8.7 percent of all applications but 23.7 percent of all applications where race was not provided by the applicant.⁴⁹ Race was not provided by the applicant for 23.5 percent of the 688,994 subprime applications, 8.0 percent of the 4,454,323 conventional prime applications, 6.9 percent of the 1,594,689 manufactured home loan applications, and 3.6 percent of the 913,155 FHA applications.

The minority composition of the neighborhood suggests that applications where race was not provided by the applicant were not disproportionately Black.⁵⁰ In 1998, Black neighborhoods accounted for 6.0 percent, 19.5 percent, and 9.4 percent of conventional prime, subprime, and FHA applications where race was not provided by the applicant.⁵¹ Black borrowers accounted for 5.6 percent, 17.6 percent, and 14.5 percent of conventional prime, subprime, and FHA applications where race was provided by the applicant.

⁴⁷ The percentage of originations with missing borrower race increased from 2.8 percent in 1993 to 6.2 percent in 1998.

⁴⁸ The percentage of originations with missing borrower income (geocode) ranged from 1.9-2.6 percent between 1993 and 1998, and the percentage of originations with missing geocodes decreased from 19-21 percent between 1993 and 1995 to 14.8 percent in 1998. The decline in the percentage of originations with missing geocodes can partially be explained by the requirement that large depositories begin reporting in 1996 the geocode for all loans regardless of their location.

⁴⁹ Subprime loan applications have accounted for an increasing percentage of all loan applications where race was not provided by the applicant. Subprime loan applications accounted for 5.8 percent of all 1993 applications where race was not provided compared to 23.7 percent in 1998.

⁵⁰ The correlation between borrower race and neighborhood minority concentration is strongest for Blacks.

⁵¹ A Black neighborhood is defined as a census tract where Blacks comprise at least 30 percent of the population. The applications were actually concentrated in neighborhoods where Blacks comprise at least 50 percent of the population. For example, neighborhoods where Blacks comprised at least 50 percent of the population accounted for 14.0 percent of subprime applications where race was not provided by the applicant. Neighborhoods where Blacks comprised between 30 and 50 percent of the population accounted for 5.5 of these applications. The percentages reported here exclude applications with missing geocodes.

Borrower Income. Subprime applications accounted for a disproportionate share of applications with missing borrower income data because the subprime market, as defined in this paper, includes Alt-A and no documentation loan applications. In 1998, 13.2 percent of subprime applications had missing borrower income data and accounted for 35.6 percent of all applications with missing borrower income data even though these applications only accounted for 8.7 percent of all applications.

Geocodes. Manufactured home loans accounted for a disproportionate share of applications with missing geocode information because they were more likely to be for properties located in non-metropolitan areas. In 1998, 49.4 percent of manufactured home loan applications had missing geocode information and although manufactured home loan applications accounted for 20.1 percent of all applications, they accounted for 37.6 percent of all applications with missing geocode information.

III. Home Refinance Loans

The volume of refinancing activity depends on interest rates. As interest rates decline, borrowers are more likely to refinance loans to change mortgage terms (e.g., lower monthly payments, shorten terms). Borrowers are also more likely to tap home equity for debt consolidation, home improvement, or major purchases through refinancing when interest rates are relatively low. That is, cash-out refinance loans are more popular than home equity closed-end loans or home equity lines of credit when interest rates are relatively low.⁵²

Refinancing patterns for lower-income borrowers and borrowers with subprime credit differ from other borrowers. Lower-income borrowers are less likely than other borrowers to refinance as interest rates decline since they typically have less equity in their homes and smaller loan amounts. Although there have been no formal studies of the effect of interest rates on subprime refinancing, anecdotal evidence suggests that interest rates are also less important to subprime borrowers. Subprime borrowers are more likely than prime borrowers to refinance at higher interest rates to obtain cash and consolidate debt and less likely than prime borrowers to prepay when interest rates are falling.⁵³

Refinance denial rate and origination patterns depend on the composition of borrowers in the refinance market. As interest rates decline, there is a higher proportion

⁵² The uses of cash-out refinancing parallel the uses of home equity credit. Canner et al (1990) reports that the uses of HELs and cash-out refinances were nearly identical. Canner, Glenn B., Charles A. Luekett, and Thomas A. Durkin. "Mortgage Refinancing." Federal Reserve Bulletin. August 1990. Pages 604-612.

⁵³ During the latest refinance wave, however, subprime borrowers refinanced at higher rates than anticipated by lenders because of broker churning and because A- and B-quality borrowers were able to qualify for A paper.

of borrowers whose primary motivation is to change monthly mortgage terms. Consequently, there is a decline in refinance denial rates and an increase in originations. As interest rates increase, borrowers that are less sensitive to interest rate changes account for a larger segment of the market. Consequently, there is an increase in refinance denial rates and a decline in originations. The refinance markets in 1993 and 1998 were similar because there was a significant decline in interest rates in both years that led to a decrease in denial rates and an increase in originations. Although the primary motivation for refinancing was to lower monthly costs in both years, a higher percentage of borrowers also refinanced to tap home equity in 1998.⁵⁴ Consequently, the refinance denial rate in 1998 exceeded the 1993 refinance denial rate.

The following analysis of mortgage market trends in the home refinance loan market is divided into five main sections. The first section discusses the effects of subprime loan applications on conventional refinance denial rates. The second section discusses denial rate trends for conventional prime (i.e., after controlling for manufactured home and subprime applications) and FHA home refinance loan applications. The third section discusses origination trends in the refinance market. The fourth section discusses the types of refinance mortgage products used by different borrower groups. Finally, the fifth section provides insights on loans with missing data. Data reported in this section are drawn from tables on home refinance lending in Appendix B.

A. Manufactured Home and Subprime Loan Applications

This section demonstrates the importance of recognizing manufactured home and subprime loan applications when analyzing home refinance denial rate trends. The main focus in this section is on subprime loan applications since manufactured home loan applications accounted for a small percentage of overall conventional applications and had a marginal effect on overall conventional denial rates.

1. Manufactured Home Lending

There has been an increase in the number of manufactured home refinance applications in 1997 and 1998. New entrants into the manufactured home industry competed with established lenders by churning refinance loans and underwriting loans under more liberal standards. The denial rates for these loans increased from 23.4 percent in 1996 to 28.6 percent in 1997 and 47.1 percent in 1998. Manufactured home refinance loan applications increased by over 100 percent between 1996 and 1998 but their share of

⁵⁴ Follain, et al reported that more than 51 percent of Freddie Mac borrowers that refinanced in 1998 obtained cash-out refinance loans compared to 34 percent in 1993. Follain, James, Vassilis Lekkass, and H. Jane Lehman. "Refinancers Crave Cash on Top of Lower Monthly Payments." Secondary Mortgage Markets. July 1999.

total applications has remained between 2 and 4 percent of conventional applications.⁵⁵ Manufactured home refinance loan applications have not significantly affected overall conventional denial rates since they accounted for a small share of overall conventional applications.⁵⁶

2. Subprime Lending

The overall conventional denial rate increased from 11.1 percent in 1993 to 24.2 percent in 1997 before declining to 19.1 percent in 1998. The overall conventional refinance denial rate increased each year between 1993 and 1997 primarily because of the increasing subprime share of total conventional applications. Conventional subprime refinance applications increased from 215,398 applications (or 3.2 percent of all conventional refinance applications) in 1993 to 1,976,526 applications (or 38.5 percent of all conventional refinance applications) in 1997. Subprime refinance applications continued to increase in 1998 to 3,351,074 applications but the subprime share of conventional applications declined to 31.4 percent of all conventional refinance applications because of lower interest rates.

The subprime denial rate has exceeded 30 percent in all years but it has exhibited no clear upward or downward trend. The subprime denial rate increased from 30.3 percent in 1993 to 36.8 percent in 1995, decreased to 30.8 percent in 1996, increased to 33.2 percent in 1997, and then decreased to 31.5 percent in 1998. The subprime denial rate pattern may reflect the broad definition of subprime lenders used in this paper and the fact that the list varies significantly from year to year as lenders either become required to report to HMDA or go out of business and drop off the list.

Subprime lenders typically concentrate on the refinance market for customers although they have expanded their focus to include the home purchase market. The HMDA data reported by subprime lenders reflects the emphasis on the refinance market. Between 1993 and 1998, the refinance share of subprime applications has ranged from 81 percent to 86 percent of all subprime applications reported to HMDA.

Borrower Racial or Ethnic Group. Subprime lending has contributed to the increase in overall conventional home refinance denial rates by racial and ethnic group

⁵⁵ The number of manufactured home loan refinance applications decreased for every race and ethnic group in 1998. Overall, manufactured home loan refinance applications increased as the number of applications where race was not provided in a telephone or mail application increased by 157 percent from 67,193 applications in 1997 to 172,795 applications in 1998.

⁵⁶ Manufactured home refinance loan applications have accounted for more than 4 percent of applications for Black borrowers in the past. In 1994 and 1995, manufactured home refinance applications accounted for 10.9 percent and 9.5 percent of conventional refinance applications for Blacks. Interestingly, the manufactured home refinance loan denial rate for Black borrowers was below the conventional prime denial rate in all years except 1993 and 1998. The manufactured home refinance loan denial rate was also below the conventional prime denial rate for Hispanic borrowers in 1995 and 1996.

between 1993 and 1997 because of the increasing share of total applications accounted for by subprime loans. The subprime share of refinance applications increased from 12.4 percent in 1993 to 56.5 percent in 1997 for Black borrowers, 5.9 percent in 1993 to 37.0 percent in 1997 for Hispanic borrowers, and 1.8 percent in 1993 to 18.1 percent in 1997 for White borrowers. The overall conventional home refinance denial rate decreased less in 1998 for Blacks than Hispanics and Whites primarily because of the constant subprime share of total Black refinance applications. Subprime applications accounted for 56.5 percent of Black applications in 1997 and 1998 while the subprime share of total Hispanic (White) refinance applications decreased from 37.0 percent (24.2 percent) in 1997 to 31.6 percent (18.1 percent) in 1998.

B. Conventional Prime and FHA Denial Rate Trends

1. Conventional Prime Denial Rate Trends

After controlling for manufactured home and subprime applications, the conventional prime refinance denial rate increased from 10.4 percent in 1993 to 18.0 percent in 1997 before declining to 12.3 percent in 1998 because of lower interest rates.⁵⁷ The denial rate increased each year from 1993 to 1997 because cash-out refinance applications accounted for a higher share of refinance applications during years of higher interest rates (1994-1997) than during years of lower interest rates (1993 and 1998).⁵⁸

The lower conventional denial rates in 1993 and 1998 reflected the fact that the primary motivation for refinancing when interest rates decrease is to lower monthly mortgage costs. These refinance loans are less likely to be denied by a lender than refinance loans that cash out home equity. A greater percentage of cash-out refinance applications also explains why the conventional prime refinance denial rate was lower in 1993 than in 1998.

⁵⁷ The conventional prime purchase denial rate was approximately equal to the conventional prime home purchase denial rate each year except in 1993 and 1997 when the purchase denial rate exceeded the refinance denial rate by 3.7-3.8 percentage points. A closer examination of the data reveals that the refinance denial rate exceeded the purchase denial rate in each year except 1993 at every income level. Home purchase applications with missing income data was the reason for the higher purchase denial rate. Applications with missing income accounted for a greater percentage of purchase cases than refinance cases and the denial rate for purchase cases was much higher than for refinance cases. A significant proportion of the purchase cases were likely manufactured home applications of prime lenders. The denial rate for purchase applications with missing income data was 33.9 percent in 1998 compared to 14.1 percent for refinance applications. For purchase mortgages with income data, the denial ranged from 7.0 percent for upper-income borrowers to 17.6 percent for lower-income borrowers. The fact that the denial rate for missing cases lies outside the range of denial rates for loans with income data suggests that these loans are manufactured home loans. After controlling for Bank of America, FSB and Chase applications, the overall conventional prime refinance denial rate was greater than the conventional prime purchase denial rate.

⁵⁸ The denial rate of conventional prime lenders also increases with increases in the percentage of their business devoted to subprime lending. It is impossible to determine from HMDA data alone the percentage of prime lenders' business that is devoted to subprime lending.

Borrower Income. The conventional prime refinance denial rate increased for borrowers at all income levels between 1993 and 1997 before declining in 1998 because of lower interest rates. The prime refinance denial rate for lower-income (upper-income) borrowers increased from 14.8 percent (8.9 percent) in 1993 to 24.4 percent (13.7 percent) in 1997 before declining to 17.9 percent (9.0 percent) in 1998.

Lower-income borrowers accounted for a higher percentage of refinance applications in 1998 than in 1993. The percentage of applications accounted for by lower-income borrowers increased from 12.9 percent in 1993 to 19.9 percent in 1997 before declining to 17.8 percent in 1998. The percentage of applications accounted for by upper-income borrowers decreased from 47.8 percent of prime refinance applications in 1993 to 38.0 percent in 1997 before increasing to 40.8 percent in 1998.

Borrower Income by Race. The conventional prime refinance denial rate increased steadily for Black, Hispanic, and White borrowers from 1993 to 1996 but then declined slightly in 1997.⁵⁹ The conventional prime refinance denial rate declined more significantly in 1998 as the conventional prime denial rate was 3.7 percentage points lower for Blacks, 7.3 percentage points lower for Hispanic borrowers, and 4.2 percentage points lower for White borrowers.

Lower-income borrowers accounted for increasing shares of conventional prime refinance applications between 1993 and 1997 but especially so for Black borrowers. The lower-income share of Black applications increased from 21.8 percent in 1993 to 36.8 percent in 1997 before declining to 33.1 percent in 1998. The lower-income share of Hispanic (White) applications increased from 20.5 percent (12.5 percent) in 1993 to 30.4 percent (18.0 percent) in 1997 before declining to 26.9 percent (16.5 percent) in 1998.

Blacks had higher conventional prime denial rates in 1998 than in 1993 at every income level. Hispanics, however, had lower conventional prime denial rates in 1998 than in 1993 at every income level. The conventional prime denial rate for Whites was approximately equal in 1993 and 1998. For example, the conventional prime denial rate for upper-income Black borrowers increased from 18.1 percent in 1993 to 19.7 percent in 1998; the conventional prime denial rate for upper-income Hispanic borrowers decreased from 17.0 percent in 1993 to 13.9 percent in 1998; and the conventional prime denial rate for upper-income White borrowers decreased from 7.5 percent in 1993 to 6.9 percent in 1998.

⁵⁹ The overall conventional prime refinance denial rate increased in 1997 mainly because of the increased share of total applications accounted for by applications taken over the phone or through the mail. The denial rate for applications taken over the phone or through the mail increased each year between 1993 and 1997. In 1997, the combined influence of higher denial rates for these applications and their increased share of total applications led to higher conventional prime refinance denial rates even though the prime denial rate declined for all racial and ethnic groups.

Neighborhood Group. The conventional prime denial rate increased in every neighborhood between 1993 and 1997 before declining in 1998. In 1998, the conventional prime denial rate in lower-income (minority) neighborhoods was 19.8 percent (19.1). The conventional prime denial rate in lower-income neighborhoods typically ranged from 1.7-1.8 times the denial rate in upper-income neighborhoods but was at least twice the denial rate in upper-income neighborhoods in 1993 and 1998. The conventional prime denial rate in minority neighborhoods typically ranges from 1.6-1.8 times the conventional prime denial rate in other neighborhoods.

2. FHA Denial Rate Trends

The FHA denial rate increased from 5.6 percent in 1993 to 14.7 percent in 1997 before declining to 6.0 percent in 1998 because of lower interest rates. The largest increase in the FHA denial rate occurred between 1996 and 1997 when the denial rate increased 4.2 percentage points because of the greater share of cash-out refinance loan applications.

The majority of FHA refinance applications have missing borrower income because FHA does not require lenders to consider borrower income when evaluating streamline refinance loans. The purpose of a streamline refinance loan is to lower monthly mortgage costs only. Cash-out FHA refinance loans must be fully underwritten and borrower income must be evaluated. Lenders are not required to report borrower income to HMDA for loan applications where income is not evaluated when underwriting the loan. Therefore, the percentage of FHA applications with missing income data is a good proxy for the percentage of streamline refinance applications.

Streamline refinance loans accounted for at least two-thirds of FHA refinance applications in all years except 1995 and 1997. The streamline refinance percentage in 1995 declined slightly to 63.5 percent of applications. The streamline refinance percentage in 1997, however, declined significantly to 55.9 percent reflecting a higher percentage of FHA loan applications for cash-out refinancing.

The increase in the FHA denial rate in 1997 at each income level reflected the higher proportion of cash-out refinance loans. The FHA denial rate for lower-income borrowers increased from 13.2 percent in 1996 to 19.4 percent in 1997. The FHA denial rates for moderate and upper-income borrowers more than doubled between 1996 and 1997. The denial rate for moderate-income (upper-income) borrowers increased from 11.0 percent (10.6 percent) in 1996 to 23.6 percent (24.1 percent) in 1997.

Borrower Racial or Ethnic Group. The FHA refinance denial rate for Black borrowers increased from 9.5 percent in 1993 to 14.4 percent in 1997 before declining to 7.7 percent in 1998. The FHA refinance denial rate for Hispanics increased from 6.7 percent in 1993 to 9.1 percent in 1997 before declining to 7.1 percent in 1998. The FHA denial rate for White borrowers increased from 4.6 percent in 1993 to 10.0 percent in 1997 before decreasing to 4.7 percent in 1998.

Blacks, Hispanics, and Whites differed with respect to the proportion that used cash-out refinancing. Of those borrowers with cash-out refinancing applications, Black, Hispanics, and Whites differed with respect to income level. For example, cash-out FHA refinance applications in 1997 accounted for 46.6 percent of Black applicants, 49.9 percent of Hispanic applicants, and 43.3 percent of White applicants. Of those borrowers with cash-out refinance applications, lower-income applicants accounted for 49.8 percent of Black applications, 29.1 percent of Hispanic applicants, and 40.9 percent of White applicants. Hispanics with cash-out refinance applications were more likely to have upper-incomes than other borrowers. For example, 46.3 percent of Hispanics with cash-out applications had upper-incomes compared to 20.3 percent for Blacks and 24.9 percent for Whites.

C. Origination Trends

Lower interest rates caused a surge in home refinance lending in 1998. Lenders reported 6,705,214 refinance loans under HMDA in 1998, a 140 percent increase over the 2,789,364 refinance loans reported in 1997, and a 9.9 percent increase over the refinance volume in 1993, another year of heavy refinancing activity because of lower interest rates. This section describes the refinance market in 1998 and discusses trends in the refinance market since 1993. In particular, we show the similarities and differences between the 1993 and 1998 refinance markets and we discuss the growth in the subprime refinance market.

1. Overall Lending Trends

Interest rates are the main determinant of fluctuations in refinance activity. The average conventional 30-year fixed rate increased from 7.33 percent in 1993 to 8.35 percent in 1994, decreased to 7.59 percent in 1997, and further decreased to 6.95 percent in 1998.⁶⁰ Total refinance lending followed a similar pattern as interest rates. Total refinance loans decreased by 58.7 percent and 35.0 percent in 1994 and 1995, respectively. Total refinance loans increased by 57.3 percent and 8.2 percent in 1996 and 1997, respectively, before further increasing by 140 percent in 1998.

The conventional prime refinance market in 1998 was similar to the refinance market in 1993, another year of low interest rates. The number of conventional prime applications in 1998 was 661,544 applications higher than in 1993.⁶¹ The increase in conventional prime applications, however, only resulted in 125,886 additional conventional prime originations, a 2.4 percent increase over 1993 levels.⁶²

⁶⁰ Source: Federal Home Loan Mortgage Corporation. We have not reported average points.

⁶¹ The number of government-insured refinance applications in 1998 was 276,568 applications below the number of applications in 1993.

⁶² Lenders originated 19.0 percent and denied 30.3 percent of the 661,544 additional conventional prime applications in 1998. The remaining applications were either approved and not accepted by the applicant,

Subprime mortgages were the only mortgage product type to experience growth each year between 1993 and 1998. Furthermore, the total number of refinance loans in 1997 would have been 393,348 loans short of its 1994 level if not for growth in subprime mortgages. Subprime refinances increased by 59.1 percent in 1994, 24.9 percent in 1995, 102 percent in 1996, 72.2 percent in 1997, and 43.2 percent in 1998.

2. Trends in Minority and Affordable Lending

Borrower Racial or Ethnic Group. Total refinance loans for Black borrowers increased by 8.5 percent between 1993 and 1997 - the only racial group that experienced an increase during this period. Refinance loans for Hispanic and White borrowers decreased by 48.3 percent and 60.0 percent, respectively, during this period. The main reason for the growth in refinance lending to Black borrowers during this period was the growth in subprime lending to Blacks. Subprime refinance lending to Blacks increased by 661 percent between 1993 and 1997 compared to 379 percent and 471 percent increases for Hispanic and White borrowers, respectively. After controlling for subprime (and manufactured home) loans, conventional prime loans for Blacks decreased by 25.4 percent for Blacks, 58.6 percent for Hispanics, and 63.1 percent for Whites. Government refinance loans decreased by 61.9 percent, 60.5 percent, and 83.3 percent, for Black, Hispanic, and White borrowers, respectively between 1993 and 1997.

In 1998, Hispanic borrowers relied less on FHA and government loans and more on conventional loans for refinancing while Black borrowers continued to rely on FHA and government-insured loans for refinancing. Conventional prime lending increased by 90 percent for Blacks, 174 percent for Hispanics, and 162 percent for Whites. Government refinances increased by 219 percent for Black borrowers, 154 percent for Hispanic borrowers, and 243 percent for White borrowers.

Borrower Income. Conventional refinancing decreased the least for lower-income borrowers between 1993 and 1997.⁶³ Conventional refinancing decreased by 17.0 percent, 49.6 percent, and 62.3 percent for lower, moderate, and upper-income borrowers, respectively, between 1993 and 1997. Conventional prime refinance lending for lower moderate, and upper-income borrowers decreased by 43.9 percent, 60.8 percent, and 67.3 percent, respectively, between 1993 and 1997. The smaller decline may reflect lower-income households' use of cash-out refinancing rather than a second-lien home equity loan.

withdrawn, or terminated because the file was incomplete which suggests households shopped around for a refinance loan more in 1998 than in 1993.

⁶³ We do not present data on FHA refinance lending by income since the majority of FHA loans are streamline refinance loans and lenders are not required to report the income of FHA borrowers for these loans.

Subprime refinance loans increased more for lower-income borrowers than moderate and upper-income borrowers between 1993 and 1997. Subprime refinances increased by 911 percent for lower-income borrowers, 685 percent for moderate-income borrowers, and 305 percent for upper-income borrowers. The greater increase in subprime lending for lower-income borrowers does not necessarily reflect worse credit. Subprime lenders are more likely to originate loans with smaller loan amounts and cash-out refinancing to tap home equity may be cheaper for lower-income borrowers than using a second-lien home equity loan.

In 1998, conventional prime refinance loans for lower-income borrowers increased less than refinancing for moderate and upper-income borrowers. Conventional prime refinance loans increased by 141 percent, 165 percent, and 176 percent for lower, moderate, and upper-income borrowers, respectively. Subprime refinance loans for lower, moderate, and upper-income borrowers increased by 48.6 percent, 44.9 percent, 51.0 percent, respectively, in 1998.

Neighborhood Group. The number of refinance loans in 1998 for borrowers in minority neighborhoods was 16.2 percent above its level in 1993. The higher number of loans in 1993 was the result of growth in subprime lending. With the exception of manufactured home lending, the volume of loans for every other refinance mortgage product was lower in 1998 than in 1993. Conventional prime (government-insured) lending was 8.0 percent (10.6 percent) below its 1993 level. Similarly, subprime mortgages accounted for the growth in refinance lending in minority neighborhoods between 1994 and 1997. Conventional prime refinance (government-insured) lending in 1997 was 18.3 percent (40.6 percent) below its 1994 level.

The number of refinance loans in 1998 for borrowers in lower-income neighborhoods was 48.0 percent above its 1993 level. Total refinance loans in moderate-income neighborhoods in 1998 was 16.4 percent above its 1993 level and total refinance loans in upper-income neighborhoods in 1998 was 3.6 percent below its 1993 level. The higher 1998 level for borrowers in lower-income neighborhoods was not only attributable to subprime lending. Conventional prime refinance lending for borrowers in lower-income neighborhoods in 1998 was 22.3 percent above its 1993 level. Similarly, conventional prime lending in 1997 was 3.0 percent above its 1994 level.

D. Market Shares

Subprime mortgages accounted for an increasing share of total refinance originations between 1993 and 1997. The subprime share of overall refinance originations increased from 1.3 percent in 1993 to 19.8 percent in 1997 before decreasing to 11.8 percent in 1998 because of lower interest rates. The conventional prime (government-insured) share decreased from 85.0 percent (13.5 percent) in 1993 to 79.2 percent (8.2

percent) in 1998. Subprime loans accounted for a higher proportion of refinance loans for Black, Hispanic, and lower-income borrowers and borrowers in minority and lower-income neighborhoods than other borrowers.

Borrower Racial or Ethnic Group. Black and Hispanic borrowers relied more on government-insured and subprime loans than other racial or ethnic groups. In 1997, subprime and government-insured mortgages accounted for 42.6 percent and 10.6 percent of refinance loans, respectively, for Black borrowers and 21.3 percent and 17.7 percent of refinance loans, respectively, for Hispanics. In 1998, subprime and government-insured mortgages accounted for 32.8 percent and 19.4 percent, respectively, of refinance loans for Black borrowers and approximately 13.2 percent and 18.7 percent, respectively, of all refinance loans for Hispanic borrowers.

Borrower Income. Lower-income borrowers were also more likely to use government-insured or subprime mortgage for refinancing than other borrowers but lower interest rates in 1998 allowed a higher proportion of lower-income borrowers to use a conventional prime loan for refinancing in 1998 than in 1997. Government-insured, subprime, and conventional prime mortgages accounted for 5.3 percent, 21.0 percent, and 72.4 percent of mortgages in 1998 compared to 3.7 percent, 29.7 percent, and 63.3 percent in 1997.

Neighborhood Group. Borrowers in lower-income and high-minority neighborhoods were more likely to use government-insured or subprime mortgages for refinancing than other borrowers but lower interest rates in 1998 allowed a higher proportion of these borrowers to use a conventional prime loan for refinancing in 1998 than in 1997. Government-insured, subprime, and conventional prime mortgages accounted for 13.9 percent, 22.6 percent, and 62.4 percent of refinance loans in minority neighborhoods in 1998 compared to 9.7 percent, 32.1 percent, and 55.0 percent in 1997. Government-insured, subprime, and conventional prime mortgages accounted for 10.4 percent, 25.9 percent, and 62.3 percent of refinance loans in lower-income neighborhoods in 1998 compared to 13.9 percent, 22.6 percent, and 62.4 percent in 1997.

E. Loans With Missing Information

The percentage of applications with missing borrower race has more than tripled between 1993 and 1998. The percentage increased from 7.0 percent in 1993 to 24.2 percent in 1998.⁶⁴ The percentage of applications with missing borrower income (geocode) has fluctuated between 7-12 percent (15-22 percent) between 1993 and 1998.⁶⁵

⁶⁴ The percentage of originations where race was not provided by the applicant increased from 4.9 percent in 1993 to 12.2 percent in 1998.

⁶⁵ The percentage of originations with missing borrower income (geocode) ranged from 5.8 percent to 10.3 percent (14.5 percent to 20.6 percent) between 1993 and 1998.

Borrower Race. The percentage of applications where race was not provided by the applicant primarily depends on the share of subprime applications with missing race data and the subprime share of overall refinance applications. Since 1994, applications where race was not provided by the applicant accounted for over 40 percent of subprime applications. In 1998, these applications accounted for 45.7 percent of subprime applications. The subprime share of all applications where race was not provided by the applicant increased from 12.6 percent in 1993 to 55.4 percent in 1998.

The minority composition of the neighborhood suggests that the conventional applications where race was not provided by the applicant may have been disproportionately Black. In 1998, Black neighborhoods accounted for 8.2 percent, 20.4 percent, and 9.3 percent of conventional prime, subprime, and FHA applications where race was not provided by the applicant.⁶⁶ Black borrowers accounted for 4.0 percent, 18.0 percent, and 12.4 percent of conventional prime, subprime, and FHA applications where race was provided by the applicant.

Borrower Income. The percentage of all applications with missing borrower income depends on the streamline refinance share of government-insured applications and the government-insured share of all applications. Streamline refinance mortgages accounted for 64.6 percent of FHA mortgages and 74.8 percent of VA and RHS mortgages in 1998; furthermore, government-insured streamline refinance mortgages accounted for 41.6 percent of all applications with missing income.⁶⁷

⁶⁶ The applications were actually concentrated in neighborhoods where Blacks comprise at least 50 percent of the population. For example, neighborhoods where Blacks comprised at least 50 percent of the population accounted for 15.1 percent of subprime applications where race was not provided by the applicant. Neighborhoods where Blacks comprised between 30 and 50 percent of the population accounted for 5.3 of these applications. The percentages reported here exclude applications with missing geocodes.

⁶⁷ Although less than 10 percent of subprime applications have missing borrower income, subprime loan applications accounted for an increasing share of all applications with missing borrower income since 1995. In 1998, subprime applications accounted for 22.6 percent of all applications with missing borrower income.

Geocodes. Subprime applications accounted for a disproportionate share of all applications with missing geocodes. In 1998, subprime applications accounted for 36.3 percent of all applications with missing geocodes but only 29.4 percent of all applications. One in five subprime applications had missing geocode data in 1998 compared to 14.7 percent of conventional prime applications and 6.3 percent of FHA applications.

Appendix D

Manufactured Home and Subprime Lenders in HMDA

I. Introduction

HMDA data does not identify manufactured home and subprime loans. We have compiled a list of lenders that stated that they specialized in manufactured home or subprime lending. In the past, we have compiled and distributed several lists of manufactured home and subprime lenders. This year, we have corrected the past lists and have updated the list for 1998 HMDA data. The 21 manufactured home and 200 subprime lenders are listed in Tables D.5a and D.5b at the end of this appendix.⁶⁸

This appendix discusses the list of manufactured home and subprime lenders that we compiled for this paper and is organized as follows. The first section describes how we identified manufactured home and subprime lenders and provides background on four prime lenders with high denial rates. The second section describes using the list of lenders with HMDA data and compares the current manufactured home and subprime list with our previous lists. The third section discusses HMDA's coverage of the manufactured home and subprime markets.

II. Manufactured Home and Subprime Lenders in HMDA

A. Identifying Lenders

We have developed several methods of identifying potential subprime and manufactured home lenders. Since 1994, we have identified a list of manufactured home and subprime lenders from trade publications and industry sources. This is our primary method of identifying potential lenders. The main trade publications include: *Origination News*, *Inside B&C Lending*, and *Secondary Marketing Executive*. We also identify potential manufactured home and subprime lenders through HMDA analyses. We use HMDA data to identify high-denial rate lenders⁶⁹, lenders with certain key words in their names (e.g., consumer, discount, finance, and equity), lenders that specialize in refinance

⁶⁸ An electronic version of the list is available upon request.

⁶⁹ Some subprime lenders do not necessarily have high denial rates. For one, lenders refer subprime borrowers to other lenders that are willing to make the loan.

loans (total originations consist of 90% or more refinances), lenders that originate loans with small loan amounts, and lenders that have a large share of loans with missing data.⁷⁰

We compiled all the lists of potential manufactured home and subprime lenders together and matched them against a file of lenders that specialize in FHA originations or GSE sales. We deleted lenders from the manufactured home and subprime list if a high share of their loans were FHA originations or sales to the GSEs since these loans typically account for a small share of manufactured home and subprime lenders' originations.⁷¹

This year, we attempted to call every lender on the potential list of manufactured home and subprime lenders (approximately 500 lenders). The majority of lenders responded to our phone calls and were very helpful. We asked the lenders if they originated manufactured home or subprime loans. We then asked lenders if they specialized in subprime or manufactured home lending. If they did not identify themselves as specializing in manufactured home or subprime lending, we asked them to give us an estimate of the share of total originations accounted for by subprime or manufactured home loans. If manufactured home or subprime loans (or both) accounted for at least 50 percent of their total originations, we identified them as a manufactured home or subprime lender.

B. Prime Lenders

Since HMDA does not identify manufactured home and subprime loans, we were unable to separate out the manufactured home and subprime loans of lenders that do not specialize in these loans.⁷² Although we cannot determine the manufactured home or

⁷⁰ Manufactured home and subprime loans may have smaller loan amounts than other mortgages. Bunce and Scheessele (1996, 1998) excluded loans for less than \$15,000 in their analysis of conventional prime home purchase lending trends. Conventional prime purchase loans for less than \$15,000 may be manufactured home loans, second loans used for home purchase, or the lender may also have chosen to report home improvement loans as home purchase loans. These loans accounted for 1.7-2.5 percent of prime loans during the 1993-1998 period. Loans for less than \$15,000 accounted for 10.5 percent of subprime lenders' home purchase loans in 1994. This percentage declined to 5.8 percent in 1995 and to less than 3 percent in 1996 through 1998. The explanation of this downward trend may reflect the types of subprime lenders on our list in 1994 versus the types of subprime lenders that appeared on the list in later years. For example, first-lien subprime home purchase lending became more popular in 1996 and after. A higher proportion of subprime lenders that reported to HMDA before 1996 may have specialized in second loans. In all years except 1993 and 1998, the percentage of refinance loans with loan amounts less than \$15,000 exceeds the percentage of purchase loans - prime or subprime - with loan amounts less than \$15,000. The greater percentage for refinance mortgages may reflect the HMDA requirement that lenders report refinancing of home improvement loans.

⁷¹ The GSEs have become more active in the subprime market in the last few years. For example, Freddie Mac has provided guarantees for subprime securities issued by major subprime lenders since 1997 and began to purchase subprime mortgages on a flow basis in 1998. Fannie Mae has concentrated on the Alt-A market and only recently the market for borrowers with subprime credit.

⁷² For example, First Union, Countrywide, Norwest, and GMAC have been active in the subprime market. Washington Mutual, FSB has been active in the manufactured home market.

subprime percentage of loans from prime lenders, there are four prime lenders in particular whose high denial rates can be attributed to their manufactured home or subprime loans.

Bank of America. For 1996, Bank of America stated that 90-95 percent of its loan denials were manufactured home loan applications.⁷³ Bank of America, FSB stated that 85-90 percent of its 1997 loan denials were manufactured home loans.⁷⁴ Bank of America, FSB sold its manufactured home loan unit to Greenpoint Bank in 1998 and the unit was transferred in October 1998. Bank of America, FSB staff confirmed that the majority of its denials in 1998 were from its manufactured home unit.

Chase Manhattan. Chase Manhattan is a large manufactured home and subprime lender. Three Chase Manhattan entities have reported manufactured home or subprime loans to HMDA. In 1997, Chase Manhattan Bank reported 82,839 purchase and refinance applications. Of these applications, 77 percent (or 63,593) applications were for manufactured homes. Chase Manhattan Bank also reported that it had a significant number of refinance applications for manufactured home loans. The denial rate on these loans was 68.9 percent. This is consistent with the 74.9 percent denial rate for Chase Manhattan Bank's home purchase applications since refinance applications for manufactured home loans may have a lower denial rate. The HMDA LARS for Chase Manhattan Bank included manufactured home loan applications for the first three quarters of 1997. The HMDA LARS for Chase Manhattan Bank, USA, NA included manufactured home loan applications for the fourth quarter. Subprime applications would be included in the LARS for Chase Manhattan Mortgage Corporation. Chase Manhattan Mortgage Corporation did not have absolute numbers for subprime but offered the following comparisons. If Chase Manhattan Mortgage Corporation separated its subprime loan applications and separated its conditional approvals that did not close (it was required to report these applications as denials in 1997), its denial rate decreased from 35 percent to 19 percent for Black borrowers, 25 percent to 15 percent for Hispanic borrowers, and 19 percent to 10 percent for White borrowers.

Other. There are two other prime lenders with high denial rates that originate subprime loans. IndyMac originates subprime loans and estimates that these loans accounted for 5 percent of its total volume. IndyMac denied 62.2 percent of its 155,022 conventional home purchase applications in 1998.⁷⁵ Residential Funding Corporation

⁷³ Bank of America, FSB acquired Security Pacific in 1992/1993. Security was a large manufactured home lender.

⁷⁴ There are four Bank of America legal entities that report to HMDA. Bank of America, FSB reports loans for mortgage companies outside California, manufactured home loans, and community development loans outside California.

⁷⁵ We included the applications and denials of both IndyMac, Inc. and IndyMac Mortgage Holdings in this calculation.

denied 46.2 percent of its 11,351 conventional home purchase applications in 1998.⁷⁶ Residential Funding Corporation could not explain its high denial rates but confirmed that it has entered the subprime market in the last two years.

III. Using the List of Lenders with HMDA Data

This section discusses how to use the list of manufactured home and subprime lenders to interpret mortgage market trends using HMDA data. The first section compares the list used in this paper with lists we have used in earlier papers. The second section describes the types of lenders that are included on the subprime lender list. The final section discusses caveats on using the manufactured home and subprime list to identify manufactured home and subprime loans.

A. Comparison of Current Lists with Past Lists

We have compiled and distributed a number of lists in the past. For example, the 1996 list was used in the papers, “Home Mortgage Lending in 1996”⁷⁷, “The 1996 HMDA Data: A Closer Look”⁷⁸, and “The GSEs’ Funding of Affordable Loans: A 1996

⁷⁹ The 1997 list was used in the paper, “1997 HMDA Highlights” and for the FFIEC’s press release on 1997 HMDA data (see tables 3 and 4)⁸⁰.

Table D.1 compares prime, subprime, and manufactured home loan counts reported in the paper, “1997 HMDA Highlights” with prime, subprime, and manufactured home loan counts after correcting errors on previous lists. We have deleted or reclassified some lenders that had been incorrectly identified as subprime lenders. Many of these lenders had names that were similar to subprime lenders that we had identified through trade publications. The main difference between this list and previous lists, however, was

⁷⁶ Residential Funding Corporation primarily purchases loans.

⁷⁷ Interagency report coordinated by the Office of the Comptroller of the Currency. March 1998.

⁷⁸ (US Housing Market Conditions , Third Quarter 1997). This article focuses on owner-occupied home purchase mortgages.

⁷⁹ Bunce and Scheessele (1996) used a slightly different list with fewer subprime and manufactured home lenders. Washington Mutual, FSB originates manufactured home loans and we originally had them in our list but we took them out in our 1997 analyses. There were other small mistakes with respect to some small lenders that were identified as subprime because they had similar names as subprime lenders. The number of loans from these lenders was insignificant. Also, we included First Franklin when analyzing 1995 HMDA data. First Franklin did not specialize in subprime lending until 1997. Bunce and Scheessele (1998).

⁸⁰ All three efforts treated the applications and denials of Bank of America, FSB as manufactured home loans but treated the originations of the depository as conventional prime originations.

the reclassification of Ford Finance from a subprime lender to a manufactured home lender.

An example illustrates how to interpret Table D.1. In 1997, we misclassified 312,143 home purchase loan applications as subprime loan applications when 292,391 loan applications should have been classified as manufactured home loan applications and 19,772 loan applications should have been classified as prime loan applications. Table D.1 reports the corrected totals for 1997 subprime and manufactured home loan applications as 214,282 and 1,296,354 loan applications, respectively.

B. Types of Subprime Lenders

There is no general agreement on the definition of the subprime market. A narrow definition of subprime lending would include only loans originated for borrowers with blemished credit histories. Even this narrow definition, however, has operational problems because lenders often disagree what constitutes a blemished credit history. Other definitions include loans that do not meet conforming conventional underwriting standards set by the GSEs, Fannie Mae and Freddie Mac. These loans generally present additional risks than the risks associated with conforming conventional mortgages. These risks are often unrelated to a borrower's credit history but may be related to property risks or the borrower's debt burden or equity in the home.

We included a broad spectrum of lenders on the subprime list. These lenders specialize in originating a variety of loans for borrowers that do not meet conforming conventional underwriting standards.⁸¹ The list may be more appropriately described as a list of niche lenders that specialize in loans that fall outside conforming conventional underwriting standards. For the most part, these niche lenders all have higher denial rates than lenders that specialize in conforming conventional loans. We included lenders that specialize in 125-LTV lending, seconds, seller-financing, Alt-A, no-documentation, and equity lending.

C. Caveats

The identification of HMDA lenders that specialize in manufactured home or subprime lending is an ongoing process. For the most part, we have always included the major manufactured home and subprime lenders. For example, we have always included subprime lenders like Champion, The Money Store, and Aames and manufactured home lenders like Green Tree Financial, Oakwood, and Vanderbilt. We have added new lenders to the list each year but we did not determine if these lenders reported to HMDA in the past. This year, we linked the list of lenders to past HMDA panels to determine if we omitted lenders that had reported to HMDA in previous years.

⁸¹ We do not include lenders that specialize in loans that only differ from conforming conventional underwriting standards because the loan amount exceeds the conforming conventional loan limit.

There is a potential problem with identifying a lender as a manufactured home or subprime lender for every year that it reports to HMDA. First, a lender may have reported to HMDA in all years but only specialized in subprime lending in some of those years. Many lenders, especially correspondents, told us that the subprime percentage of their originations depends on investor interest in the subprime market. There are also examples of lenders that have permanently changed the focus of their lending. For example, First Franklin primarily originated conforming conventional loans until 1997 when it specialized in subprime loans.

We have not systematically identified the years in which lenders on the list specialized in manufactured home or subprime lending. Manufactured home lenders are likely to have specialized in manufactured home lending in the past. For this paper, if a lender ever appeared on one of our lists then we classified them as a manufactured home or subprime lender for every year that it reported to HMDA. There are a few caveats to this rule. First, we treated First Franklin as a prime lender for 1993 through 1996 and subprime thereafter. Second, we reclassified loans that were sold to the GSEs. We reclassified 11,114 home purchase loans originated by subprime lenders and purchased by the GSEs as prime loans.⁸² We also reclassified loans 131 loans originated by manufactured home lenders and purchased by the GSEs as prime loans.

Table D.2 provides the a) the number of manufactured home and subprime loans if we used the previous HUD list (List A); and b) the number of manufactured home and subprime loan applications, denials, and originations that are added by assuming that lenders on our 1998 and previous lists specialized in manufactured home or subprime lending each year they reported to HMDA (List B).⁸³ With respect to home purchase applications, there were 38,813 additional manufactured home applications and 113,362 additional subprime applications in 1997 for a total of 1,335,167 manufactured home and 327,644 subprime loan applications, respectively. The denial rates for these additional manufactured home and subprime loans were 48.4 percent and 22.3 percent, respectively.⁸⁴ With respect to home refinance applications, there were 5,218 additional manufactured home applications and 435,546 additional subprime loan applications for a total of 151,782 manufactured home and 1,976,526 subprime loan applications. The denial rates for these additional manufactured home and subprime loans were 26.8 percent and 35.8 percent, respectively.⁸⁵

⁸² The GSEs have begun to purchase subprime mortgages but until late 1998, they have not for the most part purchased current year subprime originations.

⁸³ The list for 1998 is the same for List A and List B.

⁸⁴ There were 2,570 manufactured home and 24,312 subprime home purchase loan applications added in 1993. In 1993, the denial rates for these additional manufactured home and subprime loans were 36.6 percent and 26.6 percent, respectively.

⁸⁵ There were 7,416 manufactured home and 107,488 subprime refinance loan applications added in 1993. In 1993, the denial rates for these additional manufactured home and subprime loans were 30.7 percent and 14.8 percent, respectively.

Table D.3a lists the five subprime lenders for each year between 1993 and 1997 that had the most applications of all the lenders that were added to the original HUD list. For purchase loans in 1997, the top five lenders accounted for 45.4 percent of the additional 113,362 subprime applications. Headlands, a large Alt-A lender had the highest number of subprime purchase applications (14,320 applications) among the added lenders in 1997. For refinance loans in 1997, the top five lenders accounted for 34.5 percent of the additional 435,546 home refinance loan applications. Resource One Consumer Discount had the highest number of subprime refinance applications (46,704 applications) among the added lenders in 1997.⁸⁶

III. HMDA Coverage of Manufactured Home and Subprime Lending

As discussed above, HMDA does not include all mortgage originations and HMDA coverage rates differ by product type. The problem with measuring HMDA's coverage of a particular mortgage market is obtaining available measures of the market that are consistent with HMDA reporting rules. For example, measuring HMDA's coverage of GSE purchases is difficult because of problems with HMDA data and because of restrictions on using GSE data. On the HMDA side, lenders fail to correctly identify loans that are sold to the GSEs or end-of-year originations may not be sold to the GSEs in the current year. On the GSE side, obtaining a measure of GSE purchases that is consistent with HMDA data is difficult. The GSEs publish aggregate volume data on purchases but it is difficult to disentangle what is included in these data. HUD collects more extensive data from the GSEs that could be used to more accurately compare GSE and HMDA data but there are proprietary restrictions on using the data for these purposes.⁸⁷

Similar problems arise when trying to measure HMDA's coverage of the manufactured home and subprime markets. This section discusses the problems with measuring HMDA's coverage of the manufactured home and subprime markets and offers broad estimates of the coverage of these markets.

A. Manufactured Home Market

HMDA Data. There are a number of HMDA issues that pose problems for measuring HMDA coverage of the manufactured home market. First, not all lenders are

⁸⁶ Table D.3b also lists the five manufactured home lenders for each year between 1993 and 1997 that had the most applications of all the lenders that were added to the original HUD list.

⁸⁷ Scheessele (1998) discusses HMDA's coverage of GSE and FHA loans. Scheessele, Randall M. "HMDA Coverage of the Mortgage Market." Working Paper HF-007. Housing Finance Working Paper Series. July 1998.

required to report to HMDA. For one, lenders that engage only in non-metropolitan lending are not required to report. Manufactured homes are more likely than other homes to be located in non-metropolitan areas. The largest manufactured home lenders report to HMDA and are required to report all of their loans whether located inside or outside a metropolitan area. Depositories in non-metropolitan areas, however, are often important sources of manufactured home loans in their communities. Second, it is impossible to identify the manufactured home loans originated by prime lenders. For example, Washington Mutual and Bank of America, FSB command a high share of manufactured home loans especially in the Northwest. Third, the majority of originations reported to HMDA by manufactured home lenders are probably for new manufactured home loans excluding most loans for used manufactured home loans.⁸⁸ Fourth, it is unclear as to what percentage of purchased manufactured home loans have been reported to HMDA as originations. Bunce and Scheessele (1996, 1998) argue that the majority of conventional prime loans that are reported to HMDA as purchased loans are also reported as originations so counting both originations and purchases leads to double-counting.⁸⁹ It is unclear if this argument also applies to manufactured home loans.

Comparison Data. There is no data series for the number and dollar volume of manufactured home loans. The number and dollar volume of loans for new manufactured homes can be estimated from data on shipments, placements, and average prices published by the Bureau of the Census, Department of Commerce, and the Department of Housing and Urban Development. These estimates depend on assumptions about the average loan-to-value and the percentage of homes financed by cash. We assume that the average loan-to-value is 90 percent and 8-10 percent of manufactured homes are financed by cash in our estimates below.

There is no data series for the number of manufactured home loans that are resold each year. There are a variety of estimates of the size of the used manufactured home market but these estimates may not be as accurate as the estimates for new sales since the loan market for used manufactured homes is not as organized as the loan market for new manufactured home loans. These estimates depend on estimates of the number of used manufactured homes that are resold each year and assumptions concerning the percentage of transactions financed through cash or the seller, the valuation of used manufactured

⁸⁸ The average loan amount for a manufactured home loan reported to HMDA is close to the average price of a manufactured home which is one indication that HMDA data mainly includes loans for new manufactured home loans. For example, the average price of a manufactured home in 1998 was \$43,900 compared to an average loan amount of \$42,235. The average loan amount may also be close to the average price of new manufactured homes because HMDA manufactured home loans includes the price of the land for those homes permanently attached to real estate where the real estate is financed by the loan.

⁸⁹ See Bunce, Harold L., and Randall M. Scheessele. "The GSEs' Funding of Affordable Loans." Housing Finance Working Paper Series. Department of Housing and Urban Development. Working Paper HF-001. December 1996; and Bunce, Harold L., and Randall M. Scheessele. "The GSEs' Funding of Affordable Loans: A 1996 Update." Housing Finance Working Paper Series. Department of Housing and Urban Development. Working Paper HF-005. July 1998.

homes, and the loan-to-value ratio for a used manufactured home loan. We will assume that the number of resales is double the number of new sales and that 50 percent of these sales are cash or seller-financed sales. In other words, we assume that the number of used manufactured homes that are resold and financed is equal to the number of new sales. We assume that the loan-to-value ratio for a used manufactured home loan is equal to 90 percent, the loan-to-value ratio assumed for new manufactured home loans, and the average price of a used manufactured homes is 50 percent of a new manufactured home.

HMDA Coverage. Table D.4a provides ranges for HMDA’s coverage of the number and dollar volume of manufactured home loans given the assumptions outlined above. We estimate that the manufactured home lenders that we have identified accounted for 44-54 percent of the loans for new and used manufactured homes in 1998. The loans reported by these lenders probably accounted for the majority of loans for new manufactured homes but overall coverage is lower because of loans for used manufactured homes. These lenders accounted for 66-82 percent of the dollar volume of loans for new and used manufactured homes. HMDA’s higher coverage of the dollar volume than its coverage of loans reflects the assumption that used manufactured homes are worth 50 percent of new manufactured homes.

B. Subprime Market

HMDA Data. There a number of HMDA issues that pose problems for measuring HMDA coverage of the subprime market. First, it is impossible to identify the subprime loans of prime lenders. Prime lenders have become increasingly involved in the subprime market.⁹⁰ Second, HMDA data only includes the portion of home equity loans that are used for home improvement.⁹¹ Third, there are subprime lenders that are not required to report to HMDA. For example, Household International, a large subprime lender, is not required to report to HMDA because mortgages comprise less than 10 percent of their overall business.⁹² Fourth, it is unclear as to what percentage of subprime loans have not been reported to HMDA as originations but as purchased loans.

Comparison Data. Industry analysts estimate that subprime lending totaled \$150 billion in 1998.⁹³ It is unclear what types of loans were included in this estimate. For

⁹⁰ Countrywide, Norwest, GMAC/RFC, and Chase were among the top 25 subprime originators in 1998. Moreover, many of the lenders that we spoke with said that 10 percent of their originations were for subprime borrowers or for loans that did not meet the GSE underwriting standards.

⁹¹ The lender may report home equity loans to HMDA but must only report the portion used for home improvement. There is anecdotal evidence from some lenders that they report the entire home equity loan as long as a portion of the loan is used from home improvement.

⁹² In 1997 and 1998, Household International was the top subprime lender. In 1998, Household commanded a 6.5 percent share of the subprime market. See “Household, Associates Continue Market Dominance in Early ‘99.” Inside B&C Lending. May 17, 1999. Pages 1-3.

⁹³ The \$150 billion dollar estimate has been cited in a variety of trade articles. For example, see “New Policy Statement Chides GSE ‘Charter Creep’.” Inside B&C Lending. July 26, 1999. Page 11.

example, the estimate may include home equity seconds, high-LTV loans, no-documentation and Alt-A loans, and loans for borrowers with subprime credit histories.⁹⁴ There is also no data on the dollar volume of loans originated by depositories for borrowers that just fall outside of GSE underwriting standards. Depositories have traditionally originated loans for portfolio that may be considered Alt-A and A- loans on the conventional secondary market.

HMDA Coverage. Table D.4b provides ranges for HMDA's coverage of the dollar volume of subprime loans. We estimate that the subprime lenders that we have identified accounted for 48-79 percent of subprime loans. The range is broad because it is unclear how to treat purchased subprime loans. Purchased loans are likely to have been originated by correspondents. On the one hand, correspondents may have reported these loans directly to HMDA as originations in which case counting purchased loans would lead to double-counting. On the other hand, correspondents may not have been required or failed to report to HMDA in which case counting purchased loans would lead to a more accurate estimate of subprime volume. Our opinion is counting the purchased loans as originations most likely leads to double-counting of a significant number of loans and the lower end of the above range is a more accurate estimate of HMDA coverage of the subprime market.

⁹⁴ The only other publicly available database with subprime mortgages is maintained by the Mortgage Information Corporation (MIC). This database does not include all subprime lenders. David Olson of Olson Research also estimates subprime and home equity lending as does National Mortgage News and Inside B&C Lending.

Housing Finance

WORKING PAPER SERIES

- HF-001 **The GSEs' Funding of Affordable Loans**, by *Harold L. Bunce and Randall M. Scheessele*, December 1996.

This paper examines the borrower and neighborhood characteristics of mortgages purchased by Fannie Mae and Freddie Mac, the two major Government-Sponsored Enterprises (GSEs) in the conventional secondary mortgage market. The GSEs' mortgage purchases are compared to all mortgages originated in the conventional conforming loan market, including originations retained in portfolio by banks and thrift institutions. The analysis is based on Home Mortgage Disclosure Act (HMDA) data on home purchase loans originated in metropolitan areas between 1992 and 1995. The paper finds that there is room for further increases in purchases of affordable loans by Fannie Mae and, especially, Freddie Mac.

- HF-002 **The Multifamily Secondary Mortgage Market: The Role of Government-Sponsored Enterprises**, by *William Segal and Edward J. Szymanoski*, March 1997.

This paper examines the performance of Fannie Mae and Freddie Mac in enhancing the liquidity and efficiency of the affordable segment of the multifamily mortgage market. The paper focuses specifically on the period since 1993, when HUD established affordable housing goals for these two Government-Sponsored Enterprises (GSEs). A private secondary mortgage market has developed to address the finance needs of higher end properties; yet a comparable market for mortgages on properties affordable to lower-income families lags in development. Placed within a wider market context, it is found that the GSEs have been cautious in their affordable multifamily transactions. It is concluded that the GSEs have the potential to do more to enhance the affordable segment of the multifamily mortgage market.

- HF-003 **Characteristics of Mortgages Purchased by Fannie Mae and Freddie Mac, 1993-95**, by *Paul B. Manchester, Sue George Neal, and Harold L. Bunce*, March 1998.

This paper examines the mortgages purchased by Fannie Mae and Freddie Mac, the two major Government-Sponsored Enterprises (GSEs) in the conventional secondary mortgage market. The analyses focus on detailed borrower, locational, and loan characteristics of such mortgages in the "1993-95 transition period," established by Congress in the Federal Housing Enterprises Financial Safety and Soundness Act of 1992. In general, the report is based on the loan-level data that the GSEs submit annually to the Department. The paper finds that although there were significant increases between 1993 and 1995 in the GSEs' funding of loans for groups traditionally underserved by the mortgage market, their support is generally less than that provided by portfolio lenders.

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Additional information on housing finance topics also may be found by visiting the following web sites: <http://www.huduser.org> and <http://www.rtk.net>.

HF-004 **The GSEs' Purchases of Single-Family Rental Property Mortgages**, by *Theresa R. DiVenti*, March 1998.

This paper examines the single-family rental mortgages purchased by Fannie Mae and Freddie Mac, the two major Government-Sponsored Enterprises (GSEs) in the conventional secondary mortgage market. These properties are the “mom and pop shops” of the rental market, meaning they are small and largely individually owned and managed. To date there has been little research on this segment of the rental market. This analysis looks at neighborhood, affordability, borrower, and financial characteristics of the GSEs' mortgage purchases. The study finds that, while single-family rental properties are a small portion of the GSEs' overall business, they are a large and important segment of the rental stock for lower income families.

HF-005 **The GSEs' Funding of Affordable Loans: 1996 Update**, by *Harold L. Bunce and Randall M. Scheessele*, July 1998.

This paper (an update of HF-001) examines the borrower and neighborhood characteristics of mortgages purchased by Fannie Mae and Freddie Mac, the two major Government-Sponsored Enterprises (GSEs) in the conventional secondary mortgage market. The analysis is based on Home Mortgage Disclosure Act (HMDA) data on home purchase loans originated in metropolitan areas between 1992 and 1996. The GSEs' mortgage purchases are compared to all mortgages originated in the conventional conforming loan market, including originations retained in portfolio by banks and thrift institutions. The paper finds that there continues to be room for further increases in purchases of affordable loans by Fannie Mae and, especially, Freddie Mac.

HF-006 **Characteristics of Mortgages Purchased by Fannie Mae and Freddie Mac: 1996-97 Update**, by *Paul B. Manchester*, August 1998.

This paper (an update of HF-003) examines the mortgages purchased by Fannie Mae and Freddie Mac, the two major Government-Sponsored Enterprises (GSEs) in the conventional secondary mortgage market. The analyses focus on detailed borrower, locational, and loan characteristics of such mortgages in the 1996-97 period. In general, the report is based on the loan-level data that the GSEs submit annually to the Department. The paper finds that the GSEs generally increased their performance on the goals established by HUD in 1995 and that they surpassed all of their 1996-97 goals, with Fannie Mae's performance exceeding Freddie Mac's performance on each of the goals in both years.

HF-007 **HMDA Coverage of the Mortgage Market**, by *Randall M. Scheessele*, July 1998.

This paper examines the coverage of HMDA data by taking advantage of loan-level data reported to HUD on mortgages insured by FHA and mortgages purchased by the GSEs. The FHA and GSE data bases provide an accurate standard against which HMDA data on FHA and GSE loans can be measured. The results of this paper provide background for using HMDA data to estimate the market share of loans for FHA and the GSEs by reporting HMDA coverage rates for FHA originations and GSE acquisitions of mortgages for 1993 through 1996. The paper finds that HMDA data under-reports GSE acquisitions mainly because a few large lenders fail to correctly report the sale of a significant number of their loans to the GSEs. Notwithstanding coverage issues, HMDA data continues to be the most comprehensive data base for measuring primary and secondary mortgage market activity.

HF-008

Do FHA Multifamily Mortgage Insurance Programs Provide Affordable Housing and Serve Underserved Areas? An Analysis of FHA's Fiscal Year 1997 Book of Business and Comparison with the GSEs, by *Edward J. Szymanoski and Susan J. Donahue*, October 1999.

This paper analyzes the rent affordability of about 67,500 unassisted multifamily units, which were insured by FHA during Fiscal Year 1997, and the proportion of these units located in *underserved areas*. In addition, the paper also compares FHA's 1997 multifamily loans purchased by Fannie Mae and Freddie Mac (the government-sponsored enterprises, or GSEs) in regard to rent affordability and proportion of units located in underserved areas. The analysis shows that FHA is providing a substantial amount of modest cost rental housing and serving underserved areas with its unassisted multifamily mortgage insurance programs. About 95 percent of the FHA units in this study (including new construction and existing housing) were affordable at 100 percent of area median income, and over 40 percent were affordable at 60 percent of area median income. About 40 percent of the FHA units in the study were located in underserved areas. In drawing comparison between FHA and the GSEs, the paper first notes the differences as well as similarities between the multifamily programs of these respective agencies- for example, FHA offers higher loan-to-value ratios, lower debt service coverage ratios, and longer fixed-rate mortgage terms than do the GSEs. These underwriting differences notwithstanding, FHA's affordability and underserved area percentages for FY 1997 were very similar to those of comparable Fannie Mae and Freddie Mac mortgage purchases.

HF-009

1998 HMDA Highlights, by *Randall M. Scheessele*, July 1998.

This paper describes home purchase and refinance mortgage market trends at the national level using HMDA data on mortgage denials and originations from 1998 and earlier. An important contribution of the paper is the recognition of manufactured home and subprime lenders that report to HMDA and their effect on mortgage market trends. The paper provides a list of 21 lenders that specialize in manufactured home lending and 200 lenders that specialize in subprime lending. The paper finds that manufactured home loan applications and their increasing denial rates were the primary reason for the increasing conventional denial rate since 1993. The paper also finds that conventional prime home purchase lending to minority and lower-income borrowers increased substantially between 1993 and 1994 but growth in lending to these groups since 1994 was attributable to growth in FHA, manufactured home, and subprime lending.