Sustainable Homeownership

Paul S. Calem
Director, Freddie Mac
Housing Analysis & Research

Marsha J. Courchane
Vice President, CRA International
Practice Leader, Financial Economics

Susan M. Wachter
Richard B. Worley Professor of Financial Management
Professor of Real Estate and Finance
The Wharton School, University of Pennsylvania

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I. Introduction

Rapidly changing credit and housing market conditions of the past fifteen years have markedly impacted homeownership rates. Homeownership rates in the United States have increased steadily and significantly from 1995 to 2004, from 64 percent to 69 percent. No additional increase in homeownership, in the aggregate, occurred with the expansion of nonprime lending after 2004.[1] By 2009, the overall U.S. homeownership rate had fallen to a level below that of 2002.[2] As delinquencies and foreclosures mount, putting the nation's homeowners and the economy at risk, homeownership rates continue to decline.

How does one explain this reversal of fortune? Recent research by the authors and others emphasizes the role of structural changes in mortgage markets, characterized by the extension of nonprime credit, the progressive weakening of layered credit standards, mispriced risk, and misaligned incentives, leading ultimately to the current mortgage meltdown. As Green and Wachter (2008) note, after decades in which securitization contributed to the stability of the mortgage system and increased access to mortgage lending in the U.S., there was a major shift in how secondary markets priced risk. Research by Pavlov and Wachter (2006, 2008), Courchane and Zorn (2008), Ashcraft and Schuermann (2008) and others indicate possible roles of incomplete markets, inefficient and mispriced risk, and moral hazard in triggering the current housing crisis.

Clearly, a long-term goal of policy makers in the U.S. has been the reduction of financial barriers to homeownership, for example, through implementation of the Community Reinvestment Act (CRA) and through the affordable housing goals set by the Department of Housing and Urban Development (HUD) for the government sponsored entities (GSEs) Fannie Mae and Freddie Mac.[3] The current policy focus should be on 'sustainable' homeownership – keeping borrowers in the homes they purchase. Lessons learned from the past decade will contribute to achieving that sustainability.

We review the evidence pertaining to homeownership rates, explore the possible role of financial institutions in increasing homeownership in sustainable and unsustainable ways, and address the role of regulation. We review evidence suggesting how flexible lending initiatives have expanded access to homeownership. We also examine the role of nonprime lending and the consequences of housing market price instability for

[1] Throughout this paper we generally refer to subprime and Alt-A markets as 'nonprime.' When referring to statistics based on Home Mortgage Disclosure Act data, we refer to 'subprime' based on lender designation. For HMDA, Alt-A loans cannot be separately distinguished. Homeownership rates did increase for Hispanics and Asians after 2004.

[2] U.S. Census Bureau, Housing Vacancies and Homeownership (CPS/HVS), Annual Statistics, 2007.

[3] Green (2009) and many others note reasons for this policy goal relate to the social benefits identified as associated with homeownership including wealth building, neighborhood outcomes such as reduced crime and more political involvement and improved education for children.

homeownership. Fluctuations in the availability of credit for homeownership, and the global credit market collapse raise questions that we cannot answer here about the mistakes that have contributed to the current housing crisis. Nonetheless, evidence on market outcomes allows us at least to raise such questions, and explore the role of regulation in supporting responsible mortgage lending that encourages sustainable homeownership.

II. Homeownership Rates

Homeownership rates have been, particularly since the Great Depression, a public policy concern in the U.S. Much research has emphasized the public policy rationales for homeownership preferences (Green 2009). An additional rationale, offered by Sinai et al. (2009), that homeownership is a hedge against rent changes, is particularly salient if below median household incomes do not increase with economic growth.

In the U.S. the discussion about homeownership has often been on "homeownership gaps." This in part derives from differential homeownership rates across racial and ethnic groups. Data from the U.S. Census Bureau's Housing Vacancy Survey on total homeownership rates and homeownership rates by race and ethnicity for 1994 through 2007 are provided in Table 1. Homeownership rates by income quintile for 1995 through 2007, from the Current Population Survey's (CPS) Annual Social and Economic Supplement, are shown in Table 2. These data indicate persistent gaps between non-Hispanic white and minority households and between lower and upper income segments.[4] Other researchers have also noted persistent gaps.[5]

Importantly, the trend in homeownership rates in the aggregate and for all groups rose from 1994 through 2004. The total homeownership rate rose steadily from 64.0 percent at the end of 1994 to 66.8 percent in 1999, when it declined with the national recession, to 67.4 percent and then rose again steadily to 69.0 percent in 2004. The major shift in homeownership from 64 percent to 68.3 percent occurred from 1994 to 2003. The increase in homeownership rates occurred for all groups. After peaking at 69 percent in 2004, the total homeownership rate declined to 68.1 percent in 2007, and the most recent data show the rate falling back to the 67.9 percent level of 2002.

[4] As measured by the Housing Vacancy Survey.

[5] Herbert, Haurin, Rosenthal, and Duda (2005) find, for example, that the homeownership rate in 2004 for very low-income households (those with incomes below 50 percent of area median income) was 50.9 percent, compared to 87.7 percent for high-income households (above 120 percent of area median income).

Table 1
Homeownership Rates by Race and Ethnicity of Households
1994 - 2008

Year	U.S. Total	Non-Hispanic White	Black	Asian or Pacific	Hispanic
1994	64.0	70.0	42.3	51.3	41.2
1995	64.7	70.9	42.7	50.8	42.1
1996	65.4	71.7	44.1	50.8	42.8
1997	65.7	72.0	44.8	52.8	43.3
1998	66.3	72.6	45.6	52.6	44.7
1999	66.8	73.2	46.3	53.1	45.5
2000	67.4	73.8	47.2	52.8	46.3
2001	67.8	74.3	47.7	53.9	47.3
2002	67.9	74.7	47.4	54.6	47.0
2003	68.3	75.4	48.1	56.3	46.7
2004	69.0	76.0	49.1	59.8	48.1
2005	68.9	75.8	48.2	60.1	49.5
2006	68.8	75.8	47.9	60.8	49.7
2007	68.1	75.2	47.2	60.0	49.7
2008	67.8	75.0	47.4	59.5	49.1

Source: U.S. Census Bureau's Housing Vacancy Survey, Annual Statistics, 2007 last accessed at http:/www.census.gov/hhes/www/housing/hvs/annual07/ann07t20.

Table 2
Percent Distribution of Households that are Homeowners, by Quintile
1995-2007

Year	Lowest Fifth	Second Fifth	Middle Fifth	Fourth Fifth	Highest Fifth
1995	44.0	56.0	64.3	76.5	86.1
1996	44.3	56.1	64.9	76.9	86.4
1997	44.0	57.3	65.5	77.1	87.1
1998	44.5	56.9	67.1	77.7	87.2
1999	46.2	57.6	67.1	77.9	87.3
2000	48.1	58.0	67.6	77.9	87.0
2001	49.0	58.6	67.4	78.1	87.3
2002	48.1	58.8	67.2	78.8	88.2
2003	47.8	58.6	68.1	80.5	89.1
2004	49.0	58.8	68.9	80.5	90.0
2005	46.1	58.2	68.8	80.0	89.3
2006	45.6	59.2	68.2	79.7	88.9
2007	46.3	58.1	67.3	79.2	88.7

Source: U.S. Census Bureau's Current Population Survey, Annual Social and Economic (ASEC) Supplement HINC-05, last accessed at http://pubdb3.census.gov/macro/032007/hhinc/new05_000.htm, Table HINC-05. Percent Distribution of Households, by Selected Characteristics Within Income Quintile and Top 5 Percent in 2006, Vertical Percents, Tenure, Owner-Occupied

Homeownership gaps for minorities relative to non-Hispanic whites, derived from the data in Table 1, are shown in Figure 1. Homeownership gaps for blacks and Hispanics relative to non-Hispanic whites, which stood at 27.7 and 28.8 percentage points, respectively, in 1994, narrowed steadily through 2001 to 26.6 and 27 percentage points. After 2001, the gaps fluctuated and, as of 2007, they had narrowed further for Hispanics, to 25.5 percentage points, but had increased to 28.8 percentage points for blacks. The gap for Asians relative to non-Hispanic whites fluctuated around 20 percentage points in 2002 and dropped to around 15 percentage points in 2007.[6] With the substantial growth

[6] From 1996 – 2002, those answering 'other' for race were allocated to one of 4 categories – White, Black, American Indian/Aleut/Eskimo or Asian/Native Hawaiian. Narrowing these gaps is viewed as an important social goal because owning a home is seen as providing a number of important benefits to families relative to renting. Further, homeownership is seen as beneficial to neighborhoods or communities, beyond the benefits that accrue to individual households; that is, it generates positive externalities. Indeed, some might argue that the special status accorded to homeownership in the U.S., such as with respect to favorable tax treatment; the FHA mortgage insurance program; and the chartering of government sponsored enterprises in the secondary mortgage market; amounts to treating homeownership as an entitlement, on par with education or health care.

in homeownership rates since 1994, absolute gaps did not widen, thus relative gaps narrowed.

Homeownership gaps by income group relative to the top income quintile, based on the data in Table 2, are shown in Figure 2. The gap between the top income quintile and the middle quintile has narrowed since 1998. The gaps between the top quintile and the bottom two quintiles declined substantially between 1998 and 2001 but widened again after 2001. In particular, it is notable that with the explosion of nonprime "affordable" products in 2003-4, the gap between low and high income homeownership rates did not decrease. In fact the gap between low and high income homeownership rates increased.

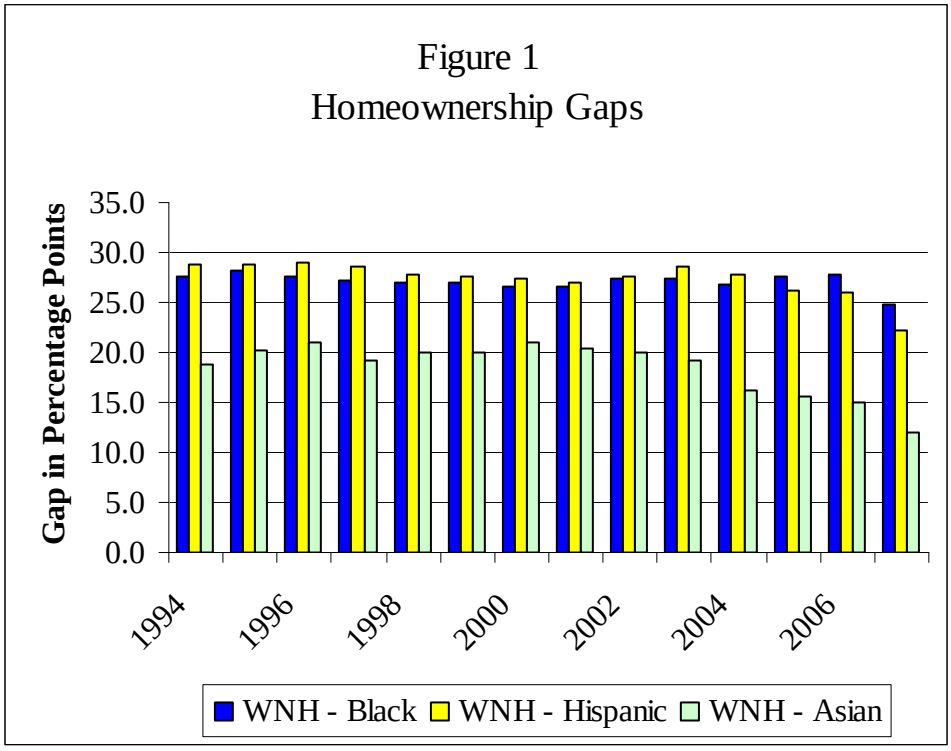
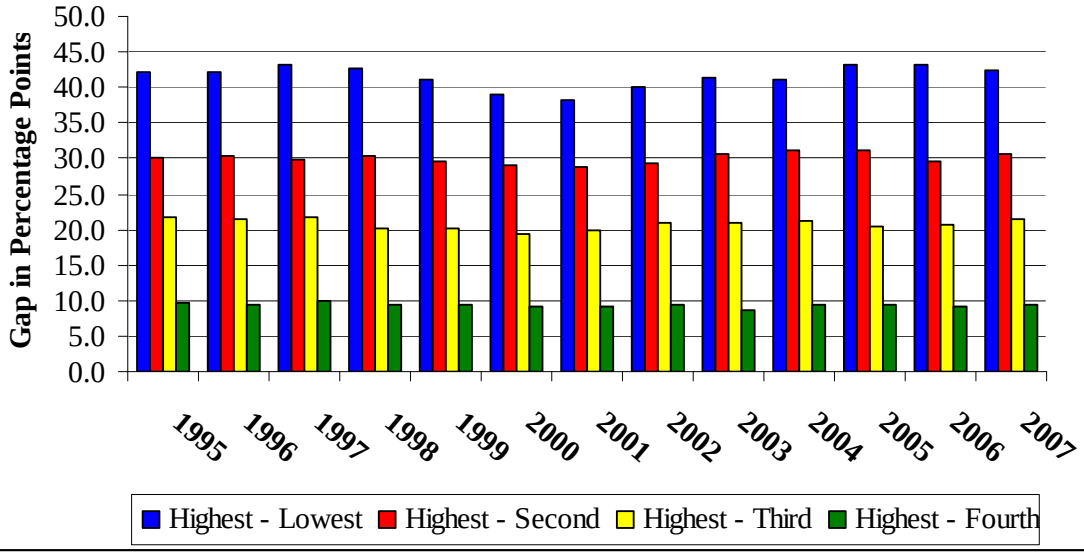


Figure 2
Homeownership Gaps by Income Quintile



III. The Role of Financial Institutions

Financial institutions play a clear role in affecting homeownership rates. By setting underwriting standards, they can directly impact the availability of mortgage credit. Easing of financing constraints can take the form of reductions in required down payments or cash reserves, loosening of payment-to-income ratio requirements, or relaxations in credit standards, enabling more borrowers to qualify for mortgages.[7] Financial institutions also can mitigate financing constraints through technological advances that reduce origination costs or increase the accuracy of credit risk assessment. There is also a role for financial institutions in contributing to or overcoming informational barriers in mortgage markets by, for example, providing homebuyer education and counseling services.[8, 9]

[7] See Courchane and Zorn (2009) for a discussion of the underwriting standards on mortgage market products and participants.

[8] Evidence suggests that a lack of adequate information about the mortgage process may result in higher-than-necessary borrowing costs for some households and deter others from borrowing in the first place. For instance, Bucks and Pence (2006) find that "some adjustable-rate mortgage borrowers, especially those with below-median income, appear to underestimate or not know how much their interest rates could change." Courchane, Surette, and Zorn (2004) find that subprime borrowers, who are disproportionately lower income and minority, tend to be less knowledgeable than prime borrowers about the process.

[9] Another type of informational barrier, discussed by Nakamura (1993), may curtail the flow of credit to neighborhoods with few home sales and is based on information externalities. Nakamura theorizes that neighborhoods with few home sales generate too little information to support accurate property appraisals, leaving lenders less willing to extend credit. This hinders the development of a more robust housing

The impact of financial institutions on homeownership trends over the past fifteen years can be attributed to developments in four broad categories: technology, the secondary market and securitization, homeownership "qualifying" products and regulation. Developments in these areas during this period were reflected in changes in the structure of the mortgage market, as evidenced by increased reliance on non-GSE ("non-agency") securitization, a shift toward risk-based pricing, and changes in the market share of different categories of financial institutions.

CRA and GSE goals

. There were two significant legislative Acts that directed a focus on serving the needs of low- and moderate-income borrowers in terms of providing liquidity for housing markets. The first of these was the Community Reinvestment Act (CRA). The CRA directs the federal banking regulatory agencies to encourage the institutions they regulate to meet the credit needs of their entire communities, including low- and moderate-income areas, to the extent consistent with safe and sound banking practices. An institution's record of serving the credit needs of low- and moderate-income populations within its market areas is periodically assessed by its regulatory agency. In 1995, substantive changes were made to CRA, including the introduction of quantitative criteria into the ratings process, and public disclosure of ratings.[10] The second legislative action that focused on access to credit was the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 (the 1992 GSE Act) that established income-based and geographically targeted housing goals for the purchase of mortgages by each GSE. The housing goals were intended to ensure that an appropriate share of GSE mortgage purchases was targeted to low- and moderate income families and neighborhoods underserved by the mortgage market.

Prime affordable lending initiatives

From the early 1990s through the end of the decade, often in response to the CRA, prime lenders implemented affordable lending programs with the intended purpose of reducing barriers to mortgage financing, through establishment or expansion of affordable lending

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market, causing the informational barrier to persist. Geographically targeted lending efforts by financial institutions may mitigate information externalities, thereby promoting neighborhood revitalization.

[10] CRA assessments and performance ratings are based on both quantitative and qualitative performance measures. Substandard CRA performance can lead to denial of applications for acquisition or merger or other regulatory enforcement actions. In addition, public disclosure of shortcomings in the CRA record can adversely affect the institution's reputation among potential investors, depositors, and borrowers. Consequently, banks have an incentive to maintain a good CRA record and expand lending as encouraged by the Act. See Avery, Bostic, and Canner (2000) for further discussion of the CRA performance evaluation process.

programs.[11] These programs featured flexible underwriting standards, resulting in increased credit risk exposure, and risk mitigation activities, such as credit counseling. Typically, one or more of the following underwriting flexibilities were applied: low down payment requirements; higher acceptable ratios of debt payment to income; the use of alternative credit history information such as records of payments for rent and utilities; flexible employment standards; reduced cash reserve requirements; and flexibilities with respect to property evaluations such as applying less weight to neighborhood vacancy rates. [12] In most cases, eligibility was restricted to low- or moderate-income borrowers, first-time homebuyers, or households purchasing a home in a low- or moderate-income neighborhood.[13]

Fannie Mae, Freddie Mac, and private mortgage insurance companies established analogous programs during this period. In 1994, Fannie Mae initiated a series of underwriting experiments, including its Flexible 97 product that permitted creditworthy borrowers to make 3 percent down payment from a variety of sources. Freddie Mac followed as it introduced its Affordable Gold® 97 product that permitted creditworthy borrowers to make 3 percent down payments from personal cash and other sources and offered flexible payment ratios. In 2000, Freddie Mac offered the Freddie Mac 100 product and Fannie Mae released its MyCommunityMortgage suite of products. These products allowed zero down payment options for creditworthy, low- to moderate-income borrowers.

Market share changes

In recent research, Avery, Courchane and Zorn (2009) have shown that the share of overall financial activity covered under the CRA has declined substantially. This decline in coverage has occurred at the same time as mortgage securitization was increasing. Those institutions not covered by CRA did not rely on deposits to obtain liquidity for mortgage lenders, but rather on the secondary market. Figure 3 illustrates the decline in dollar volumes of mortgages originated by CRA lenders and the contemporaneous rise in securitization activity in mortgage markets.[14]

The authors further demonstrate that the footprint of financial institutions has increased dramatically with institutions that operate across several states, if not nationally,

[11] Avery, Bostic, Calem, and Canner (1996) and Avery, Bostic, and Canner (2000) present detailed discussions of affordable home lending programs; the latter provide findings from a survey of these programs.

[12] The programs may also involve subsidies to borrowers. These may take the form of lower interest rates than would ordinarily be associated with the credit risk of such loans, sometimes even below prime market rates. Subsidies may also involve the waiving of private mortgage insurance requirements or reducing or waiving of points or fees. In some cases, the lender may partner with a government program or a private, nonprofit community reinvestment fund that provides the subsidy.

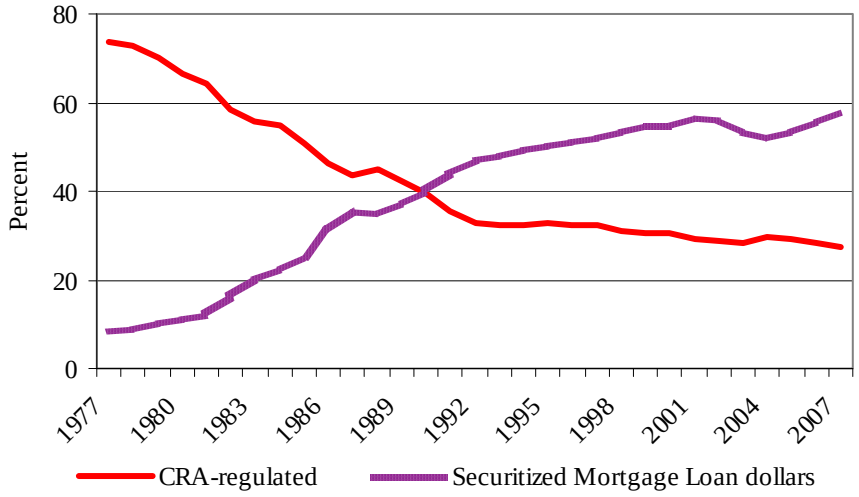
[13] Some programs also require that the borrower be a first-time homebuyer. These programs are further characterized by special marketing efforts to targeted groups.

[14] Data are from Federal Reserve Board G19 and the Flow of Funds Table 2b (real 2007 $millions).

conducting most financial activity. This suggests that we should expect to see CRA-regulated institutions regain market share as independent, non-chartered investment banks no longer exist—they have either merged with depositories or become bank-chartered institutions and as the non-covered subprime sector has collapsed.

The authors also draw a link to access to credit for low- and moderate-income borrowers. They suggest that because underwriting standards have tightened significantly in primary, secondary, and mortgage insurance markets, there is likely to be a significant reduction in the share of higher-rate mortgage originations implying less access to credit for LMI borrowers and in LMI neighborhoods. If such a trend were confirmed, the importance of the CRA may increase as it mandates focus on these otherwise less well-served areas.

Exhibit 3
Dollar Volume of Home Mortgage Debt Outstanding



Starting in 2004, market share shifted dramatically to subprime and away from prime and FHA lenders (see Tables 3 and 4). The market share held by those lenders identified as 'subprime' specialists by the Department of Housing and Urban Development (HUD) widened beginning in 2001 and surged from 2004 through 2006. This expansion by subprime specialists as shown in the HMDA data was indicative of rapid growth in nonprime lending in general, including subprime and alt-A loans originated by predominantly prime lenders. At the same time that the nonprime share grew, financial institutions were originating fewer government-insured FHA mortgages (see Table 4).[15] These trends are illustrated below in Figure 4.

[15] See Courchane, Darolia and Zorn (2009).

Table 3
Single Family, Conforming, Purchase/Refinance, All Races
National Originations by Year

Year	Counts			
	FHA	Conventional, Conforming		Total
		Prime	Subprime	
1997	807,083	4,202,763	639,635	5,649,481
1998	1,064,757	7,676,376	948,334	9,689,467
1999	1,013,425	5,961,172	1,018,137	7,992,734
2000	834,352	4,496,769	895,605	6,226,726
2001	1,226,980	9,261,618	985,184	11,473,782
2002	1,077,348	11,388,307	1,270,399	13,736,054
2003	1,185,570	15,617,654	1,885,091	18,688,315
2004	617,759	9,288,716	2,248,197	12,154,672
2005	400,595	9,724,090	2,380,741	12,505,426
2006	349,800	9,440,567	1,626,887	11,417,254
2007	423,465	7,557,544	390,661	8,371,670

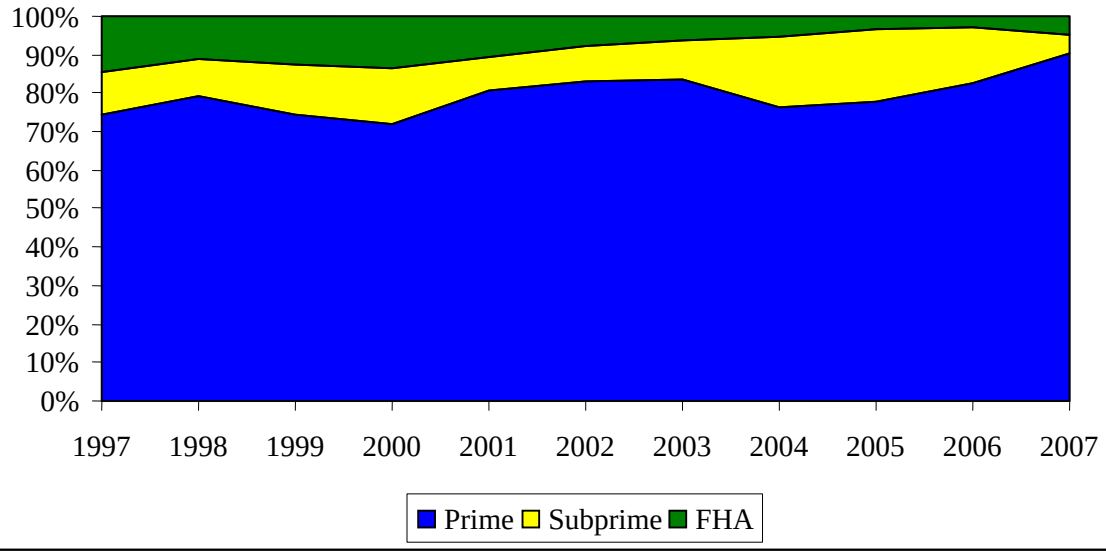
Table 4

Single Family, Conforming, Purchase/Refinance, All Races

Year	Counts		
	FHA	Conventional, Conforming	
		Prime	Subprime
1997	14.29%	74%	11%
1998	10.99%	79.22%	9.79%
1999	12.68%	74.58%	12.74%
2000	13.40%	72.22%	14.38%
2001	10.69%	80.72%	8.59%
2002	7.84%	82.91%	9.25%
2003	6.34%	83.57%	10.09%
2004	5.08%	76.42%	18.50%
2005	3.20%	77.76%	19.04%
2006	3.06%	82.69%	14.25%
2007	5.06%	90.28%	4.67%

The subprime share doubled to 18 percent in 2004 and stayed at 20 percent for 2005 and 2006. As the subprime share of the market increased, many expected that homeownership rates would increase and that gaps might also decrease, as the subprime share of the market led to complex layering of relaxed standards including the relaxation of credit standards, zero down payment amounts, and increased or unmeasured debt ratios. In fact, the national homeownership rate did not increase after 2004. Rather, some of this expansion in subprime came at the cost of the FHA market share, which historically had been focused on first time and minority homebuyer efforts.

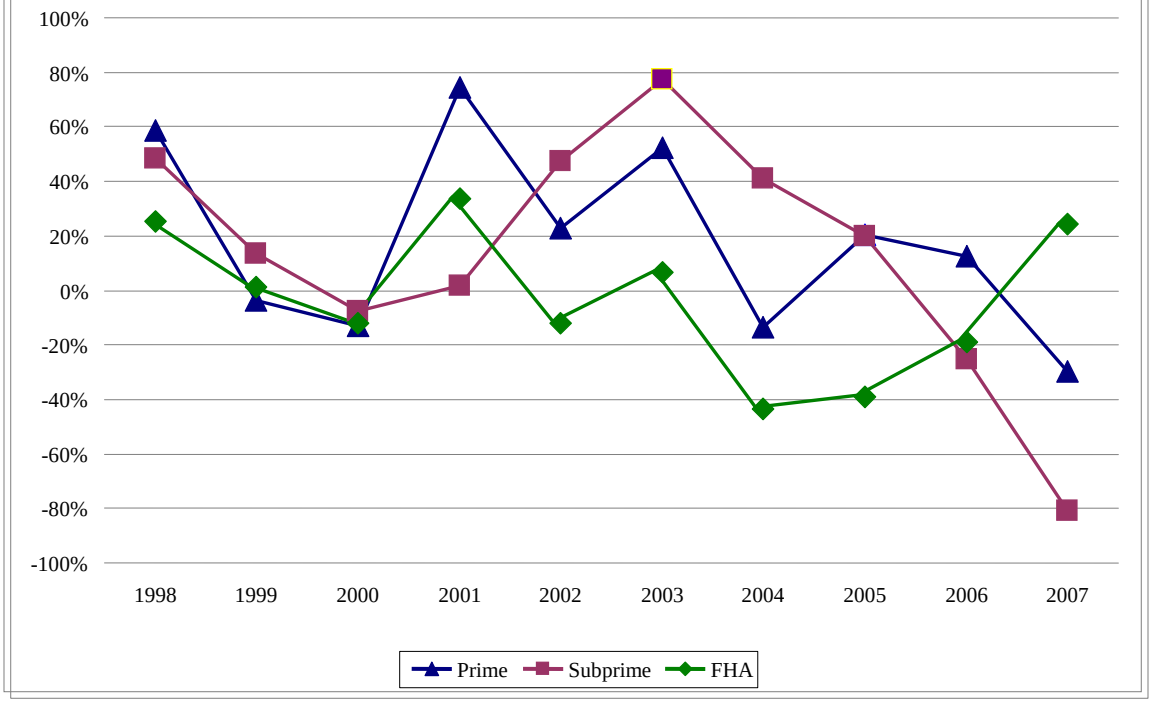
Figure 4
Mortgage Market Shares



In the period 2002-2005, the growth rate of subprime was particularly high for minority borrowers. As shown in Figure 5, the share of minority loans that were originated by subprime lenders grew rapidly during this period, falling off (in terms of growth) beyond 2005.

Figure 5

Growth Rate in the Percentage of Loans Originated to African American & Hispanic Borrowers, 1997 - 2007



In the prime market, apart from periods of high refinance activity due to falling interest rates, home purchase borrowing has ranged from about 50 to 60 percent of the market (Figure 6). In contrast, the subprime market historically has been dominated by refinance lending (Figure 7), with home purchase borrowing comprising only 20 and 30 percent of the market. After 2003, however, the home purchase share of the subprime market surged to between 40 and 50 percent. As we have seen, however, this increase was not associated with an increase in homeownership rates beyond a modest increase from 2003 to 2004, nor an increase in homeownership rates among low to moderate income populations.

Figure 6
Purchase and Refinance Originations by Prime Lenders

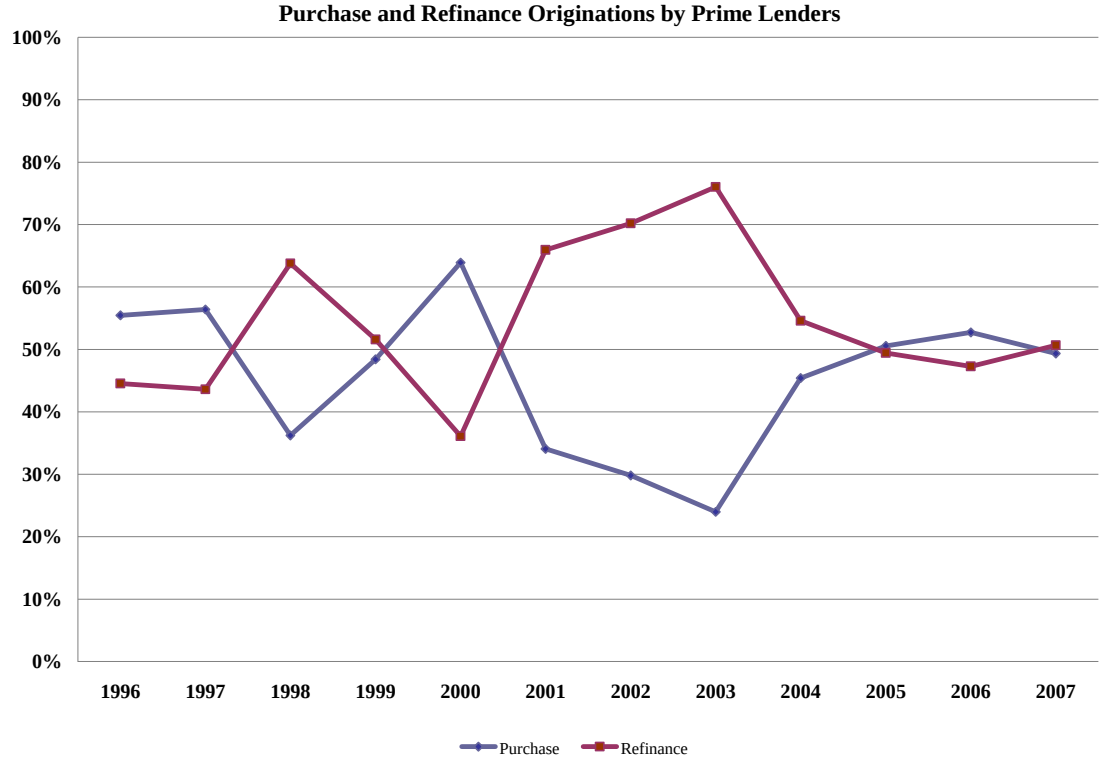
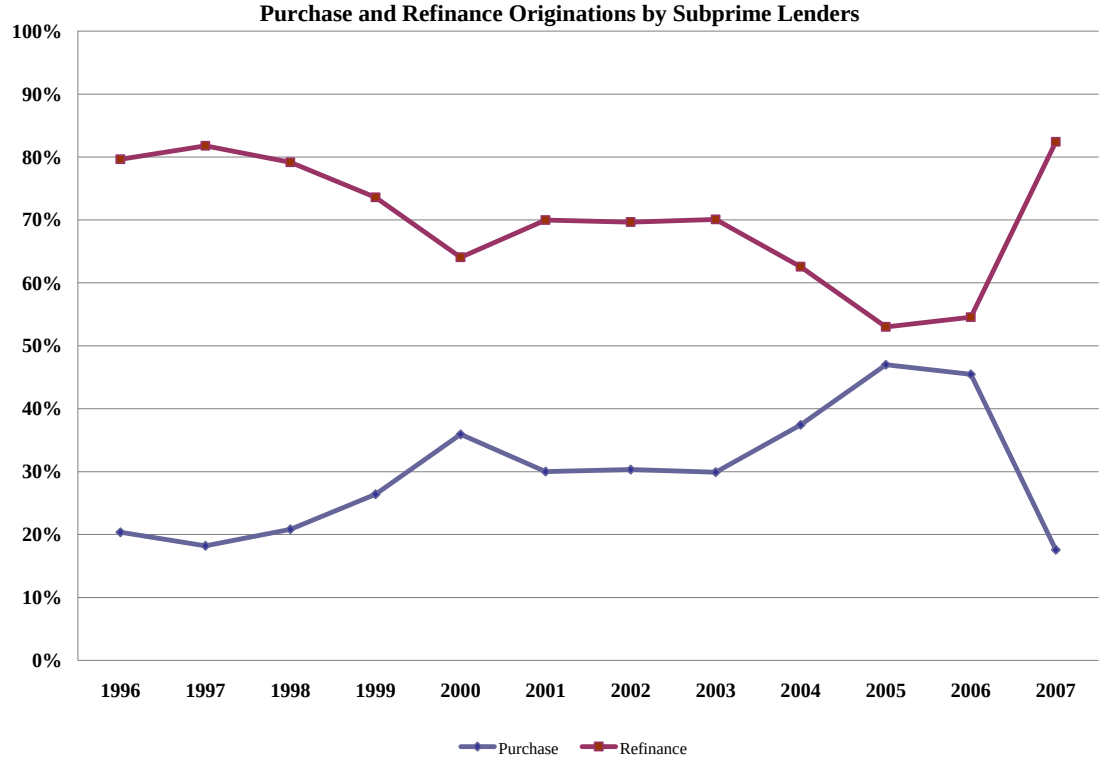


Figure 7
Purchase and Refinance Originations by Subprime Lenders



IV. Impacts on Homeownership of Lending Initiatives and Market Changes

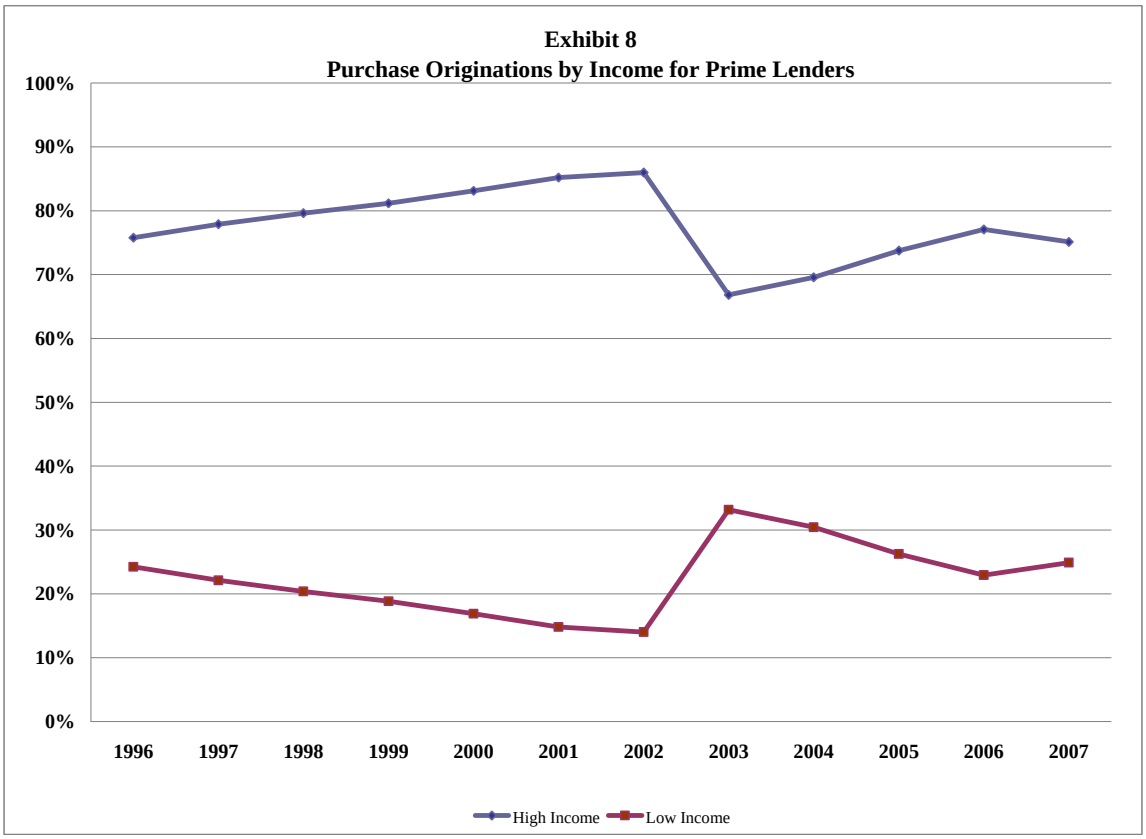
There exists a fair amount of evidence that links the rising homeownership rate prior to 2004 and the narrowing of homeownership gaps to developments in the mortgage market. Bostic and Surette (2001) analyze the increase in homeownership prior to 1998, and find that it was greatest for lower income groups, although substantial disparities by income and racial or ethnic classification remained. They find that changes in household characteristics, including demographic changes with respect to age, marital status, and household size; and changes in education levels and incomes explain much of the increase in homeownership for middle- and upper-income families, but little of the increase for lower-income families. They conclude that "changes in mortgage and housing markets, and changes in the regulations governing those markets" likely played an important role in expanding homeownership, particularly for lower-income families.[16] Gates, Waldron, and Zorn (2003) present evidence suggesting that the introduction of automated underwriting models had a positive impact on acceptance rates of applications for mortgages on properties located in low- and moderate income neighborhoods. Moreover, technology advances likely facilitated the ability of higher credit risk borrowers, including many with low- and moderate incomes, to obtain home purchase loans. Avery, Calem, and Canner (2004b) also find an impact of the CRA on local neighborhood homeownership rates, in a comparison of neighborhoods just above and below the "low- and moderate-income" threshold used to evaluate CRA performance.

Subprime lending

Historically, subprime borrowing appears to have been relatively concentrated among lower income and minority households and in lower-income or minority neighborhoods, providing circumstantial evidence that nonprime lending has helped to increase

[16] Gabriel and Rosenthal (2005) focus on racial and ethnic gaps in homeownership, and find that the portion of the gap that cannot be explained by differences in demographic variables, income, or employment and health circumstances declined substantially between 1983 and 2001, although substantial gaps persist. They note that "this narrowing or race-related effects was broadly consistent with changes in the savings behavior of white and minority renters over the period," as evidenced by an increase in the proportion of minorities saving to purchase a home. They also note "these patterns suggest that minority households view homeownership as a far more viable option today than in the past." Indirect evidence is found in the substantial literature on financial barriers to homeownership. Quercia, McCarthy, and Wachter (2003) estimate an empirical model of the impact of financial barriers on homeownership status and apply it to evaluate the marginal effect of specific underwriting flexibilities. Their empirical results indicate an important impact of affordable lending programs on likelihood of homeownership.

homeownership.[17] Historically, however, most subprime lending was for the refinance of existing mortgages, and thus did not play a direct role in expanding homeownership. Moreover, by 2002, the distinction between prime and subprime with respect to borrower incomes appears to have largely disappeared for home purchase loans (see Figures 8 and 9), although it persists for refinance loans (Figures 10 and 11).[18] In addition, as noted above, FHA and other lending sources were crowded out. These facts, along with the coincidence of the expansion of subprime while homeownership rates were level or declining, suggests that subprime did not expand homeownership, particularly for low to moderate income households.



[17] A number of studies have compared the composition of the subprime market to that of the prime market with respect to borrower and neighborhood economic and demographic characteristics. See Calem, Gillen, and Wachter (2004) for a review of these studies.

[18] The discrete jumps in the data from 2002 to 2003 reflect simply the change in the Census data used (from 1990 to 2000 data) in HMDA to measure low and moderate incomes.

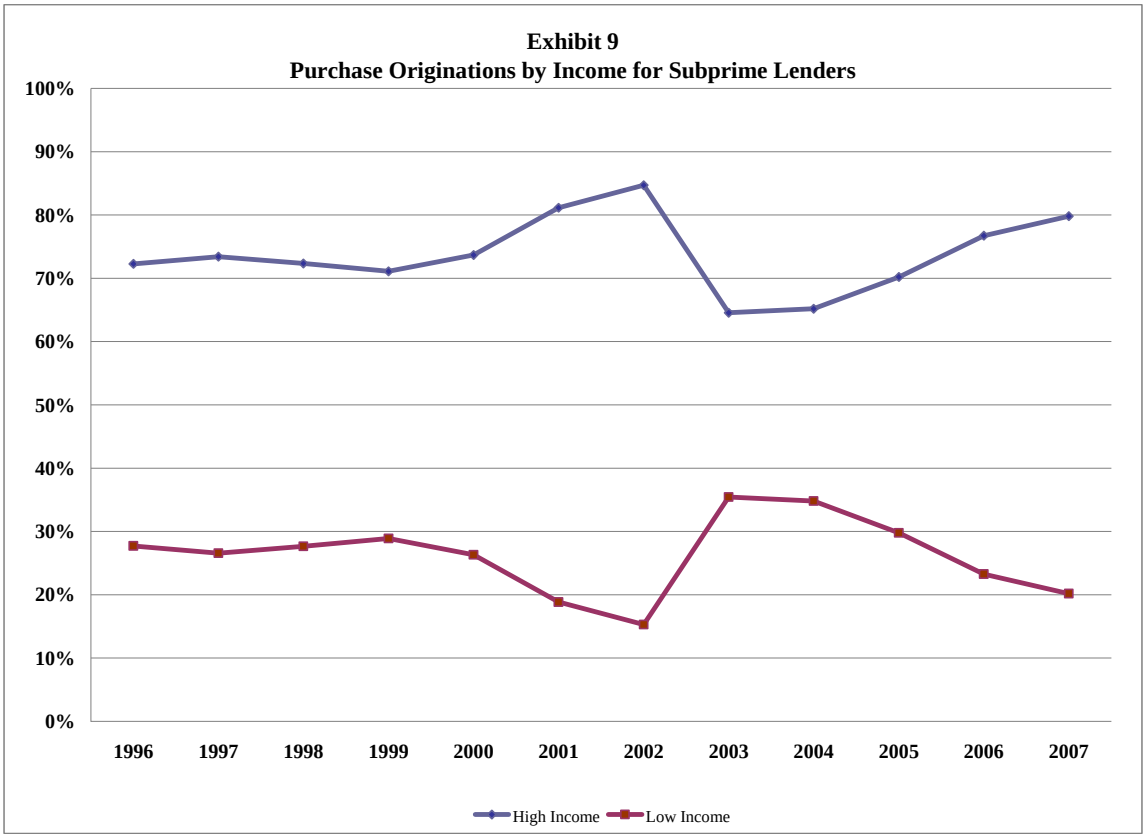


Exhibit 9
Purchase Originations by Income for Subprime Lenders
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
High Income
Low Income

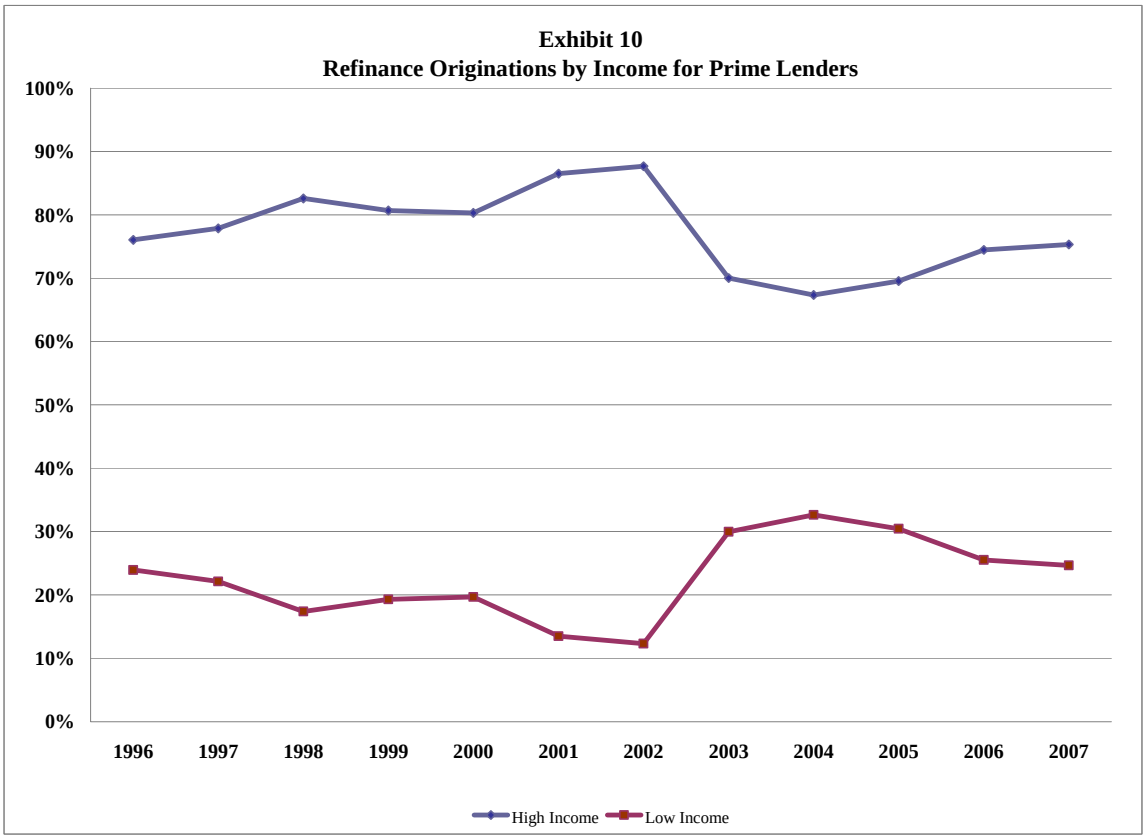
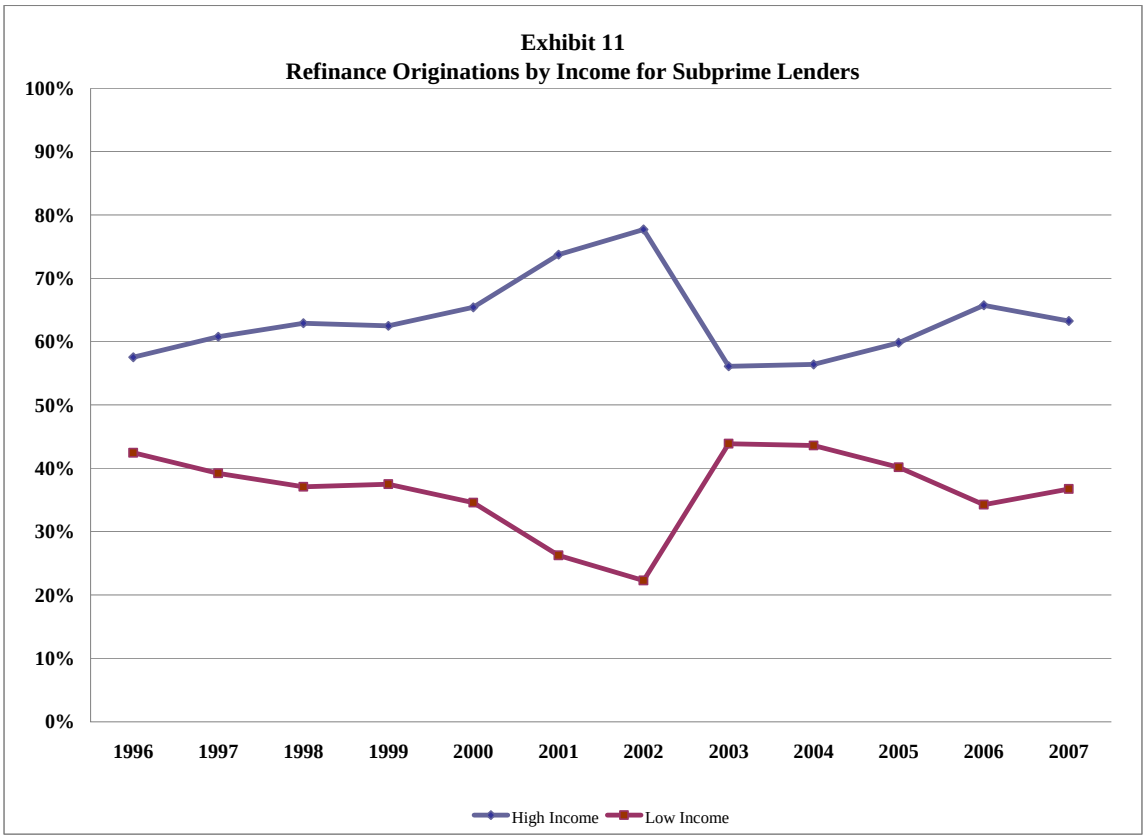


Exhibit 10
Refinance Originations by Income for Prime Lenders
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
High Income
Low Income



Further, research by Courchane and Zorn (2008) indicates that the credit profiles of Hispanic and African American populations differ within the subprime market channel. African Americans, given subprime, have lower distributions of FICO scores than do Hispanics. Other evidence suggests that Hispanics may have more thin files and more borrowers qualifying on a particular mortgage. To the extent that the reasons differ for why borrowers obtained nonprime mortgages, they will be differentially impacted by the recent demise of subprime lending and tightened underwriting. In fact homeownership rates for Hispanics continue to rise suggesting that access to the now nonexistent subprime market was not fundamental to this trend.

Limits to expanding homeownership

While financial institutions have a role to play in promoting homeownership, particularly by reducing financial barriers, there are important limitations to what they can accomplish. These limitations include costs to borrowers and lenders associated with an elevated risk of default; impacts of neighborhood concentrations of delinquency and default; and limitations associated with market conditions and economic variables, including housing affordability conditions.[19]

[19] In addition, there may be natural limitations on the ability of financial institutions to overcome informational barriers.

There is substantial evidence to indicate that the complex layering of individual borrower and/or neighborhood risk factors characteristic of subprime lending and similar "homeownership qualifying" programs after 2003, elevated delinquency and default rates.[20] The associated costs to borrowers and lenders imply limitations on increases in homeownership achievable through relaxation of several credit standards simultaneously.

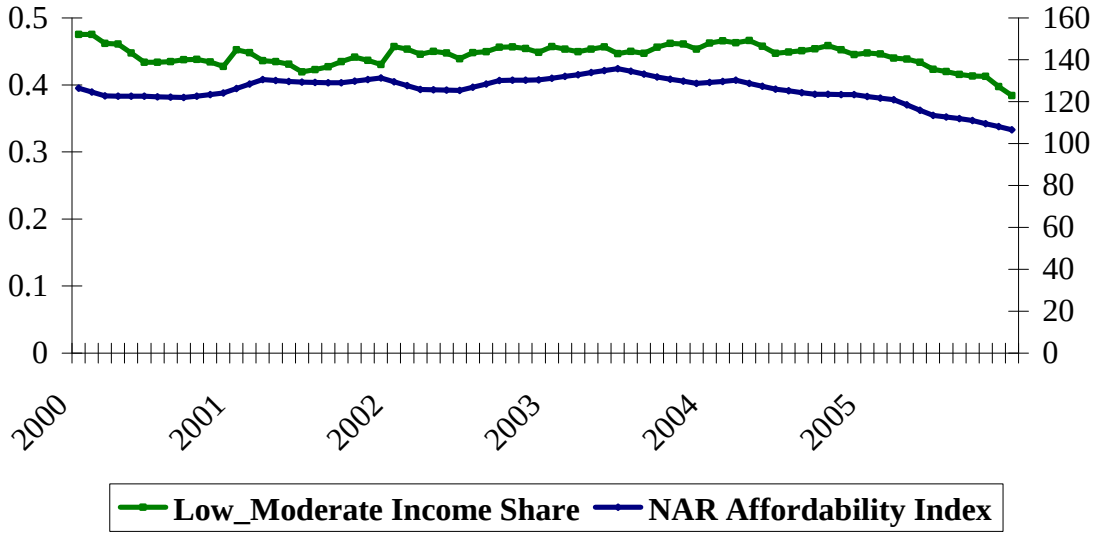
In the subprime market, borrowers with higher measured risk generally pay higher prices for the loans in the form of higher interest rates and more points or fees for mortgage credit. Thus, subprime credit was not necessarily an affordable option for many households. In the case of CRA-related flexible lending initiatives, risk-based pricing is used in a more limited way, if at all. Typically, the riskiest borrowers in these programs are either subsidized by the lender or by other borrowers in the program or both. Clearly, then, the scope of these programs is limited by the amount of cross-subsidy other borrowers are willing to provide (before opting for their perceived, next-best alternative) and by the costs that lenders are willing to bear.[21]

Figure 12 presents evidence that the share of mortgages originated to low- and moderate-income borrowers tends to be positively related to affordability of housing over time (as measured by the National Association of Realtors). In particular, the sharp decline in affordability in 2004 and 2005 was accompanied by a comparable decline in the proportion of lower income borrowers. Declining affordability due to rapidly rising house prices may be a reason why the national homeownership rate did not continue to increase through 2005, and declined among lower income borrowers (Table 2).

[20] See, for instance, Avery, Bostic, Calem, and Canner (1996). Calem and Wachter (1999) highlight the risk exposure associated with lending in neighborhoods with thin housing markets.

[21] Evidence from a recent Federal Reserve survey suggests that CRA-related lending to date had not placed an undue burden on banking organizations. Avery, Bostic, and Canner (2000) report that among survey respondents, CRA special mortgage programs tended to have lower delinquency and default rates than other mortgage lending in lower income areas and to lower income borrowers. Most of the programs were classified as profitable, though less profitable than overall mortgage lending. This report is encouraging insofar as it suggests that lenders were satisfied with their existing programs. However, it provides no indication of the degree to which lenders could expand existing programs without bearing undue costsThe survey is no doubt also subject to survivorship bias, in that programs that have proven to be less profitable are likely to have been terminated.

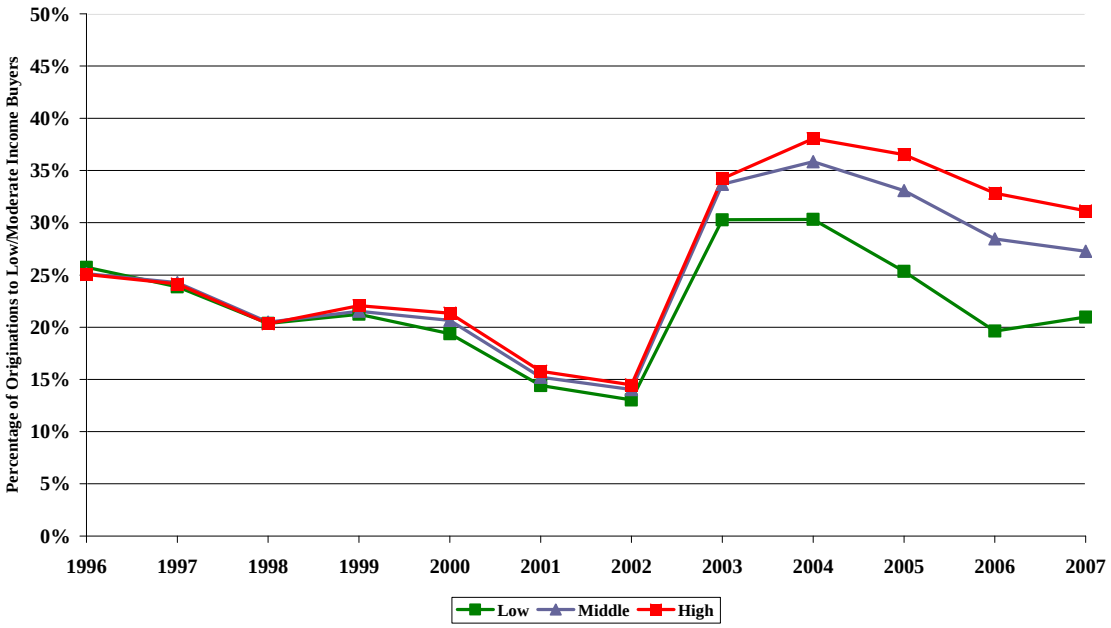
Figure 12
Low- and Moderate Income Share and Affordability



Source: National Association of Realtors and monthly HMDA time series; HMDA data restricted to conforming-size, conventional 1-4 family, owner-occupied, home purchase mortgages in metropolitan areas *Note:* Low-and moderate-income borrowers defined as those with incomes less than area median income.

Figure 13 tracks the share of home purchase and refinance loans originated to low-and moderate-income borrowers by state affordability ranking (as of 2006). Prior to 2003, states with higher affordability had higher percentages of lower income borrowers, possibly reflecting stronger economic conditions in those states, although differences across states were small. After 2003, the relationship changed. States with greater affordability had substantially larger percentages of low- and moderate-income borrowers, reflecting the reduced ability of low- and moderate-income borrowers to afford homeownership in states with low and declining affordability.

Figure 13
Originations to Low- and Moderate Income Borrowers by State Affordability Index Rank 1997 - 2007



V. The World Ahead

In order to be able to contemplate fruitfully ways in which sustainable homeownership might be increased, it is important to understand the barriers to homeownership. Rosenthal (2003), using data from the 1998 Survey of Consumer Finances, found that as of 1998, the impact of financing constraints resulted in lowering the national homeownership rate by 4 percentage points. Research by Bostic and Surette (2001) suggested that 1 percentage point of the 1.8 percentage point increase in homeownership rates between 1998 and 2005 can be attributed to easing of credit barriers.[22] Subtracting this percentage point from Rosenthal's estimate leaves 3 percentage points of unrealized homeownership attributable to financing constraints as of 2005. Using a similar methodology would suggest that 1.8 percentage points of the 3.1 percentage point increase in the homeownership rate between 1995 and 2005 can be attributed to reduced credit barriers, particularly among lower-income and minority households.

The ability to qualify for a mortgage depends not only on credit barriers but also on the level of the down payment that can be supplied by borrowers. During the subprime surge period, a large percentage of loans were provided to borrowers as 'piggy back' loans,

[22] Bostic and Surrette (2001) attribute growth in the homeownership rate in the top two income quintiles to income and demographic trends, and in the lower quintiles to supply-side factors. Note that the CPS indicates a 1.8 percentage point increase in the overall homeownership rate between 1998 and 2005, while the Housing Vacancy Survey indicates a 2.6 percentage point increase.

with a first lien loan of 80 percent and a second lien loan (provided by the same or a different lender) at up to 20 percent of the value of the home being purchased. As housing prices have fallen, and many homeowners have mortgage loan amounts that exceed home values, lenders have grown particularly cautious about granting high LTV loans. Even FHA loans, traditionally serving a high LTV segment of the market, have imposed constraints requiring minimum down payments of 3 percent.

To be able to move toward increases in sustainable homeownership will likely require overcoming credit quality constraints. Past research by Bostic, Calem and Wachter (2004) had found that perceived credit quality had trended downward among the renter population, according to Bostic, Calem, and Wachter (2004). They suggest this may have resulted from finding that households with lower measured credit quality became more concentrated among the renter population as wealth and income barriers to homeownership had eased. Calem, Firestone, and Wachter (2008) point to the important role of credit impairment as well as to downpayments in the probability of becoming a homeowner through 2004.

Currently, markets are imposing stringent requirements on down payments (wealth), ability to pay (verifiable income), and good credit, making this one of the hardest periods in recent years in which to qualify for a home mortgage. The focus, at least for the next few years, is likely to be on keeping borrowers in the homes they have purchased, rather than on providing increased access to credit to borrowers perceived to be marginal. The rise and fall in housing prices associated with the expansion and withdrawal of subprime and nonprime lending (Pavlov and Wachter, 2006, 2008) has resulted in "underwater" mortgages for one-fourth of home borrowers. The unprecedented rise in foreclosures to levels not seen in the post World War period raise serious questions about the financial system's structure. Issues of systemic instability will need to be addressed in order to support sustainable homeownership going forward.

Our policy recommendations include the following:

- The return to somewhat more conservative underwriting standards
  - The requirement that borrowers contribute some percentage of their won funds to downpayments
  - Income verification or employment verification based on pay stubs
  - Mandatory pre-purchase counseling for borrowers with credit scores below a minimum threshold (e.g. 620?)
  - ?????

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Appendix

Table A-1

U.S. Homeownership Rates by Race and Ethnicity, 1983 to Present

Period	U.S. Total, %	Non-Hispanic, % White Alone	Black Alone	Other race alone	Two or more races	Hispanic%
1983	64.9	69.1	45.6	53.3	NA	41.2
1984	64.5	69.0	46.0	50.9	NA	40.1
1985	64.3	69.0	44.4	50.7	NA	41.1
1986	63.8	68.4	44.8	49.7	NA	40.6
1987	64.0	68.7	45.8	48.7	NA	40.6
1988	64.0	69.1	42.9	49.7	NA	40.6
1989	64.0	69.3	42.1	50.6	NA	41.6
1990	64.1	69.4	42.6	49.2	NA	41.2
1991	64.0	69.5	42.7	51.3	NA	39.0
1992	64.1	69.6	42.6	52.5	NA	39.9
1993	64.1	70.2	42.0	50.6	NA	39.4
1994	64.0	70.0	42.5	50.8	NA	41.2
1995	64.7	70.9	42.9	51.5	NA	42.0
1996	65.4	71.7	44.5	51.5	NA	42.8
1997	65.7	72.0	45.4	53.3	NA	43.3
1998	66.3	72.6	46.1	53.7	NA	44.7
1999	66.8	73.2	46.7	54.1	NA	45.5
2000	67.4	73.8	47.6	53.9	NA	46.3
2001	67.8	74.3	48.4	54.7	NA	47.3
2002	67.9	74.7	48.2	55.0	NA	47.0
2003	68.3	75.4	48.8	56.7	58.0	46.7
2004	69.0	76.0	49.7	59.6	60.4	48.1
2005	68.9	75.8	48.8	60.4	59.8	49.5
2006	68.8	75.8	48.4	61.1	59.9	49.7
2007	68.1	75.2	47.8	60.3	59.0	49.7
2008	67.8	75.0	47.9	59.8	57.8	49.1

Source: U.S. Housing Market Conditions, HUD, Table 2, Homeownership Rates by Race and Ethnicity, 1983 to Present, last accessed at: http://www.huduser.org/periodicals/ushmc/winter08/hist_data.pdf