

Through Boom and Bust: Minorities, Immigrants and Homeownership

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Executive Summary

The boom-and-bust cycle in the U.S. housing market over the past decade and a half has generated greater gains and larger losses for minority groups than it has for whites, according to an analysis of housing, economic and demographic data by the Pew Hispanic Center, a project of the Pew Research Center.¹ From 1995 through the middle of this decade, homeownership rates rose more rapidly among all minorities than among whites. But since the start of the housing bust in 2005, rates have fallen more steeply for two of the nation's largest minority groups—blacks and native-born Latinos—than for the rest of the population.

Overall, the ups and downs in the housing market since 1995 have reduced the homeownership gap between whites and all racial and ethnic minority groups. However, a substantial gap persists. As of 2008, 74.9% of whites owned homes, compared with 59.1% of Asians, 48.9% of Hispanics and 47.5% of blacks.

At the same time, blacks and Latinos remain far more likely than whites to borrow in the subprime market where loans are usually higher priced.² In 2007, 27.6% of home purchase loans to Hispanics and 33.5% to blacks were higher-priced loans, compared with just 10.5% of home purchase loans to whites that year. For black homeowners who had a higher-priced mortgage, the typical annual percentage rate (APR) was about 3 percentage points greater than the rate on a typical 30-year, fixed-rate conventional mortgage; for Latinos who had a higher-priced mortgage, the typical rate was about 2.5 percentage points higher than that of the conventional mortgage.

Moreover, in 2007, blacks and Hispanics borrowed higher amounts than did whites with similar incomes, exposing themselves to greater debt relative to their incomes. On both counts—the likelihood of higher-priced borrowing and higher debt relative to income—the gap between minorities and whites is greater among high-income households than among low-income households.

¹ All references to whites, blacks and Asians in this report are to the non-Hispanic components of those populations. The terms Latino and Hispanic are used interchangeably.

² Activity in the subprime market is approximated in this report by higher-priced lending. Higher-priced loans have an annual percentage rate (APR) that exceeds the rate on U.S. Treasury securities of comparable maturity by a specified threshold (3 percentage points for first-lien loans). Higher-priced loans are believed to encompass the vast majority of subprime loans (see “Frequently Asked Question About the New HMDA Data,” available at <http://www.federalreserve.gov/newsevents/press/bcreg/bcreg20060403a1.pdf>).

This study analyzes three major interrelated aspects of the U.S. housing market: trends in homeownership from 1995 through the middle of 2008 among different racial, ethnic and nativity groups;³ higher-priced lending to Hispanics and blacks in 2006 and 2007; and differences in foreclosure rates across the nation's 3,141 counties.

One surprise to emerge from this analysis is that the recent decline in the homeownership rate has hit native-born heads of households harder than immigrant householders. Immigrant householders are less likely than native-born householders to be homeowners (52.9% versus 70.0% in 2008) but their losses in recent years have been smaller than those of the native born.

The explanation for the relatively modest impact of the recent housing market turmoil on immigrants appears to lie in the changing characteristics of the foreign born. Among other things, the typical immigrant in 2008 had spent more years in the U.S. and was more likely to be a U.S. citizen than was the typical immigrant in 1995. Those factors, strongly associated with higher rates of homeownership, appear to have mitigated recent troubles in the housing market among immigrants.

The analysis reveals that blacks and native-born Hispanics are among those who experienced the sharpest reversal in homeownership in recent years. Overall, the homeownership rate in the U.S. dropped from 69.0% in 2004 to 67.8% in 2008, a loss of 1.2 percentage points. Over the same period, the homeownership rate for black households decreased 1.9 percentage points, from 49.4% to 47.5%, reversing four years of gains. The homeownership rate for native-born Latinos peaked a year later in 2005. But since then it has fallen from 56.2% to 53.6%, a loss of 2.6 percentage points in just three years.⁴

Immigrant households did not experience similar losses in homeownership. For all immigrants, the homeownership rate declined modestly, from a high of 53.3% in 2006 to 52.9% in 2008. The rate for foreign-born Latinos has yet to diminish. It reached a peak of 44.7% in 2007 and was unchanged in 2008.

This report also focuses on differences in 2008 foreclosure rates across the nation's 3,141 counties and the role of demography in explaining those differences.⁵ In 2008, the national foreclosure rate was 1.8%, triple the rate in 2006. But the foreclosure rate—or the percentage of housing units with at least

³ References to homeownership in 2008 for sub-national populations are based on trends through June 2008.

⁴ The national homeownership rate is as reported by the Census Bureau. Estimates of homeownership by race, ethnicity and nativity are the Center's estimates derived from the Census Bureau's Current Population Survey data.

⁵ This question is not directly answerable because foreclosure statistics by race, ethnicity or nativity are currently not available. However, the relationship between demography and foreclosure activity at the county level is discerned in this report through the marriage of different sources of data.

one foreclosure filing—varies widely across counties. The analysis finds that counties with higher shares of immigrant residents had elevated rates of foreclosure. It is estimated that of two counties with similar economic and demographic characteristics, the one whose immigrant share of the population is 10 percentage points higher than the other has a foreclosure rate that is 0.6 percentage points higher.

But it cannot be inferred from this finding that immigration levels in and of themselves are the cause of elevated foreclosures. In recent years, the construction boom attracted immigrants in large numbers into new settlements in the U.S. (Kochhar, Suro and Tafoya, 2005; Frey, Berube, Singer and Wilson, 2009) Many of these areas, such as Nevada's Clark County, which includes Las Vegas, are now experiencing sharp reversals in construction and a wave of foreclosures.⁶ Thus, the presence of immigrants in a county may simply signal the effects of a boom-and-bust cycle that has raised foreclosure rates for all residents in that county.

The state of the local economy is also an important determinant of foreclosures. A county's unemployment rate that is 1 percentage point higher than in a typical county is associated with a foreclosure rate that is 0.1 percentage points higher. Home prices falling annually by about 2 percentage points more compared with a typical county are also estimated to raise foreclosure rates by 0.1 percentage points.⁷ Local housing costs, as reflected in high loan-to-income ratios, and a greater incidence of higher-priced lending to blacks and Hispanics are also linked to higher foreclosure rates.⁸

Data from a number of sources are used in this study. They include demographic and homeownership data from the Census Bureau's American Community Survey (ACS) and Current Population Survey (CPS), foreclosure data from RealtyTrac®, loan data from the Home Mortgage Disclosure Act (HMDA), labor market data from the Bureau of Labor Statistics (BLS), and home prices from the Federal Housing Finance Agency (FHFA).

⁶ Census Bureau data show that permits for new privately owned housing units in the Las Vegas-Paradise metropolitan area fell from 39,237 in 2005 to 12,538 in 2008, a drop of 68%. That was greater than the nationwide drop of 58% in permits. (<http://www.census.gov/const/www/C40/table3.html>)

⁷ Home prices rising slower by about 2 percentage points on an annual basis have a similar effect on foreclosure rates.

⁸ Data on higher-priced loans to immigrants are not available.

The major findings of the study are as follows:

Homeownership

- Homeownership in the U.S. expanded rapidly from 1994 to 2004 but has declined since then. Some 69.0% of all households owned homes in 2004 compared with 64.0% in 1994. The homeownership rate fell each year after 2004 and stood at 67.8% in 2008.
- Homeownership among Hispanics increased more quickly and for a longer time than homeownership overall. The Latino homeownership rate peaked at 49.8% in 2006, compared with 42.1% in 1995. It was unchanged in 2007 and fell to 48.9% in 2008.
- Black householders raised their homeownership rate from 41.9% in 1995 to 49.4% in 2004. By 2008, the black homeownership rate had decreased to 47.5%.
- Immigrant householders are less likely to be homeowners than those who are native-born, but their losses in recent years were relatively modest. Homeownership among immigrant householders increased from 46.5% in 1995 to 53.3% in 2006 and then fell to 52.9% in 2008.
- Among native-born householders, the homeownership rate increased from 66.1% in 1995 to 71.5% in 2004, peaking two years earlier than for immigrants. The native-born homeownership rate in 2008 was 70.0%.
- Foreign-born Latinos have not experienced a reversal in homeownership. Their homeownership rate increased from 36.9% in 1995 to 44.7% in 2007 and was unchanged through the first half of 2008.
- Native-born Hispanics raised their homeownership rate sharply, from 47.2% in 1995 to 56.2% in 2005. But they also experienced a sharp turnabout, as their homeownership rate dropped to 53.6% in 2008.

Homeownership Rate: The percent of householders, or heads of households, who report living in owner-occupied homes.

Loans for Home Purchase

- There was a precipitous drop in the number of loan applications for home purchases from 2006 to 2007. Nationwide, the number of applications decreased 25.2%, and there was an accompanying drop of 25.0% in the number of loans originated. Some of this drop is due to a lack of reporting by lenders that ceased operation in 2007, but the vast majority reflects a real drop in market activity.

- Loan applications for home purchases by Hispanics fell 38.2% from 2006 to 2007. Applications from blacks decreased 34.4% during the same period, and the number of white applicants decreased 18.9%.
- Among Hispanics, loan applications from the highest income group decreased at a faster rate (41.0%) from 2006 to 2007 than did applications from the lowest income group (23.8%).
- The median amount borrowed by Hispanic home buyers in 2007 was \$197,000, somewhat higher than for blacks (\$168,000) and whites (\$180,000). When compared with others with similar incomes, blacks also borrow more than whites.
- Loan-to-income ratios are higher for Hispanic and black households than for whites. The gap between minorities and whites is greater among high-income households.
- Some 14.2% of overall home purchase loans in 2007 were higher-priced loans. But 27.6% of loans issued to Hispanics and 33.5% of loans issued to blacks in 2007 were higher priced. Only 10.5% of loans to whites were higher priced.
- High-income Hispanics and blacks are about as likely as low-income Hispanics and blacks to receive a higher-priced loan. That is not the case for high-income whites who are half as likely as low-income whites to receive a higher-priced loan.

Higher-Priced Home Purchase Loans: Mortgage loans with annual percentage rates that exceed the rate on U.S. Treasury securities of comparable maturity by a specified threshold (3 percentage points for first-lien loans). Often used as a proxy for lending activity in the subprime market.

Foreclosures

- The national foreclosure rate tripled from 2006 to 2008, increasing from 0.6% to 1.8%.
- The foreclosure rate was 5% or more in 33 of the nation's 3,141 counties. Of those 33 counties, California was home to 12 and Florida to 10. Virginia and Nevada accounted for three counties each.
- The highest foreclosure rate in the nation was 12.0% in Florida's Lee County, which includes Fort Myers and Cape Coral.

Foreclosure Rate: Percentage of housing units with at least one foreclosure filing in the year.

- The typical county in the U.S. had a foreclosure rate of 0.6% in 2008. That is the simple average of foreclosure rates across 3,141 counties.⁹ The foreclosure rate was less than 0.6% in 2,164 counties.
- The vast majority of counties in several states that are either traditional immigration destinations or notable new areas of settlement have foreclosure rates that are higher than in the typical county—157 of 178. These counties are in California, Arizona, Nevada, Florida and New Jersey.
- Higher shares of immigrants in county populations are associated with higher foreclosure rates. But this does not mean that immigration in and of itself is the cause of elevated foreclosures.
- Higher foreclosure rates across counties are also associated with higher unemployment levels, home price depreciation or slower appreciation, home prices that are high relative to income levels and higher proportions of higher-price mortgage loans to Hispanic and black homeowners.

⁹ The national foreclosure rate of 1.8% is the ratio of all foreclosure filings in the U.S. to all housing units in the U.S. It is essentially a weighted average of foreclosure rates in counties where the weights are the number of housing units in a county. The weighted average (1.8%) is higher than the simple average (0.6%) in this case because the foreclosure rate is higher in more populated areas.

About this Report

This study analyzes three major interrelated aspects of the U.S. housing market: trends in homeownership from 1995 through the middle of 2008 among racial, ethnic and nativity groups; higher-priced lending to Hispanics and blacks in 2006 and 2007; and differences in foreclosure rates across the nation's 3,141 counties.

A Note on Terminology

The terms “Latino” and “Hispanic” are used interchangeably in this report, as are the terms “foreign born” and “immigrant.” The terms “whites,” “blacks” and “Asians” are used to refer to their non-Hispanic components.

Foreign-born refers to an individual who is born outside of the United States, Puerto Rico or other U.S. territories and whose parents are not U.S. citizens.

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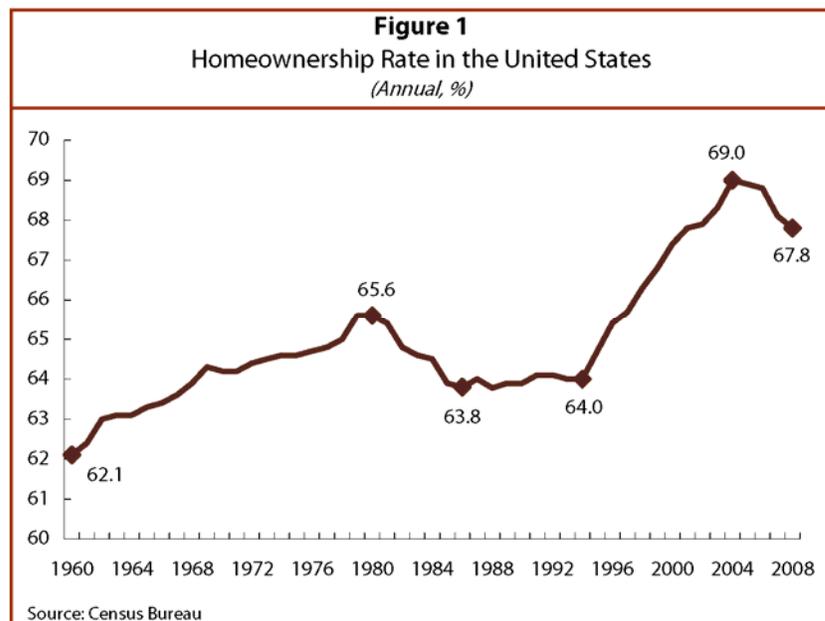
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1. Introduction

Homeownership in the United States expanded at an historic pace from 1994 to 2004. In that span, the homeownership rate in the U.S. increased from 64.0% to 69.0%, or by 5 percentage points.¹⁰ A rise of this magnitude in the course of a decade is rare. Since 1900, homeownership increased at a faster pace only during the economic boom that followed the end of World War II.¹¹

Prior to the latest jump, the national homeownership rate in 1994 had been virtually unchanged for three decades. In 1960, 62.1% of householders owned their homes. Over the next two decades, ownership spread slowly, reaching 65.6% in 1980 (Figure 1). The two recessions in the first half of the 1980s, coupled with high interest rates, caused the homeownership rate to drop to 63.8% in 1986. It remained near that level until 1994.



The surge in home buying after 1994 was fueled by the combination of an economic expansion from 1991 to 2000, low interest rates and the growth of subprime lending (Bostic and Lee, 2008; Gramlich, 2007). That climate was particularly beneficial for minority households. The homeownership rates of Hispanics, blacks and Asians were all boosted by more than the national average, narrowing the gap with white households.

¹⁰ The source for these estimates is the U.S. Census Bureau.
(<http://www.census.gov/hhes/www/housing/hvs/annual08/ann08t14.xls>)

¹¹ This statement is based on a comparison of homeownership rates across the decennial censuses. According to the Census Bureau the homeownership rate in the U.S. decreased from 46.5% in 1900 to 43.6% in 1940. The effects of the Great Depression were erased by the post-war boom and homeownership rates jumped to 55.0% in 1950. By 1960 the rate had climbed further to 61.9%. This estimate for 1960, from the decennial census, differs slightly from that shown in Figure 1, from the Current Population Survey.

However, the rapid growth of subprime lending had a downside. Loans originating in the subprime market are generally intended for applicants with poorer credit histories and less net worth than other borrowers, or other financial limitations. Such loans tend to be higher priced, in that they carry higher interest rates than standard mortgage loans. The result was a surge in mortgage delinquency rates and foreclosures starting in 2005.¹²

Troubles in the housing market translated into falling rates of homeownership for most groups from 2005 to 2008. The homeownership rate in the U.S. dropped from 69.0% in 2004 to 67.8% in 2008. Just as minority households benefited more from the initial gains in homeownership, they lost more in the post-2005 slump. Native-born Hispanics and blacks were especially hard hit. Immigrants, however, appeared to fend off declining prospects of ownership in the housing market.

This report focuses on the demography of recent developments in the housing market. The report first examines trends in homeownership from 1995 to mid-2008 among different racial, ethnic and nativity groups. The starting date, 1995, marks the beginning of the housing boom. It is also the year that data on immigrants became available on a regular basis in the Current Population Survey, the source of the housing trends data presented in this study. This section of the report also examines why homeownership among immigrant households appears to have been less affected since 2005.

The report then examines the prevalence of subprime lending to Hispanic, black and white households. Subprime loans are not directly identified in the source data, but characteristics of a close proxy—higher-priced loans—are available. Higher-priced loans are believed to encompass the vast majority of loans originating in the subprime mortgage market. These loans carry annual percentage rates (APRs) that exceed the rate on U.S. Treasury securities of comparable maturity by a specified threshold (3 percentage points for first-lien loans).

The final section of the report spotlights trends in foreclosure rates and how they varied across U.S. counties in 2008. Foreclosures are more prevalent in a small handful of states. The most notable of these states—California, Nevada, Arizona and Florida—are also home to large numbers of immigrants. The changing economic fortunes of Hispanic immigrants and the ties of those immigrants to the construction industry have been previously documented by the Center ([Kochhar, 2008](#)). A question that arises in this context is whether the presence of immigrants is associated with higher rates of foreclosures. The section also sheds light on how

¹² [Mayer, Pence and Sherlund \(2009\)](#) provides an extensive discussion of the characteristics of subprime loans and the rise in delinquency rates.

other economic and demographic factors are correlated with foreclosure rates across counties.

Appendices to the report contain additional tables and charts, details on the data and key elements of the methodology.

2. Homeownership, 1995 to 2008

If owning a home is the gateway to the middle class and beyond, then more than two-thirds of American households have crossed that threshold. But who makes it, and who doesn't, varies widely depending on the race, ethnicity and nativity of the householder. Whites are the most likely to own a home, and Hispanics and blacks are the least likely. However, minority households have closed the gap somewhat in recent years. The homeownership rate among immigrants is initially low but increases with the number of years of U.S. residence. And there are signs that immigrants are moving more quickly into homeownership.

The push to acquire a home has proved to be a double-edged sword. The surge in ownership from 1995 to 2004 was accompanied by rapid growth in debt in the absolute and relative to income for homeowners ([Dynam and Kohn, 2007](#); [Pew Research Center, 2008](#)). Rising foreclosure and mortgage delinquency rates reflect the fact that, for some families, debt had swelled to unsustainable levels.

2.1. Homeownership by Race and Ethnicity, 1995 to 2008

All households, regardless of race and ethnicity, experienced rising homeownership rates from 1995 to 2004. However, results from 2004 to 2008 were mixed. Homeownership rates for some groups continued to increase after 2004, but other groups lost ground.

Hispanics experienced a more sustained period of growth in homeownership than did white or black households. The Latino homeownership rate increased from 42.1% in 1995 to 49.8% in 2006 (Figure 2). There was only one interruption—homeownership slid backwards from 2002 to 2003, reflecting the cumulative effect of the 2001 recession and the economic slowdown that followed. In 2008, the homeownership rate for Hispanics was 48.9%, nearly 1 percentage point lower than in 2006 but 6.8 points higher than in 1995.

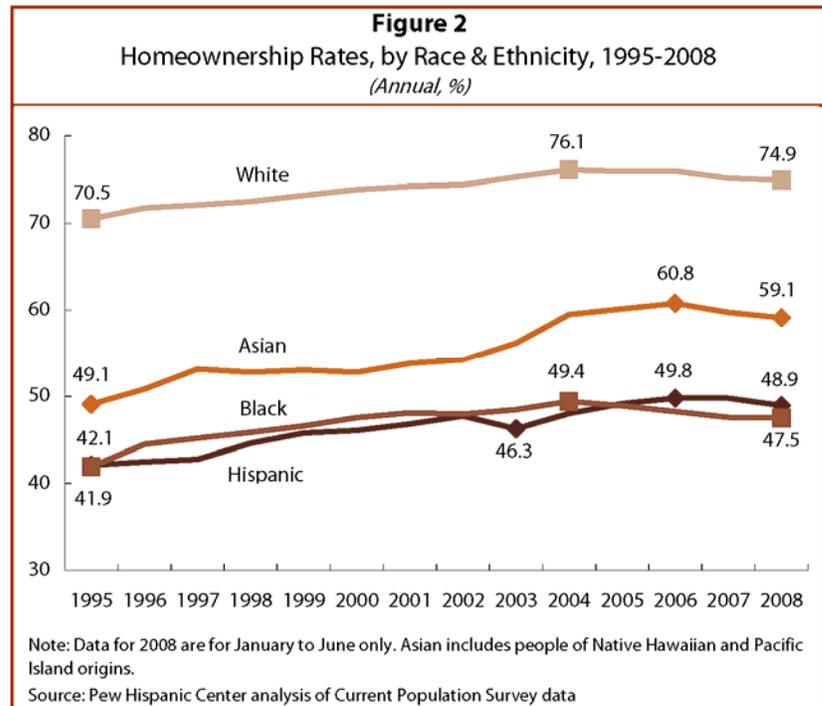
The homeownership rate for whites peaked in 2004, two years sooner than the peak for Hispanics. For white householders, the homeownership rate increased from 70.5% in 1995 to 76.1% in 2004 (Figure 2). It stood at 74.9% in 2008, 1.2 percentage points lower than in 2004, with most of the decrease occurring after 2006.

Blacks are about as likely as Hispanics to be homeowners. But their homeownership rate reached a high in 2004 and has fallen farther since then. The homeownership rate for blacks increased from 41.9% in 1995 to 49.4% in 2004, a gain of 7.5 percentage points. But the rate reverted to its 2000 level in 2008 by falling to 47.5%, a 1.9 percentage point decline in four years.

The Asian homeownership rate increased faster than any other group, from 49.1% in 1995 to 60.8% in 2006. It has, however, fallen notably since then, to 59.1% in 2008.

Despite recent setbacks, all minority groups have chipped away at the homeownership gap with white households. The Latino homeownership rate in 1995 (42.1%) was 28.4 percentage points less than the rate for whites (70.5%). The gap

in 2008 was still high but had decreased to 26.0 points. Asians are closing the gap most rapidly, shrinking the disadvantage vis-à-vis white households from 21.4 percentage points in 1995 to 15.8 points in 2008.



2.2. Homeownership among Native-Born and Foreign-Born Households, 1995 to 2008

Immigrants are less likely than the native born to own homes. About half of foreign-born householders are homeowners, compared with more than two-thirds of the native born. The current gap in homeownership between immigrant and native-born households is narrower than in 1995 but still wide.

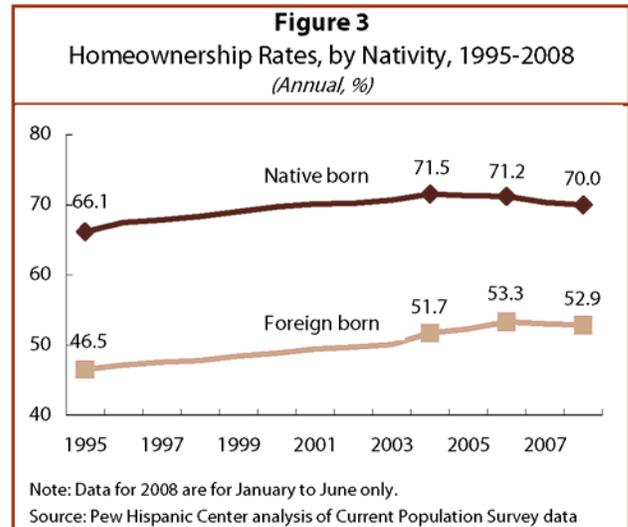
One reason for the large gap is that immigrants are disproportionately minority and present characteristics associated with lower rates of homeownership, such as lower income and levels of education. In particular, 75.7% of foreign-born households are Latino, black or Asian, compared with 20.2% of native-born households.¹³ Another reason is that the move into homeownership among immigrants takes time—only after an immigrant has been in the U.S. about 20 years does the likelihood of an immigrant owning a home equals that of a native-born householder.¹⁴

¹³ Estimates based on Pew Hispanic Center tabulations of Current Population Survey data for January through June 2008.

¹⁴ The geographic concentration of immigrants is also a key factor ([Borjas, 2002](#)). See [Cortes, Herbert, Wilson and Clay \(2007\)](#) for a more general discussion of factors that affect homeownership.

From 1995 to 2004, homeownership among foreign-born and native-born households increased by similar amounts. For immigrants, the homeownership rate rose from 46.5% to 51.7%, an increase of 5.2 percentage points. For the native born, it went up from 66.1% to 71.5%, an increase of 5.4 percentage points (Figure 3).

While homeownership for the native born peaked in 2004, ownership among the foreign born maintained an upward trajectory, reaching a high of 53.3% in 2006. Then, from 2006 to 2008, the homeownership rate for immigrants dipped modestly to 52.9%. The rate for native-born householders decreased by a larger amount, from 71.2% in 2006 to 70.0% in 2008. Although the gap in homeownership between immigrant and native-born households diminished slightly from 1995 to 2008, it is still quite large (17.1 percentage points).

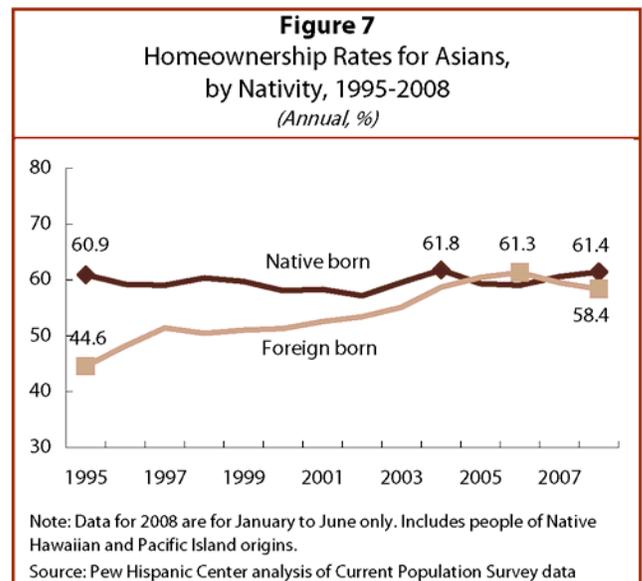
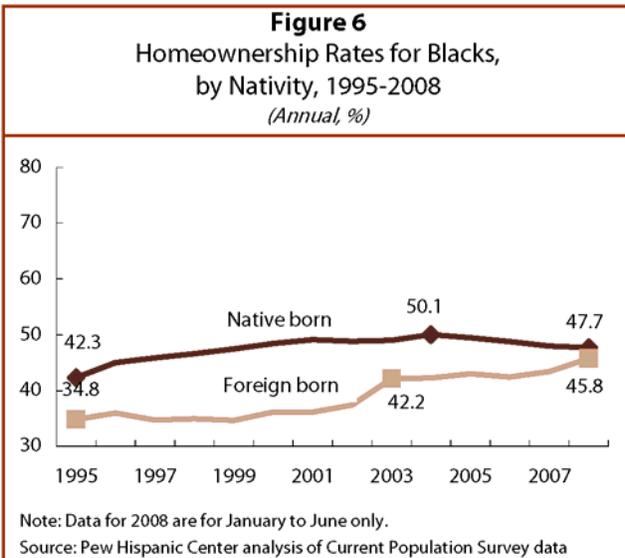
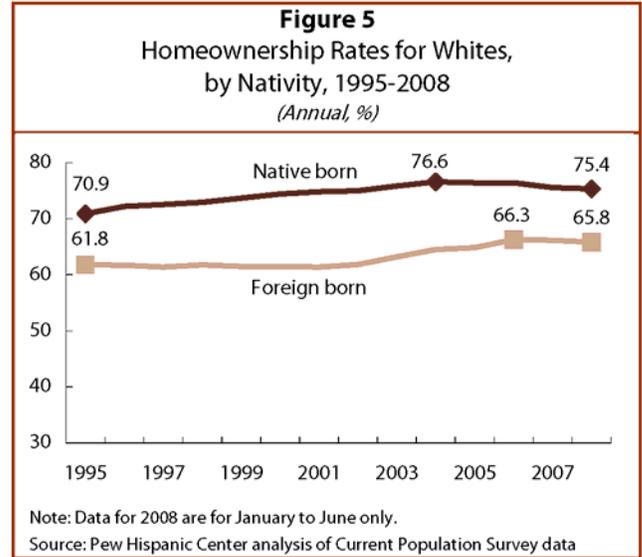
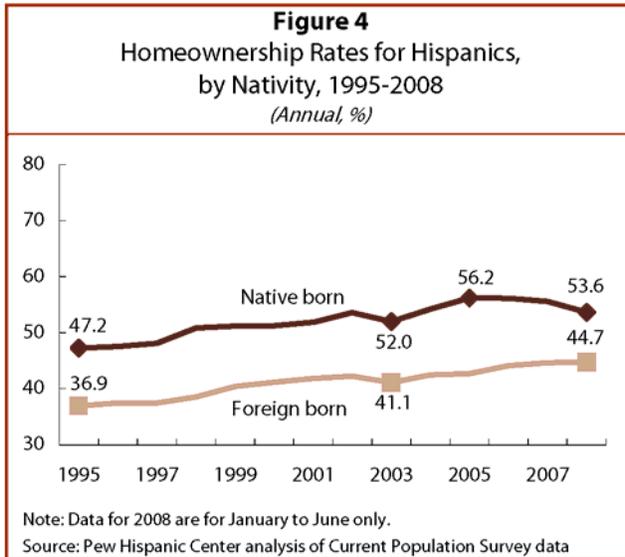


Homeownership among Native- and Foreign-Born Households by Race and Ethnicity

Figures 4 to 7 compare the homeownership rates for foreign-born and native-born householders by race and ethnicity. The gap between immigrants and the native born within a single racial and ethnic group is narrower than in the aggregate. Among Hispanics, for example, 53.6% of native-born householders owned a home in 2008, compared with 44.7% of foreign-born householders, a difference of 8.9 percentage points.

Homeownership rates among foreign-born Latinos and blacks did not decline in the post-2004 period and recorded their highest levels in 2008—44.7% for Hispanics and 45.8% for blacks. Native-born Latinos and blacks, however, witnessed notable drops in homeownership in recent years—from 56.2% in 2005 to 53.6% in 2008 for Hispanics and from 50.1% in 2004 to 47.7% in 2008 for blacks.

As a result, immigrant Latinos and blacks have closed the gap in homeownership relative to their native-born counterparts. For Latinos, the difference in the homeownership rate between the native born and the foreign born fell from 13.5 percentage points in 2005 to 8.9 points in 2008. For blacks, the gap decreased from 6.5 percentage points in 2005 to 1.9 points in 2008.



Asian immigrants recorded the largest gains in homeownership, from 44.6% in 1995 to 61.3% in 2006. By 2005, they essentially eliminated the gap in homeownership relative to the native born. However, Asian immigrants did experience a setback from 2006 to 2008 as their homeownership rate fell from 61.3% to 58.4%.

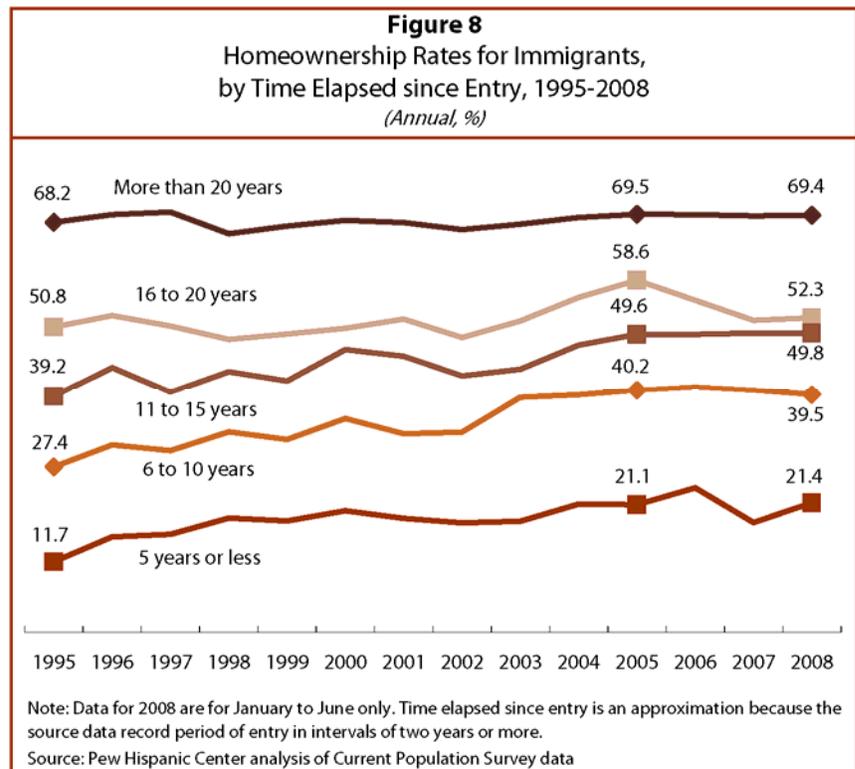
2.3. Assimilation into Homeownership among Foreign-Born Households, 1995-2008

The rapid growth in homeownership among immigrant populations and the ability of foreign-born Hispanics and blacks to stem a decline in recent years arise from the forces of economic assimilation. Immigrants' incomes and their economic status improve significantly with time spent in the U.S. and the acquisition of citizenship. The key question is whether immigrant homeownership would also have declined from 2005 to 2008 if not for the forces that drive assimilation.

Homeownership among Foreign-Born Households by Years in the United States

The number of years an immigrant has been in the U.S. is related that person's degree of economic integration ([Duleep and Dowhan, 2008](#)). Among other things, the longer an immigrant has been in the U.S., the more likely that person is to be a homeowner. After about 20 years in the country, the homeownership rate for immigrants equals the rate for the native born.

Figure 8 shows the homeownership rate for immigrants grouped by the number of years they have been in the U.S.¹⁵ In 2008, the rate is only 21.4% among immigrants in the country for five years or less. It elevates to 39.5% for those here for six to 10 years, climbs further to 49.8% after 11 to 15 years, increases to 52.3% for those with U.S. residence of 16 to 20 years, and peaks at 69.4% among immigrants here for more than 20 years.



Three notable points emerge from the trends in Figure 8. First, the homeownership rate for immigrants increases during the first two decades in the

¹⁵ Estimates of the number of years an immigrant has been in the U.S. are approximate because the year of entry is reported in intervals of two years or more in the Current Population Survey.

U.S. and then levels off near the rate for native-born householders. As shown in Figure 8, for each year from 1995 to 2008, immigrants who were in the U.S. for more than two decades had a homeownership rate of close to 70%.¹⁶

The second point is that immigrants are moving into homeownership more quickly than in the past. In 1995, for example, immigrants here for five years or less had a homeownership rate of only 11.7%. In 2008, immigrants with the same length of residence had a homeownership rate of 21.4%. Similar strides in homeownership are also observed for those who have been in the U.S. six to 10 years and from 11 to 15 years. Thus, it appears that newer immigrants have benefited more from the economywide expansion in homeownership.

Finally, reflecting overall market trends, the gains in homeownership for immigrants occurred primarily from 1995 to 2005. For example, the homeownership rate for immigrants who were in the U.S. for six to 10 years crossed the 40% threshold in 2005. But since then, it has nudged down. For immigrants in the U.S. for 16 to 20 years, homeownership peaked at 58.6% in 2005. The rate dropped sharply after that and in 2008 stood at 52.3%, not very different from the rate in 1995.

Homeownership among Foreign-Born Households by Citizenship

Immigrants who acquire U.S. citizenship are nearly twice as likely as non-citizens to be homeowners. In part, that reflects the influence of more years in the U.S. because the route to citizenship can be lengthy. However, this is an effect that appears even when comparisons are made among immigrants who have similar durations of stay in the U.S. or whose characteristics are otherwise similar.¹⁷

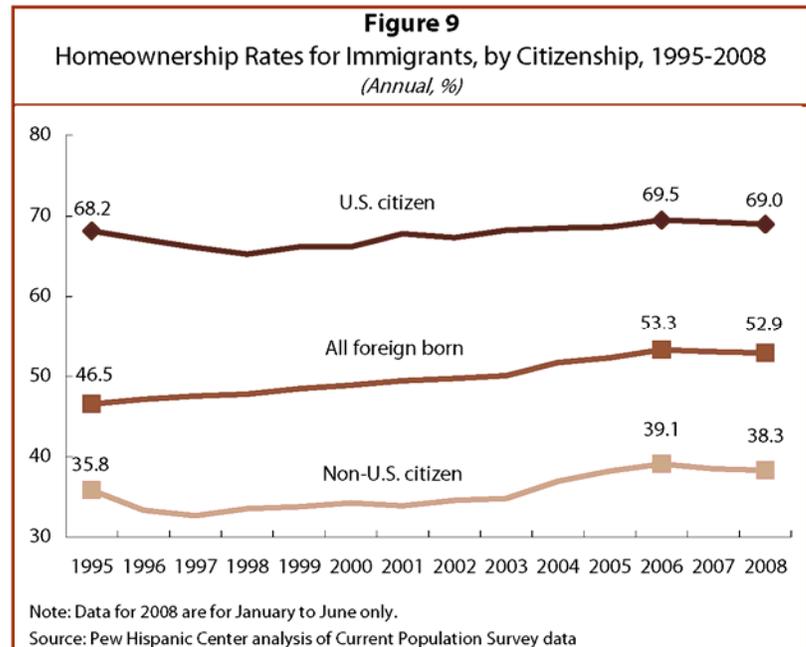
As shown in Figure 9, 69.0% of naturalized citizen immigrants owned a home in 2008, compared with only 38.3% of non-citizen immigrants. The homeownership rates and the gap between the two groups of immigrants are not very different from those in 1995, when 68.2% of citizen immigrants and 35.8% of non-citizen immigrants owned homes.

The trends presented in Figure 9 show that the rise in homeownership from 1995 to 2008 was greater among immigrants collectively than among citizens and non-citizens separately. More specifically, homeownership for all immigrants increased by 6.4 percentage points from 1995 to 2008 even though it increased only 0.8 percentage points for citizens and 2.5 percentage points for non-citizens.

¹⁶ In 1995, immigrants who arrived more than 20 years ago refers to those who entered the U.S. before 1975. In 2008, immigrants who arrived more than 20 years ago refers to those who entered the U.S. before 1988.

¹⁷ For example, see [Cortes, Herbert, Wilson and Clay \(2007\)](#). This result was also confirmed in the process of the more detailed statistical analysis described in the next section.

The reason this happened is that the naturalization rate in the U.S. trended up sharply after 1995 (Passel, 2007). The switch in status boosted the rate of homeownership for all immigrants, even as the increase was more modest for citizens or non-citizens alone.



The Changing Attributes of Immigrants and Trends in Homeownership

The spread of homeownership among immigrant Hispanics and blacks from 2005 to 2008, even as it ebbed among other populations, is one of the notable developments in recent years. A more detailed analysis shows that the reason lies in the changing attributes of immigrants. Among other things, the average immigrant now has spent more years in the U.S. and relatively more immigrants have planted roots as U.S. citizens. The result is an ongoing rise in homeownership even amid troubles in the housing market.

This section illustrates the issue through the experience of immigrant Latinos. This group, 7.2 million strong, accounts for 44.8% of all foreign-born heads of households. By contrast, there are 1.4 million foreign-born blacks, and they account for only 8.7% of the immigrant householder population.¹⁸

Key changes in the characteristics of immigrant Latino householders include the fact that they are much more likely than in years past to be U.S. citizens—35.8%

¹⁸ These estimates are derived by the Pew Hispanic Center from Current Population Survey data for January through June 2008.

in 2008 compared with 19.4% in 1995.¹⁹ These immigrants also have been in the U.S. longer—42.2% were here for more than 20 years in 2008, compared with 36.1% in 1995. Also, immigrant Latino householders are more middle-aged—54.7% were ages 30 to 49 in 2008, compared with 48.9% in 1995—and better educated—52.8% had completed high school in 2008, compared with 44.4% in 1995.

The question is, how does one disentangle the impact of the changing characteristics of Hispanic immigrants from more general trends in homeownership? This analysis uses a statistical model that relates homeownership to a list of personal attributes, such as years in the U.S., citizenship, age, education and income.²⁰ Once the relationship has been established, it is possible to use the model to estimate homeownership rates that relate to any given set of attributes. In this study, the goal is to estimate homeownership rates in each year for the attributes that describe Latino immigrants in 1995.

Figure 10 presents homeownership rates for immigrant Latinos computed two ways. One trend line, labeled “Predicted,” shows homeownership rates estimated by a statistical model that predicts the likelihood of owning a home by taking into account the characteristics of Latino immigrants in that year.²¹

The other trend line in Figure 10, labeled “Predicted, 1995 attributes,” shows homeownership rates derived from the same statistical model in each year under the assumption that, on average, Latino immigrants in that year possessed the same attributes as Latino immigrants did in 1995.

¹⁹ See [Passel \(2007\)](#) for trends in naturalization rates among immigrants. The statistics noted in this section refer to the characteristics of heads of households. Thus, they may differ from the more widely known characteristics of the foreign-born population that are generally based on data for all individuals, not just heads of households.

²⁰ More specifically, the predictions are derived from a logit regression model that relates homeownership to a list of attributes including gender, age, education, family income, household size, marital status, employment status, citizenship, country of origin, years in the U.S., residence in a principal city and residence in a large metro area. A regression model is a statistical technique that can be used to determine the importance of each of a number of independent variables in predicting a phenomenon of interest—in this case, the probability that a householder is a homeowner based on that person’s demographic and economic attributes. Results are available upon request from the Pew Hispanic Center.

²¹ The statistical model that is used to predict homeownership generally understates homeownership among immigrant Latinos (compare the estimated homeownership rates in Figure 10 with the actual rates shown in Figure 4). One problem is that not every factor that relates to homeownership is observed in the data. Other problems may arise from the nature of the data. For example, household income is recorded only within intervals in the source data. The gap between the estimated and actual homeownership rates does narrow over time, suggesting that the accuracy of the model is better in more recent years. In 2008, for example, the predicted homeownership rate is 41.2% and the actual homeownership rate is 44.7%. What is important for the purposes of the analysis is that the trends in homeownership from 1995 to 2008, actual or predicted, are alike.

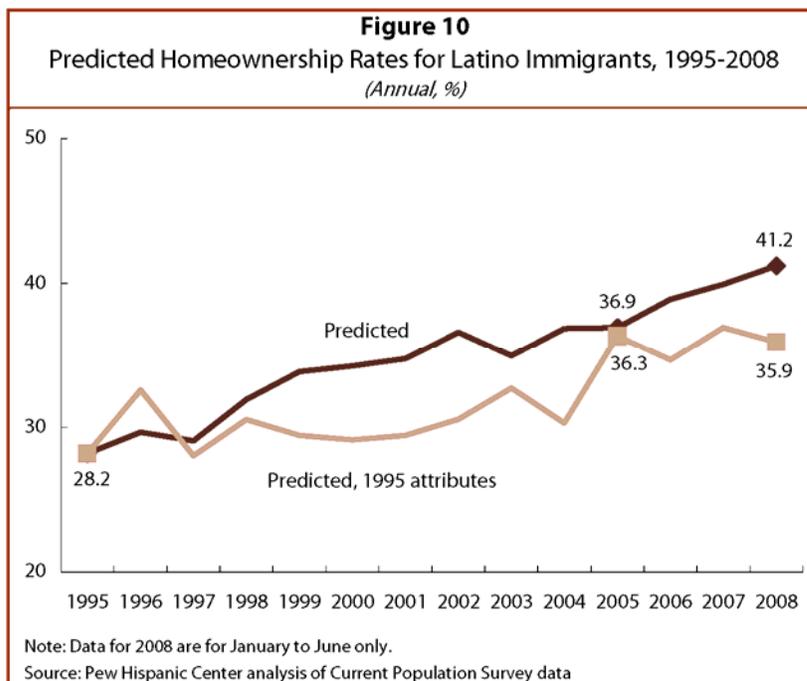
That means that we disallow any change over time in the characteristics of immigrants, including the number of years they have been in the U.S., naturalization rates, schooling and age.

From 1995 to 2005, both estimates show a rising tide of homeownership for Hispanic immigrants. In 2005, the statistical model predicts a homeownership rate of 36.9%. The rate would have been slightly lower—36.3%—if

immigrants in 2005 had the same characteristics as immigrants in 1995. In the interim, the two estimates show a varying degree of closeness. Generally speaking, if immigrant attributes are pinned to their 1995 levels—in other words, they are not allowed to “improve”—the estimated homeownership rate is lower.

From 2005 to 2008, the two estimates reveal divergent trends. The predicted homeownership rate continues a steep rise, from 36.9% in 2005 to 41.2% in 2008. That accords with the actual change in homeownership rates for Latino immigrants (Figure 4). However, if attributes are held to their 1995 status, the homeownership rate for Latino immigrants shows virtually no change—35.9% in 2008 compared with 36.3% in 2005.

These results show that Hispanic immigrants were not immune to the downturn in the housing market that began in 2005. The observed increase in their homeownership rate from 2005 to 2008 is estimated to have arisen largely from the forces of economic assimilation. If not for changing characteristics, such as years spent in the U.S. and naturalization rates, Latino immigrants’ experience would have been more similar to that of native-born householders—rising likelihood of homeownership from 1995 to 2005, followed by either a leveling off or a decline.



3. Loans for Home Purchase in 2007

The growth in subprime lending in recent years is considered responsible for both raising homeownership rates among minorities and contributing to the wave of foreclosure since 2005. Loans originating in the subprime market are intended for high-risk borrowers who typically have poor credit histories, low incomes and savings, or other financial limitations. Thus, subprime loans can make homeownership possible for applicants who might not qualify for mainstream loans ([Bostic and Lee, 2008](#); [Gramlich, 2007](#)).

However, subprime loans are also susceptible to higher rates of default. Many high-risk or low-income borrowers are eventually unable to maintain payments on loans that carry higher interest rates. Several studies have demonstrated that subprime loans experience higher rates of foreclosure and that the risk of foreclosure remains elevated several years into the term of the loan ([Schloemer, Li, Ernst and Keest, 2006](#)).

This section spotlights major trends in mortgage lending in 2006 and 2007, the latest years for which data are available. The analysis is based on data gathered under the provisions of the Home Mortgage Disclosure Act (HMDA). The HMDA data encompass about 80% of lending activity in the U.S. for home purchase and refinancing.²²

The HMDA data identify a set of products known as higher-priced loans because they carry an annual percentage rate (APR) above a specific threshold.²³ The determination is made by comparing the APR on a loan with the rate on a U.S. Treasury security of comparable maturity. The threshold varies by the type of loan. A first-lien loan is considered higher priced if the interest on it exceeds the rate on the comparable Treasury security by 3 percentage points or more. The threshold for a second-lien loan is 5 percentage points.

Higher-priced loans are used in this section as a stand-in for subprime loans. The two are not identical. However, most higher-priced loans are believed to originate in the subprime market and subprime loans are often higher priced. Thus, higher-priced loans are frequently used as a proxy for subprime activity ([Bocian, Ernst and Li, 2006](#); [Mayer and Pence, 2008](#)).

²² HMDA data and a wide-ranging set of tabulations from the data are available at <http://www.ffiec.gov/hmda/>.

²³ The APR includes the interest on the loan and other costs such as points, fees and premiums for mortgage insurance.

The focus of this section is on home purchase loans only; refinance loans are excluded. Moreover, the analysis is confined to first-lien conventional home purchase loans for one- to four-family homes intended for owner occupancy.²⁴ Examples of specific types of loans not included in the analysis are loans for purchase of manufactured homes and loans for home improvement. Thus, the data presented in this section are not meant to represent the universe of home mortgage loans.

3.1. Loans for Home Purchase

Changes from 2006 to 2007

As home sales plunged, so did lending for home purchases. The number of loan applications and, consequently, the number of loan originations in 2007 were well below their 2006 levels.²⁵ As shown in Table 1, there were 4.4 million loan applications for home purchase in 2007, compared with 5.9 million in 2006—a reduction of 25.2%. The number of loans originated fell 25.0%, from 3.7 million in 2006 to 2.8 million in 2007.

	LOAN APPLICATIONS			LOAN ORIGINATIONS		
	2006	2007	Change (%)	2006	2007	Change (%)
Total	5,873,134	4,394,662	-25.2	3,736,579	2,800,599	-25.0
Hispanic	994,036	614,405	-38.2	549,227	309,395	-43.7
White	3,424,741	2,778,536	-18.9	2,417,733	1,960,191	-18.9
Black	635,585	416,748	-34.4	314,349	195,475	-37.8

Note: Sample includes conventional loans for 1- to 4-family home purchase for owner occupancy, first liens only. The total includes racial and ethnic groups not shown separately.
Source: Pew Hispanic Center tabulations of Home Mortgage Disclosure Act (HMDA) data

The decline in loan applications and originations was greater among minorities than among whites.²⁶ Applications from Hispanics fell 38.2% from 2006 to 2007, and applications from blacks decreased 34.4%. This most likely reflects the fact that the drop in lending in 2007 was more severe in the subprime market and that Hispanics and blacks are disproportionately served in that market compared with their share of applicants (see Table 5 and Figure 14 below).

²⁴ These loans accounted for approximately two-thirds of all loans for home purchase recorded in the 2007 HMDA data.

²⁵ Some of the drop was due to lenders ceasing operations in 2007. When a mortgage loan company stops operating it may not report any loans it originated in that year. That can exaggerate the measured drop in activity and the extent of this problem is believed to be bigger than usual in 2007. Nonetheless, a Federal Reserve Board study concludes that most of the observed slowdown in loan activity from 2006 to 2007 was real, i.e. it was a result of the turmoil in the housing market (Avery, Brevoort and Canner, 2008).

²⁶ It is not possible to identify immigrants in the HMDA data.

A striking aspect of the changes in 2007 is that, among minorities, lending activity dropped most for high-income homebuyers (Table 2). Among Hispanics, loans originated to the highest income homebuyers decreased at a faster rate (49.3%) from 2006 to 2007 than did loans to the lowest income buyers (21.2%).²⁷ Unfortunately, the HMDA data do not contain enough detail on loan and borrower characteristics to determine the reasons behind this trend.

	ALL	RATIO OF INCOME TO MEDIAN INCOME IN METROPOLITAN AREA					
		< 0.5	0.5 to .75	0.75 to 1	1 to 1.25	1.25 to 1.5	>= 1.5
Loan Applications							
Total	-25.2	-27.4	-22.0	-24.4	-25.9	-26.3	-21.9
Hispanic	-38.2	-23.8	-25.6	-33.7	-39.0	-44.1	-41.0
White	-18.9	21.1	-17.6	-19.4	20.6	-19.7	-14.2
Black	-34.4	-36.7	-32.4	-34.2	-35.8	-34.8	-31.5
Loan Originations							
Total	-25.0	-22.9	-18.6	-22.8	-25.9	-26.4	-23.2
Hispanic	-43.7	-21.2	-23.9	-36.0	-44.0	-49.9	-49.3
White	-18.9	-18.8	-15.6	-18.5	-20.6	-19.9	-15.6
Black	-37.8	-31.2	-29.6	-35.3	-40.8	-40.9	-40.3

Note: Sample includes conventional loans for 1- to 4-family home purchase for owner occupancy, first liens only. The total includes racial and ethnic groups not shown separately.
Source: Pew Hispanic Center tabulations of Home Mortgage Disclosure Act (HMDA) data

Loans Originated and Their Size, by Race and Ethnicity, 2007

Applications by Hispanics and blacks are less likely to result in loan originations than are applications by white householders. But when they do take out loans, Hispanics and blacks tend to borrow larger amounts than whites for a variety of reasons. That, coupled with lower median income levels,²⁸ translates into higher loan-to-income ratios for minority borrowers.

In 2007, half (50.4%) of applications for home purchase from Hispanic householders resulted in loan originations (Figure 11).²⁹ That was slightly greater than the origination rate for blacks (46.9%) but much less than the rate for whites

²⁷ Income is defined not in the absolute but relative to the median income in the metropolitan statistical area (MSA) where the borrower resides.

²⁸ Census data on household median income are available at <http://www.census.gov/hhes/www/income/income07.html>.

²⁹ The status of an application may fall into one of several categories at the time of reporting. Among them: It may be denied; result in a loan origination; pending for some reason; withdrawn; or incomplete.

(70.5%). Conversely, denial rates were higher for Hispanics (26.1%) and blacks (30.4%) than for whites (12.1%).³⁰

The income of Hispanic and black applicants does not seem to affect the likelihood of denial. In 2007, the denial rate for Hispanics in the highest income groups was 27.7%, about the same as the rate for Hispanics in the lowest income group (29.0%). Similarly, black applicants, regardless of income, faced a denial rate of about 30% (Table 3). Meanwhile, the denial rate for high-income whites (10.8%) was only about half as much as the rate for low-income whites (19.7%). Thus, based on denial rates, the disparity in lending between minority and white households in 2007 increased with income.

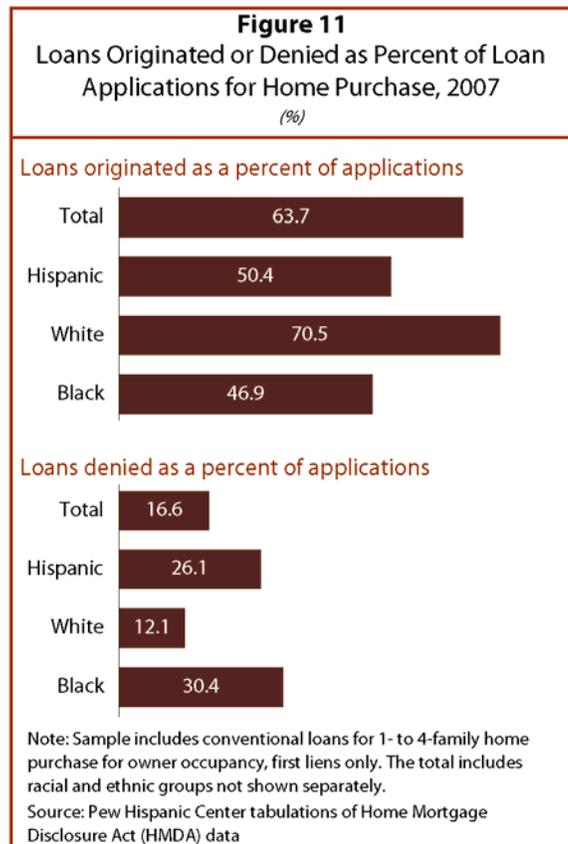


Table 3
Loans Originated or Denied as Percent of Loan Applications for Home Purchase, 2007

	ALL	RATIO OF INCOME TO MEDIAN INCOME IN METROPOLITAN AREA					
		< 0.5	0.5 to .75	0.75 to 1	1 to 1.25	1.25 to 1.5	>= 1.5
Loans Originated as Percent of Applications							
Total	63.7	57.7	65.3	65.6	65.4	65.8	63.4
Hispanic	50.4	53.6	58.0	54.7	52.2	50.5	47.1
White	70.5	64.6	72.0	72.6	72.8	73.5	71.2
Black	46.9	45.8	51.7	50.2	47.7	47.5	43.8
Loans Denied as Percent of Applications							
Total	16.6	24.8	17.3	16.0	15.5	14.8	15.7
Hispanic	26.1	29.0	23.1	24.0	25.2	26.0	27.7
White	12.1	19.7	12.9	11.6	10.9	10.0	10.8
Black	30.4	34.5	28.1	28.0	29.4	29.3	32.0

Note: Sample includes conventional loans for 1- to 4-family home purchase for owner occupancy, first liens only. The total includes racial and ethnic groups not shown separately.
Source: Pew Hispanic Center tabulations of Home Mortgage Disclosure Act (HMDA) data

³⁰ Differences in denial rates are not necessarily evidence of discriminatory behavior. Denial rates may vary across groups due to differences in credit scores, loan-to-value ratios, and other financial considerations. However, research related to this issue often finds that risk factors alone are not the entire explanation for differences in lending patterns across racial and ethnic groups (for example, see [Bocian, Ernst and Li, 2006](#) and [Calem, Hershaff and Wachter, 2004](#)).

Notwithstanding higher denial rates, home loans made to Hispanics in 2007 were for larger amounts than loans made to whites. The median loan to Hispanics was \$197,000 compared with \$180,000 to whites and \$168,000 to blacks (Figure 12). Within most income categories, however, there is little difference in the amounts loaned to Hispanics and blacks. Both minority groups in each income category received larger loans than did whites in that category (Table 4).³¹

Geography helps to explain why Hispanic homebuyers borrow more on average than whites do. California, Texas, Florida, Arizona, Illinois, New York and New Jersey accounted for 70.7% of loans that originated to Hispanics in 2007, compared with 32.9% for whites. With the exception of Texas and Arizona, these states either are uniformly higher priced (such as California) or have higher-priced pockets (such as Chicago).³² Thus, the greater concentration of Latinos in higher-priced areas makes it more likely that they will borrow greater sums.

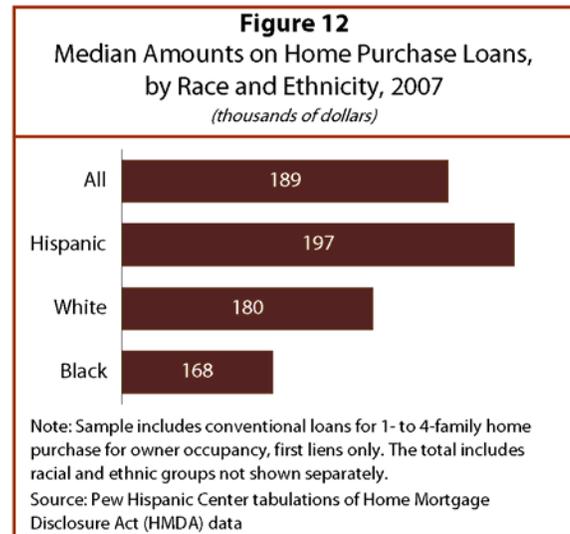


Table 4
Loan Amounts and Loan-to-Income Ratios on Home Purchase Loans, 2007

	ALL	RATIO OF INCOME TO MEDIAN INCOME IN METROPOLITAN AREA					
		< 0.5	0.5 to .75	0.75 to 1	1 to 1.25	1.25 to 1.5	>= 1.5
Median Loan Amount (thousands of dollars)							
Total	189	85	122	152	180	207	301
Hispanic	197	87	126	165	196	226	302
White	180	84	119	147	172	197	286
Black	168	86	123	155	189	223	313
Loan-to-Income Ratio							
Total	2.6	3.5	3.1	2.9	2.7	2.5	2.2
Hispanic	2.9	3.6	3.3	3.2	3.0	2.9	2.6
White	2.5	3.5	3.1	2.8	2.5	2.4	2.0
Black	2.8	3.5	3.1	2.9	2.7	2.6	2.4

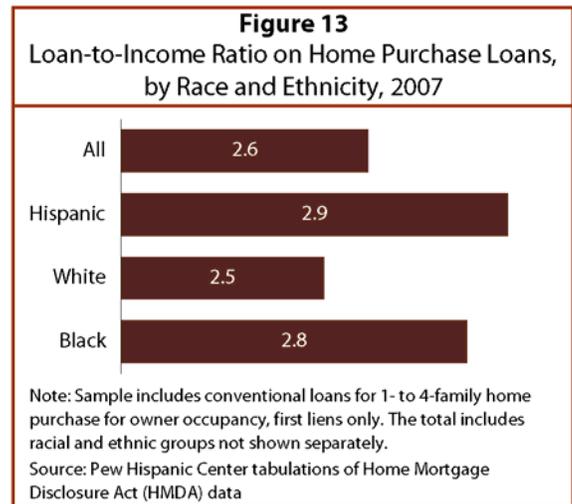
Note: Sample includes conventional loans for 1- to 4-family home purchase for owner occupancy, first liens only. The total includes racial and ethnic groups not shown separately.
 Source: Pew Hispanic Center tabulations of Home Mortgage Disclosure Act (HMDA) data

³¹ The loan amount to blacks is lower among all persons combined because blacks are more likely to be in lower income categories.

³² This statement is based on median home sale price data from the National Association of Realtors.

Another likely explanation is that minority households have fewer resources of their own to commit to a home purchase.³³ That is also one of the reasons Latino and black households are more likely to seek loans in the subprime market that require low down payment.

The result is that Hispanics and blacks who want to buy homes face greater financial exposure than whites (Figure 13). The 2007 loan-to-income ratio among Hispanics (2.9) and blacks (2.8) was higher than among whites (2.5). This was true even within individual income groups (Table 4). In fact, the loan-to-income ratio of high-income Latinos (2.6) was 30.0% higher than that of high-income whites (2.0).



3.2. Higher-Priced Loans

Changes from 2006 to 2007

Lending in the subprime market dropped at a faster rate from 2006 to 2007 than did lending in the market overall. As shown in Table 5, the number of higher-priced loans that originated in 2007 was less than half the number that originated the year before—397,373 loans in 2007, compared with 944,500 in 2006, a decrease of 57.9%. The greatest drop was among Hispanics (65.4%); the drop was 60.6% for blacks and 51.5% for whites.

As a result, the share of higher-priced loans in overall lending also fell sharply—from 25.3% in 2006 to 14.2% in 2007 (Figure 14). A potential benefit of this development is that it probably will reduce the future risk of default in the mortgage market.

The declining share of higher-priced lending is evident for all racial and ethnic groups. In 2007, 27.6% of all loans originated to Hispanics were higher priced, as were 33.5% of loans to blacks and 10.5% of loans to whites. For each group the

Table 5
Higher-Priced Loans Originated for Home Purchase, 2006 and 2007

	2006	2007	Change (%)
Total	944,500	397,373	-57.9
Hispanic	246,640	85,316	-65.4
White	422,921	204,936	-51.5
Black	166,011	65,425	-60.6

Note: Higher-priced loans have annual percentage rates that exceed the rate on U.S. Treasury securities of comparable maturity by a specified threshold (3 percentage points for first-lien loans). Sample includes conventional loans for 1- to 4-family home purchase for owner occupancy, first liens only. The total includes racial and ethnic groups not shown separately.
Source: Pew Hispanic Center tabulations of Home Mortgage Disclosure Act (HMDA) data

³³ The gap in the savings and wealth of minority and white households is well documented. See, for example, [Kochhar \(2004\)](#) and [Bucks, Kennickell, Mach and Moore \(2009\)](#).

share of higher-priced lending was greater in 2006—44.9% for Hispanics, 52.8% for blacks and 17.5% for whites.

However, minority households remain far more likely to receive a higher-priced loan than are white households. In 2007, Hispanics were about 2.5 times as likely to receive a higher-priced loan as whites, and blacks were about three times as likely. That disparity is no different from 2006.³⁴

The subprime market also does not seem to distinguish among high- and low-income minority borrowers. High-income Hispanics and blacks are about as likely to receive a higher-priced loan as are low-income Hispanics and blacks. For example, in 2007, 26.8% of loans to low-income Latinos and 26.6% of loans to high-income Latinos were higher priced (Table 6). In contrast, the share of higher-priced loan originations to whites drops rapidly with income, from 16.8% for low-income whites to 7.6% for high-income whites. Consequently, high-income Latinos and blacks are at a greater disadvantage relative to whites than are low-income Latinos and blacks.

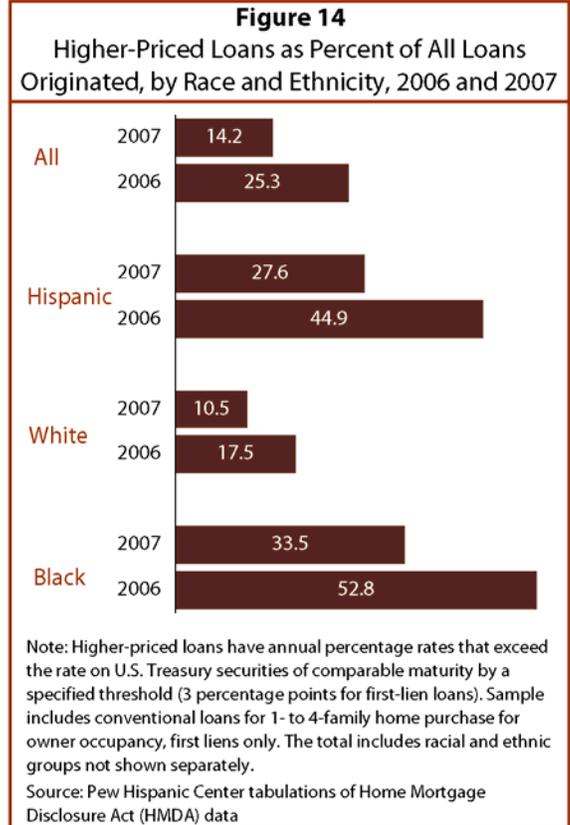


Table 6
Higher-Priced Loans as Percent of All Loans Originated, 2006 and 2007

	ALL	RATIO OF INCOME TO MEDIAN INCOME IN METROPOLITAN AREA					
		< 0.5	0.5 to .75	0.75 to 1	1 to 1.25	1.25 to 1.5	>= 1.5
2007							
Total	14.2	20.2	16.2	15.0	14.1	12.8	10.9
Hispanic	27.6	26.8	25.8	27.2	28.1	28.0	26.6
White	10.5	16.8	12.6	11.3	10.5	9.3	7.6
Black	33.5	35.5	32.4	34.0	35.1	33.8	30.6
2006							
Total	25.3	30.4	28.8	28.0	26.3	24.2	20.8
Hispanic	44.9	39.7	43.6	47.8	49.5	48.6	43.8
White	17.5	24.3	21.9	20.4	18.2	15.8	12.8
Black	52.8	55.0	56.2	56.5	55.9	53.1	48.5

Note: Higher-priced loans have annual percentage rates that exceed the rate on U.S. Treasury securities of comparable maturity by a specified threshold (3 percentage points for first-lien loans). Sample includes conventional loans for 1- to 4-family home purchase for owner occupancy, first liens only. The total includes racial and ethnic groups not shown separately.
Source: Pew Hispanic Center tabulations of Home Mortgage Disclosure Act (HMDA) data

³⁴ See [Bocian, Ernst and Li, 2006](#) for why minorities are more likely to receive subprime loans.

The Cost of Higher-Priced Loans

By definition, higher-priced loans carry an annual percentage rate that is at least 3 percentage points higher than the rate on a U.S. Treasury security of comparable maturity. The median rate spread among all higher-priced loans in 2007 was 4 percentage points (Table 7). Judging by this yardstick, the cost of higher-priced loans to Latinos and whites in 2007 were similar—a rate spread of 4.1 percentage points for Latinos compared with 3.9 percentage points for whites. This similarity extends through all income groups.

	ALL	RATIO OF INCOME TO MEDIAN INCOME IN METROPOLITAN AREA					
		< 0.5	0.5 to .75	0.75 to 1	1 to 1.25	1.25 to 1.5	>= 1.5
Total	4.0	3.9	4.0	4.1	4.2	4.2	4.1
Hispanic	4.1	3.8	3.9	4.1	4.3	4.3	4.3
White	3.9	3.7	3.8	3.9	4.1	4.0	3.9
Black	4.7	4.4	4.6	4.7	4.9	4.9	5.0

Note: Higher-priced loans have annual percentage rates that exceed the rate on U.S. Treasury securities of comparable maturity by a specified threshold (3 percentage points for first-lien loans). Sample includes conventional loans for 1- to 4-family home purchase for owner occupancy, first liens only. The total includes racial and ethnic groups not shown separately. Source: Pew Hispanic Center tabulations of Home Mortgage Disclosure Act (HMDA) data

The cost to blacks with higher-priced loans was greater than the cost to Latinos and whites. The median rate spread for blacks was 4.7 percentage points in 2007, nearly a percentage point higher than the cost to whites. The disparity is present within each income group.

However, the difference between the rate on higher-priced loans and the rate on a U.S. Treasury security is not the same as the difference between the rate on higher-priced loans and the rate on conventional mortgage loans. In 2007, the annual yield on a 30-year Treasury security averaged 4.8%. Based on the typical rate spread for black borrowers (4.7%), the annual cost of a 30-year higher-priced loan would have been about 9.5%. At the same time, the average rate on a 30-year fixed-rate conventional mortgage was 6.3%. That means that for blacks who had a higher-priced mortgage, the typical rate was about 3 percentage points greater than the rate on a typical 30-year fixed-rate conventional mortgage. Similarly, for Latinos who had a higher-priced mortgage, the typical rate was estimated to be 2.5 percentage points higher than the conventional 30-year fixed-rate mortgage in 2007.³⁵

³⁵ Data on the annual yield on a 30-year Treasury security and the rate on a 30-year fixed-rate conventional mortgage are from the Federal Reserve Bank (<http://www.federalreserve.gov/releases/h15/data.htm#top>).

Lending Relative to Borrowers' Incomes for Higher-Priced Loans

Taken relative to the incomes of borrowers, loan amounts disbursed in the high-cost segment of the mortgage market are smaller than average. Table 8 shows the loan-to-income ratio for higher-priced loans. The ratios for higher-priced loans are almost universally smaller than the ratios for all loans (see Table 4).

	ALL	RATIO OF INCOME TO MEDIAN INCOME IN METROPOLITAN AREA					
		< 0.5	0.5 to .75	0.75 to 1	1 to 1.25	1.25 to 1.5	>= 1.5
Total	2.6	3.1	2.7	2.6	2.5	2.5	2.3
Hispanic	2.8	3.2	3.0	3.0	2.9	2.9	2.6
White	2.4	3.0	2.6	2.5	2.3	2.3	2.0
Black	2.7	3.2	2.8	2.6	2.6	2.6	2.5

Note: Higher-priced loans have annual percentage rates that exceed the rate on U.S. Treasury securities of comparable maturity by a specified threshold (3 percentage points for first-lien loans). Sample includes conventional loans for 1- to 4-family home purchase for owner occupancy, first liens only. The total includes racial and ethnic groups not shown separately. Source: Pew Hispanic Center tabulations of Home Mortgage Disclosure Act (HMDA) data

The phenomenon is most pronounced among borrowers with income less than the median income in their metropolitan area of residence, regardless of their race and ethnicity. For example, among the lowest income Hispanics in 2007, the loan-to-income ratio for higher-priced loans was 3.2 (Table 8), compared with 3.6 for all loans (Table 4). Among low-income whites, the loan-to-income ratio for higher-priced loans was 3.0 (Table 8), compared with a ratio of 3.5 for all loans (Table 4).³⁶

³⁶ According to the Federal Reserve Bank of New York, nearly one-third of subprime loans in March 2009 required no or low documentation (<http://www.newyorkfed.org/regional/subprime.html>). Thus, incomes of many borrowers in the subprime market and resulting estimates of loan-to-income ratios may not be accurately stated.

4. Foreclosures in the U.S. in 2008

A foreclosed home is a visible symbol of today's housing crisis. The number of homes in the United States with at least one foreclosure filing increased from 717,522 in 2006 (0.6% of all housing units) to 2,330,483 in 2008 (1.8% of all housing units). Latest reports from RealtyTrac[®] show that the number of properties entering foreclosure continued to increase through the first quarter of 2009.³⁷ With no signs of an end to the recession, it is likely that foreclosure activity will stay at a high level into the near future.

This section focuses on the geography of foreclosures—how the rate differs across U.S. counties—and the role of demography in explaining those differences. A specific question of interest is whether the increased presence of minority or immigrant residents in a county is associated with a relatively high foreclosure rate. The question arises because several states with higher than average foreclosure rates, such as California, Nevada, Arizona and Florida, are also home to large numbers of Latinos and immigrants.

Unfortunately, the available data do not identify the race, ethnicity or nativity of owners whose homes are foreclosed upon. Thus, it is not possible to know directly whether a county's high foreclosure rate correlates to a high share of residents with above-average risks of foreclosure. Of course, foreclosure rates also depend on economic factors, such as unemployment, home price depreciation, housing affordability and the prevalence of higher-priced lending. The goal of the analysis is to discern the nature of the relationship between foreclosures and demographic factors independent of the influence of economic factors.

The analysis finds that higher shares of immigrant residents in counties are associated with higher rates of foreclosure. Local economic conditions, including unemployment rates, are also an important determinant of foreclosures. Home prices that fall, or that rise slower, are also estimated to raise foreclosure rates. Other key factors include local housing costs and a greater incidence of higher-priced lending to blacks and Hispanics.

Data from a number of sources are compiled to address the principal question of this section. Foreclosure rates by county were provided by RealtyTrac[®]. Demographic data for counties were derived from the Census Bureau's three-year file of the American Community Survey (ACS). This file combines ACS data

³⁷ All data on foreclosures are from RealtyTrac[®] (<http://www.realtytrac.com/>).

from 2005, 2006 and 2007 and was used to determine the race, ethnicity, nativity and homeownership status of householders at the county level.³⁸

With regard to economic data, local area unemployment statistics are from the Bureau of Labor Statistics (BLS) and home prices are from the Federal Housing Finance Agency (FHFA).³⁹ Home Mortgage Disclosure Act (HMDA) data are the source of information on higher-priced lending and loan-to-income ratios in U.S. counties.

4.1. Foreclosure Rates in U.S. Counties, 2008

The foreclosure crisis has distinct epicenters in the U.S. The foreclosure rate equals or exceeds the national rate in fewer than 10% of the nation's counties: 270 of 3,141 counties had a foreclosure rate of 1.8% or higher in 2008. The vast majority of those counties—207 of 270—are located in a handful of states (Map 1). California and its neighbors to the east (Arizona and Nevada) and the manufacturing belt (Ohio, Michigan, Indiana and Illinois) comprise two hot spots. Other states with high foreclosure rates are Florida, Georgia, Virginia and Colorado.

Florida and California have the most severe problem with foreclosures. The foreclosure rate in 2008 exceeded 5% in 12 counties in California and 10 in Florida (Table 9). Those counties accounted for the majority of the nation's 33 counties with a foreclosure rate of 5% or more. The highest foreclosure rate in the U.S. was 12.0% in Lee County, Fla.

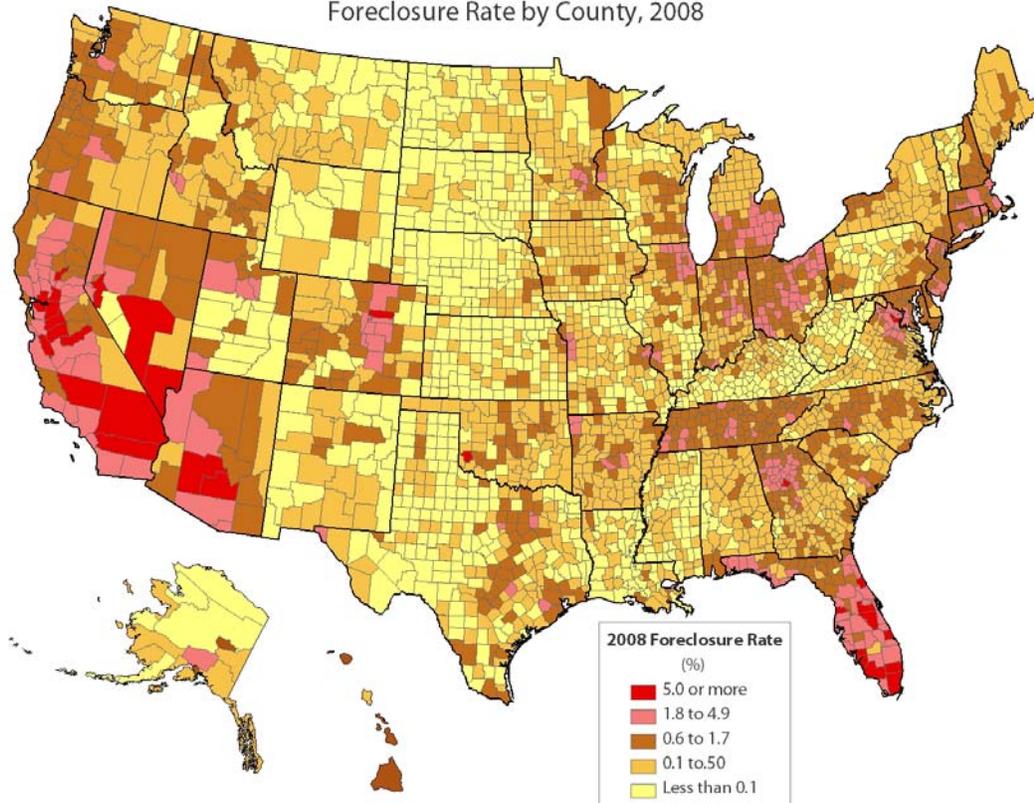
In contrast, most of the nation's counties experienced few foreclosures in 2008. In 2,164 counties, the foreclosure rate was 0.5% or less (Table 10). That total includes 382 counties in which no properties entered into foreclosure proceedings in 2008.

³⁸ The 2005-07 ACS file contains geographic identifiers for areas with populations of 100,000 or more. The boundaries of those areas, known as Public Use Microdata Areas (PUMAs), often, but not always, coincide with U.S. counties. It was possible to map PUMA data into almost all 3,141 U.S. counties using a program developed by Jeffrey S. Passel of the Pew Hispanic Center.

³⁹ The FHFA data are grouped by metropolitan statistical areas (MSAs) that were successfully mapped into 1,087 counties. Thus, any analysis in this section that utilizes FHFA data is limited to no more than that many counties.

Thus, there are two facets to the foreclosure crisis. From one point of view, it may be said the problem is moderate in most of the country. A simple average of the foreclosure rate across counties—representative of the experience in a typical county—is 0.6%. On the other hand, the national foreclosure rate in 2008—representative of the overall risk in the U.S.—was 1.8%. That is because the foreclosure crisis is most severe in more populated regions, and those areas receive greater weight in the national calculus.⁴⁰

Map 1
Foreclosure Rate by County, 2008



Note: The national foreclosure rate in 2008 was 1.8%. The simple average of foreclosure rates across U.S. counties in 2008 was 0.6%.
Source: RealtyTrac* <http://www.realtytrac.com>

⁴⁰ The national foreclosure rate of 1.8% is the ratio of all foreclosure filings in the U.S. to all housing units in the U.S. It is essentially a weighted average of foreclosure rates in counties where the weights are the number of housing units in a county.

Rank	State	County	Foreclosure Rate (%)
United States			1.8
Average across all U.S. counties			0.6
1	Florida	Lee	12.0
2	Virginia	Manassas City	11.1
3	California	Merced	10.2
4	Florida	Osceola	9.6
5	California	San Joaquin	9.5
6	Nevada	Clark	8.9
7	California	Stanislaus	8.7
8	Florida	Saint Lucie	8.6
9	California	Riverside	8.4
10	Virginia	Prince William	7.8
11	Nevada	Lyon	7.7
12	California	San Bernardino	7.5
13	Arizona	Pinal	7.0
14	California	Solano	6.5
15	California	San Benito	6.4
16	California	Kern	6.2
17	California	Sacramento	6.0
18	Florida	Broward	5.9
19	Arizona	Maricopa	5.9
20	California	Yuba	5.9
21	California	Madera	5.9
22	Virginia	Fairfax City	5.9
23	Florida	Orange	5.8
24	Florida	Flagler	5.7
25	Florida	Charlotte	5.7
26	Nevada	Nye	5.6
27	Georgia	Henry	5.6
28	California	Contra Costa	5.5
29	Oklahoma	Greer	5.3
30	Florida	Miami-Dade	5.2
31	Florida	Hernando	5.0
32	Colorado	Adams	5.0
33	Florida	Collier	5.0

Source: RealtyTrac® <http://www.realtytrac.com>

Foreclosure Rate	Number of Counties
5.0 or more	33
1.8 to 4.9	237
0.6 to 1.7	707
0.1 to 0.5	1,268
Less than 0.1	896

Note: The national foreclosure rate in 2008 was 1.8%. The simple average of the foreclosure rate across U.S. counties in 2008 was 0.6%.

Source: RealtyTrac® <http://www.realtytrac.com>

4.2. Explaining Differences in Foreclosure Rates across Counties

The foreclosure rate in a county may be high for any number of reasons. A weak economy may raise unemployment, making it harder for some to make mortgage payments. Falling home prices may turn home equity negative, giving homeowners an incentive to default on their loan. Other owners may simply fail to keep up with payments because high home prices or the terms of their loan pushed their debt into unsustainable levels.⁴¹

The minority or immigrant status of homeowners in a county may also determine the risk of loan default and foreclosure. The income and employment status of those households may be more volatile than average ([Freeman and Rodgers, 2005](#); [Council of Economic Advisers, 1999](#)). Minority and immigrant households are also known to have only a fraction of the assets owned by white households, leaving them more vulnerable to economic shock ([Kochhar, 2004](#)). Participation in financial markets is also more limited among immigrants than among the general population ([Osili and Paulson, 2006](#)). Therefore, the demographic makeup of a county may be related to foreclosure risk independent of general economic conditions.

Demographic and economic factors would not explain differences in foreclosure rates across counties if they uniformly characterized all counties. For instance, if home prices decreased by 5% in all counties last year, then home price deflation could not be a factor in explaining differences in the foreclosure rate across counties.⁴²

But there are large differences across areas on most measures. The unemployment rate in 2008 was as low as 1.2% in Slope County, N.D., and as high as 22.9% in Imperial County, Calif. The share of foreign-born residents in a county's population varies from less than 0.5% in places such as Jackson County, Ohio, to 60.7% in Miami-Dade County, Fla. Similarly, the share of Latinos in county populations ranges from less than 1% in places including Kennebec County, Maine, to 93.0% in Webb County, Texas.

Moreover, several states with large numbers of Hispanics and immigrants or states that are new destinations for these groups are home to numerous counties with relatively high foreclosure rates. California, Florida, Arizona, Nevada and New Jersey are prominent in this regard. These five states accounted for 47.2% of the U.S. Hispanic population in 2007, compared with 24.1% of the overall population. Also, the vast majority of counties in these states—157 of 178—had

⁴¹ [Dyan and Kohn \(2007\)](#) documents the rapid increase of the debt-to-income ratio among homeowners.

⁴² Note that home price depreciation would still be a factor in the rise in the foreclosure rate over time.

foreclosure rates higher than 0.6%, the simple average of the rate across all U.S. counties.

This study uses a multivariate regression model⁴³ to determine how the variation in foreclosure rates across counties in 2008 is associated with each of the following factors: the share of the population in the county that is minority or foreign born; the homeownership rate in the county among minority and immigrant populations; the county unemployment rate in 2008; the change in home prices from 2005 to 2007; the average home purchase loan-to-income ratio in the county in 2006 (a measure of housing affordability); and the share of home purchase loans to Latinos, blacks and whites that were higher priced in 2006.⁴⁴ The analysis encompasses about 1,000 counties for which data on all variables were available.⁴⁵ The limiting factor was the availability of data on home prices.

Tables A1 to A4 in Appendix A show how those factors appear in the 33 counties whose foreclosure rate in 2008 exceeded 5%. The concentration of immigrants and Latinos in these counties is generally above average. For example, 22.9% of the householder population in Clark County, Nev., is foreign born (Hispanic and non-Hispanic), compared with 4.7% in the average county and 13.2% in the nation. The homeownership rate among immigrants and Latinos is also above average in these counties. Thus, if default risk is elevated in minority and immigrant populations in these counties, it transmits with greater force into the foreclosure rate.

The unemployment rate in the 33 counties is also relatively high. The rate in four California counties—Merced, Yuba, Stanislaus and San Joaquin—exceeded 10% in 2008. The change in home prices from 2005 to 2007 was negative in the majority of counties in the table, including in the 12 California counties. Housing affordability was an issue, as the loan-to-income ratio was 3.0 or greater in 19 counties. Similarly, higher-priced lending to Latinos and blacks was more prevalent in these counties than average.

The regression analysis finds a statistically significant relationship between the foreclosure rate in a county and the following demographic and economic attributes: the immigrant share of the population; the immigrant homeownership rate; the native-born Hispanic homeownership rate; the unemployment rate; the

⁴³ A multivariate regression model is a statistical technique that can be used to determine the importance of each of a number of independent variables in predicting a phenomenon of interest—in this case, the foreclosure rate in a county.

⁴⁴ Homeownership rates and population shares of minority and immigrant groups are from the 2005-07 ACS file. Housing affordability and higher priced loan data from 2006, not 2007, are used because research indicates these factors take some time to increased default risk ([Schloemer, Li, Ernst and Keest, 2006](#)).

⁴⁵ The exact number of counties in a regression depends on the variant of the model that is estimated.

change in home prices; the average loan-to-income ratio; the percent of home purchase loans to Hispanics that are higher priced; and the percent of home purchase loans to blacks that are higher priced.⁴⁶

In general terms, higher shares of immigrant residents in counties are found to be associated with higher rates of foreclosure. Unemployment rates that are higher than average and home price appreciation that is lower than average are also related to higher rates of foreclosure. Other factors linked to higher rates of foreclosure are higher rates of homeownership among immigrants and minorities; high cost of housing; and a greater incidence of higher-priced lending to blacks and Hispanics.

Table 11 shows how a specific change in a county characteristic is related to the foreclosure rate. The first column of data in Table 11 is the simple average of a variable across U.S. counties. For example, the simple average of the unemployment rate in U.S. counties in 2008 is 5.7%.⁴⁷ The second column of data contains mean values for the same variables in a hypothetical county. The unemployment rate in the hypothetical county is assumed to be 6.7%, or 1 percentage point higher than the rate in a typical county. Similarly, the loan-to-income ratio in the hypothetical county is assumed to be 3.2 instead of the typical ratio of 2.2, and so on for the other variables.

The final column of data in Table 11 shows the change in the foreclosure rate associated with the assumed change in a demographic or economic attribute. The notable findings are as follows:

- A 10 percentage point increase in the immigrant share of the population is associated with an increase of 0.6 percentage points in the foreclosure rate.
- An unemployment rate that is 1 percentage point higher is estimated to increase foreclosure rates by 0.1 percentage points.
- A 5 percentage point reduction in the rise of home prices from 2005 to 2007, or slightly more than a 2 point reduction annually, is associated with a foreclosure rate increase of 0.1 percentage points.
- A 1 point increase in the loan-to-income ratio is predicted to raise the foreclosure rate by nearly 1 percentage point.

⁴⁶ Detailed results from the regression analysis are presented in Appendix Tables A4 and A5. Additional results from the estimation of alternative models are available upon request.

⁴⁷ These mean values represent the “typical” U.S. county and may or may not equal the value for the nation. The national unemployment rate, for example, was 5.8% in 2008, higher than the simple average of the unemployment rates across counties. Averages are taken across the number of counties for which data were available. Home price data were available for about 1,000 counties, and data on the other attributes were available for about 3,000 counties.

- If Hispanic and black homebuyers in a county are more likely to have higher-priced loans, the county is likely to experience higher foreclosure rates. However, the association of higher-priced lending with foreclosure rates across counties appears to be not as strong as other factors listed above.⁴⁸
- The estimates show that higher homeownership rates among immigrants and native-born Hispanics are associated with a higher foreclosure rate in a county. That is because a higher homeownership rate translates into a larger pool of owners with potential risk of foreclosure.

	Average U.S. County	Hypothetical County	Change in Characteristic	Change in Foreclosure Rate
Foreign-born share of population (%)	4.7	14.7	10.0	0.63
Unemployment rate (%)	5.7	6.7	1.0	0.12
Change in home prices, 2005-07 (%)	13.2	8.2	-5.0	0.15
Loan-to-income ratio	2.2	3.2	1.0	0.95
Higher-priced loans (% of all loans)				
Hispanics	30.7	40.7	10.0	0.05
Blacks	31.8	41.8	10.0	0.04
Homeownership rate (%)				
Native-born Hispanics	55.1	65.1	10.0	0.03
Foreign born (all)	58.0	68.0	10.0	0.11

Note: Except for the loan-to-income ratio, all changes are expressed in percentage points. The characteristics of the average U.S. county are the simple averages of characteristics across all U.S. counties for which data were available. Sources: Pew Hispanic Center analysis of data from Bureau of Labor Statistics (BLS), Federal Housing Finance Agency (FHFA), Home Mortgage Disclosure Act (HMDA) and RealtyTrac® 2008 <http://www.realtytrack.com>

The statistical model contributes to an understanding of why foreclosure rates are high in several counties. Tables 12 and 13 compare two counties—Miami-Dade, Fla., and Sacramento, Calif.—with the average U.S. county. The foreclosure rates in those two counties were high—5.2% in Miami-Dade and 6.0% in Sacramento—compared with 0.6% in the average county. The analysis in these tables, which repeats the exercise from Table 11, shows that different factors contributed to the high rates of foreclosures in Miami-Dade and Sacramento.

⁴⁸ This should not be taken to mean that higher-priced lending played a limited role in the increase in the national foreclosure rate from 2006 to 2008.

Table 12
The Gap in the Foreclosure Rate between Miami-Dade, Fla., and the Average U.S. County that Is Associated with Differences in Selected Characteristics

	Average U.S. County	Miami-Dade, Fla.	Difference in Characteristic	Gap in Foreclosure Rate
Foreclosure rate (%)	0.6	5.2		
Foreign-born share of population (%)	4.7	60.7	56.0	3.52
Unemployment rate (%)	5.7	5.1	-0.6	-0.07
Change in home prices, 2005-07 (%)	13.2	44.2	31.0	-0.92
Loan-to-income ratio	2.2	2.6	0.4	0.42
Higher-priced loans (% of all loans)				
Hispanics	30.7	52.3	21.7	0.11
Blacks	31.8	61.3	29.5	0.11
Homeownership rate (%)				
Native-born Hispanics	55.1	62.9	7.7	0.02
Foreign born (all)	58.0	57.4	-0.6	-0.01
Total	---	---	---	3.19

Note: Except for the loan-to-income ratio, all changes are expressed in percentage points. The characteristics of the average U.S. county are the simple averages of characteristics across all U.S. counties for which data were available. Sources: Pew Hispanic Center analysis of data from Bureau of Labor Statistics (BLS), Federal Housing Finance Agency (FHFA), Home Mortgage Disclosure Act (HMDA) and RealtyTrac® 2008 <http://www.realtytrack.com>

Table 13
The Gap in the Foreclosure Rate between Sacramento, Calif., and the Average U.S. County that Is Associated with Differences in Selected Characteristics

	Average U.S. County	Sacramento, Calif.	Difference in Characteristic	Gap in Foreclosure Rate
Foreclosure rate (%)	0.6	6.0		
Foreign-born share of population (%)	4.7	20.5	15.8	1.00
Unemployment rate (%)	5.7	7.1	1.3	0.16
Change in home prices, 2005-07 (%)	13.2	-44.2	-57.4	1.70
Loan-to-income ratio	2.2	3.3	1.1	1.00
Higher-priced loans (% of all loans)				
Hispanics	30.7	51.4	20.7	0.10
Blacks	31.8	56.3	24.4	0.09
Homeownership rate (%)				
Native-born Hispanics	55.1	53.4	-1.8	-0.01
Foreign born (all)	58.0	59.0	1.0	0.01
Total	---	---	---	4.06

Note: Except for the loan-to-income ratio, all changes are expressed in percentage points. The characteristics of the average U.S. county are the simple averages of characteristics across all U.S. counties for which data were available. Sources: Pew Hispanic Center analysis of data from Bureau of Labor Statistics (BLS), Federal Housing Finance Agency (FHFA), Home Mortgage Disclosure Act (HMDA) and RealtyTrac® 2008 <http://www.realtytrack.com>

The main factors associated with the high rate of foreclosure in Miami-Dade are demographic. The foreclosure rate in Miami-Dade was 4.6 percentage points higher than average. The factors listed in Table 12 account for 3.2 percentage points of the difference. The single largest contributing factor is the share of the immigrant population—60.7% in Miami-Dade compared with 4.7% in the typical U.S. county. That gap in the share of the immigrant population is associated with a 3.5 percentage point difference in the foreclosure rate, about three-quarters of the total difference in the foreclosure rates in Miami-Dade and the average county.

In contrast, economic variables are among the major factors associated with the high rate of foreclosure in Sacramento. The foreclosure rate in Sacramento was 5.4 percentage points higher than average, and the factors listed in Table 13 account for 4.1 percentage points of the difference. The high cost of housing in Sacramento, relative to income, and a recent plunge in home prices are most directly related to the high foreclosure rate in the county. Those two factors collectively account for 2.7 percentage points, or half, of the total 5.4 percentage point difference between Sacramento and the average county.

Overall, the statistical model points to some, but not all, of the reasons that foreclosure rates in some counties may be higher than in others. Some indicators in the model may not necessarily send the perfect signal. For example, a local economic shock may cause some people to lose their jobs and place their properties in foreclosure. But if they choose to leave the county, the unemployment rate in the county, measured only among current residents, may not increase. Thus, the measured unemployment rate will fail to reflect the underlying economic reason for foreclosures in that county.

Another factor in the model—higher-priced lending activity in 2006—may not yet have had its fullest impact. Research shows that it takes about five years into the term of subprime loans for foreclosure activity to near a peak ([Schloemer, Li, Ernst and Keest, 2006](#)). For example, the true cost of many subprime loans is not felt until initially low teaser rates expire some years into their terms.

Of the several demographic attributes included in the analysis, the immigrant share of the county population is the one that emerges as the most important correlate with the foreclosure rate. And within the immigrant population, the share of foreign-born Latinos stands out as a more notable influence than the share of non-Hispanic immigrants (Appendix Table A5). This may mean exactly what it appears to be—the foreclosure rate among the immigrant population, especially immigrant Latinos, is higher than average.

However, it is also possible that the presence of immigrants serves merely as a stand-in for underlying circumstances not otherwise captured in the data. In recent

years, the construction boom attracted immigrants in large numbers into new settlements in the U.S. ([Kochhar, Suro and Tafoya, 2005](#); [Frey, Berube, Singer and Wilson, 2009](#)) Many of these areas, such as those surrounding Las Vegas and Atlanta are now witnessing sharp reversals in construction and high rates of foreclosures. The increased presence of immigrants in an area may simply signal the effects of a boom-and-bust cycle that has raised foreclosure rates for all residents there. Thus, it is not possible to affirm that immigration levels in and of themselves raise foreclosure rates.⁴⁹

⁴⁹ Likewise, it should not be inferred that immigration is a factor in the increase in the foreclosure rate from 0.6% in 2006 to 1.8% in 2008. The share of the U.S. householder population that is foreign born increased from 13.2% in 2006 to 13.6% in 2008. That is too small a change to have contributed to the sharp, short-term rise in the foreclosure rate.

Appendix A: Data Tables

Rank	State	County	Home Purchase Loan-to- Income Ratio, 2006	Higher-Priced Loans, 2006 (% of All Home Purchase Loans)			Home Price Change, 2005 - 07 (%)	Unemployment Rate, 2008 (%)
				Hispanic	Black	White		
United States			2.7	44.9	52.8	17.5	6.0	5.8
Average across all U.S. counties			2.2	30.7	31.8	26.3	13.2	5.7
1	Florida	Lee	2.8	64.6	65.0	28.2	-31.6	7.9
2	Virginia	Manassas City	3.2	50.9	58.6	15.8	5.2	4.2
3	California	Merced	3.2	50.0	49.1	30.1	-62.0	12.2
4	Florida	Osceola	3.0	52.4	50.9	29.7	19.1	6.1
5	California	San Joaquin	3.2	52.1	58.8	26.7	-52.8	10.2
6	Nevada	Clark	3.1	48.2	46.6	22.1	-4.0	6.5
7	California	Stanislaus	3.1	51.0	59.2	27.3	-51.4	11.0
8	Florida	Saint Lucie	2.7	55.6	60.5	29.3	-40.9	8.4
9	California	Riverside	3.0	49.4	54.1	23.0	-4.4	8.5
10	Virginia	Prince William	3.6	46.6	35.1	10.9	5.2	3.4
11	Nevada	Lyon	3.1	42.3	53.8	23.3	--	9.1
12	California	San Bernardino	3.1	54.4	60.6	29.0	-4.4	7.8
13	Arizona	Pinal	3.1	46.2	41.4	24.3	10.7	6.4
14	California	Solano	3.3	51.5	58.5	21.7	-34.5	6.9
15	California	San Benito	3.3	48.5	0.0	16.9	-1.2	9.4
16	California	Kern	2.8	48.4	55.5	23.7	-4.3	9.8
17	California	Sacramento	3.3	51.4	56.3	21.3	-44.2	7.1
18	Florida	Broward	2.7	50.1	62.0	27.2	-2.1	5.2
19	Arizona	Maricopa	3.1	57.6	43.3	19.5	10.7	4.3
20	California	Yuba	3.1	42.1	54.5	25.8	-42.2	12.0
21	California	Madera	3.1	48.4	44.2	22.9	-4.5	9.5
22	Virginia	Fairfax City	3.1	37.3	33.3	7.9	5.2	3.4
23	Florida	Orange	2.9	48.5	54.7	19.7	19.1	5.5
24	Florida	Flagler	2.8	43.7	52.7	25.8	--	9.2
25	Florida	Charlotte	2.7	62.1	44.9	25.9	-36.0	8.1
26	Nevada	Nye	2.7	59.5	58.8	36.8	--	9.0
27	Georgia	Henry	2.7	36.0	39.3	17.3	9.6	5.8
28	California	Contra Costa	3.3	49.3	51.4	14.2	-25.9	6.2
29	Oklahoma	Greer	1.3	100.0	0.0	60.0	--	4.5
30	Florida	Miami-Dade	2.6	52.3	61.3	30.9	44.2	5.1
31	Florida	Hernando	2.6	48.7	42.6	27.2	11.0	8.1
32	Colorado	Adams	2.9	50.0	53.8	22.4	0.0	5.6
33	Florida	Collier	2.9	60.0	61.1	18.2	-21.7	6.6

Note: The unemployment rate is an average of monthly unemployment rates from January through November of 2008. The change in home prices is calculated using the House Price Index (HPI) of the fourth quarters of 2005 and 2007.

Source: Pew Hispanic Center analysis of Home Mortgage Disclosure Act (HMDA) data, Bureau of Labor Statistics (BLS) unemployment data, and Federal Housing Finance Agency (FHFA), House Price Index.

Table A2
Homeownership Rate in Counties with a Foreclosure Rate of 5% or More in 2008, by Race, Ethnicity and Nativity, 2005-07
(%)

Rank	State	County	Native Born					Foreign Born		
			All	Hispanic	White	Black	Other	All	Hispanic	Non-Hispanic
United States			69.3	53.0	74.3	46.6	57.6	54.0	46.4	59.8
Average across all U.S. counties			72.7	55.1	75.5	50.8	61.2	58.0	46.6	66.1
1	Florida	Lee	76.4	60.5	79.0	42.6	70.8	59.1	47.5	70.3
2	Virginia	Manassas City	74.3	70.7	79.2	57.8	65.8	75.9	68.0	84.6
3	California	Merced	59.4	47.1	67.3	40.6	55.1	52.9	49.2	64.0
4	Florida	Osceola	69.8	61.0	75.8	49.1	54.3	65.9	63.1	69.0
5	California	San Joaquin	64.6	59.6	69.3	43.2	66.0	59.7	53.6	66.5
6	Nevada	Clark	59.7	49.4	64.9	35.9	55.2	58.1	49.7	68.6
7	California	Stanislaus	65.0	56.8	68.0	51.1	58.3	59.5	59.1	60.2
8	Florida	Saint Lucie	77.0	67.3	81.1	51.0	63.1	72.2	63.6	77.7
9	California	Riverside	71.0	63.3	74.9	54.1	67.7	65.5	61.8	73.9
10	Virginia	Prince William	74.3	70.7	79.2	57.8	65.8	75.9	68.0	84.6
11	Nevada	Lyon	72.1	68.8	72.9	22.3	64.7	60.8	57.7	63.6
12	California	San Bernardino	65.7	62.5	71.2	44.4	60.6	65.5	63.2	71.3
13	Arizona	Pinal	76.3	68.2	80.5	57.1	51.6	72.8	69.8	81.9
14	California	Solano	66.6	62.0	71.2	53.5	62.9	66.3	54.2	73.4
15	California	San Benito	59.2	47.6	64.5	30.5	56.7	49.3	44.9	60.4
16	California	Kern	63.5	54.8	68.8	40.6	58.3	57.1	54.9	67.0
17	California	Sacramento	61.6	53.3	66.6	39.8	57.9	59.0	52.4	62.0
18	Florida	Broward	72.9	65.2	78.4	49.4	64.2	67.6	66.0	68.6
19	Arizona	Maricopa	70.9	60.2	74.8	42.1	45.7	55.9	48.1	70.6
20	California	Yuba	61.9	56.9	63.3	55.2	55.7	59.7	52.1	69.5
21	California	Madera	66.4	57.0	71.2	48.5	60.7	53.2	49.5	70.3
22	Virginia	Fairfax City	77.8	63.4	81.4	52.6	68.5	66.5	57.2	69.6
23	Florida	Orange	61.4	50.3	69.8	37.8	53.3	59.8	50.7	65.4
24	Florida	Flagler	76.1	63.0	79.7	56.9	68.2	73.8	49.2	82.8
25	Florida	Charlotte	83.3	83.4	83.9	77.8	50.8	83.8	81.2	84.4
26	Nevada	Nye	72.1	67.8	72.9	76.5	64.2	63.3	60.3	70.7
27	Georgia	Henry	81.5	58.7	85.7	71.7	71.0	81.8	72.3	85.5
28	California	Contra Costa	72.0	66.8	77.0	45.8	69.9	70.1	61.8	75.1
29	Oklahoma	Greer	65.2	36.5	68.8	38.5	44.3	60.4	54.4	77.4
30	Florida	Miami-Dade	64.2	62.9	74.5	46.6	56.0	57.4	56.7	60.0
31	Florida	Hernando	86.5	77.4	87.6	80.4	60.3	80.8	68.0	84.4
32	Colorado	Adams	73.5	57.7	76.6	47.1	60.2	59.3	47.5	70.0
33	Florida	Collier	80.6	69.0	81.8	48.1	72.0	57.5	47.9	70.9

Source: Pew Hispanic Center tabulations of the American Community Survey (ACS) 2005-07 three-year file.

Table A3
Distribution of Household Heads in Counties with a Foreclosure Rate of 5% or More in 2008,
by Race, Ethnicity and Nativity, 2005-07
(%)

Rank	State	County	Native Born				Foreign Born		
			All	Hispanic	White	Black	All	Hispanic	Non-Hispanic
United States			86.8	4.9	69.0	10.5	13.2	5.8	7.4
Average across all U.S. counties			95.3	3.4	81.2	8.0	4.7	2.5	2.2
1	Florida	Lee	85.1	4.3	76.3	3.7	14.9	7.3	7.5
2	Virginia	Manassas City	77.1	3.1	56.9	15.1	22.9	12.0	10.8
3	California	Merced	67.8	18.8	41.4	4.3	32.2	24.1	8.0
4	Florida	Osceola	76.4	21.8	49.4	4.1	23.6	12.3	11.3
5	California	San Joaquin	72.9	13.5	47.0	7.4	27.1	14.4	12.7
6	Nevada	Clark	77.1	6.9	57.6	8.9	22.9	12.8	10.1
7	California	Stanislaus	76.5	13.6	57.2	2.7	23.5	15.3	8.2
8	Florida	Saint Lucie	83.5	4.0	69.6	9.1	16.5	6.4	10.1
9	California	Riverside	73.6	13.0	52.0	5.5	26.4	18.4	8.0
10	Virginia	Prince William	77.1	3.1	56.9	15.1	22.9	12.0	10.8
11	Nevada	Lyon	92.7	4.4	84.4	0.4	7.3	3.5	3.8
12	California	San Bernardino	72.8	16.7	44.7	8.3	27.2	19.4	7.8
13	Arizona	Pinal	90.1	13.3	68.8	1.7	9.9	7.4	2.5
14	California	Solano	78.8	8.1	50.9	13.8	21.2	7.8	13.4
15	California	San Benito	68.7	14.0	47.8	2.8	31.3	22.5	8.8
16	California	Kern	76.1	16.1	52.0	5.1	23.9	19.5	4.4
17	California	Sacramento	79.5	8.2	56.3	8.7	20.5	6.5	14.0
18	Florida	Broward	67.2	6.2	50.6	9.3	32.8	12.3	20.5
19	Arizona	Maricopa	82.4	9.1	67.3	3.5	17.6	11.5	6.1
20	California	Yuba	82.4	7.7	66.2	1.8	17.6	9.9	7.8
21	California	Madera	75.9	18.1	51.7	3.6	24.1	19.8	4.3
22	Virginia	Fairfax City	71.5	2.2	60.6	6.7	28.5	7.1	21.4
23	Florida	Orange	79.7	12.4	53.3	12.7	20.3	7.7	12.6
24	Florida	Flagler	90.2	3.8	73.7	10.7	9.8	2.6	7.1
25	Florida	Charlotte	88.9	1.6	84.7	1.4	11.1	2.3	8.8
26	Nevada	Nye	90.7	4.3	79.8	0.7	9.3	6.6	2.7
27	Georgia	Henry	92.9	1.5	66.6	22.9	7.1	2.0	5.2
28	California	Contra Costa	75.1	6.2	54.8	8.9	24.9	9.4	15.5
29	Oklahoma	Greer	95.4	5.3	83.7	2.7	4.6	3.4	1.2
30	Florida	Miami-Dade	39.3	11.0	18.3	9.5	60.7	48.7	12.0
31	Florida	Hernando	92.4	4.3	83.9	2.9	7.6	1.7	5.9
32	Colorado	Adams	89.1	8.0	76.1	2.7	10.9	5.2	5.7
33	Florida	Collier	78.7	3.2	73.6	1.4	21.3	12.4	8.9

Source: Pew Hispanic Center tabulations of the American Community Survey (ACS) 2005-07 three-year file.

Table A4
County Foreclosure Rate in 2008 Regressed
on County Characteristics: Model 1

(Number of counties = 1,077; R-squared = 0.49)

Characteristic	Coefficient	Std. Error
Unemployment rate, 2008	0.1208 *	0.0297
% Change in home prices, 2005-07	-0.0296 *	0.0035
% Higher-priced loans, 2006		
Hispanic	0.0050 *	0.0012
Black	0.0036 *	0.0011
White	0.0092 *	0.0046
Loan amount as % of income, 2006	0.0095 *	0.0011
Homeownership rate, 2005-07		
Native-born Hispanic	0.0029 *	0.0014
Native-born white	0.0026	0.0091
Native-born black	0.0029	0.0020
Other native born	0.0016	0.0025
All foreign born	0.0115 *	0.0023
% of household heads, 2005-07		
Native-born Hispanic	0.0137	0.0146
Native-born white	0.0068	0.0120
Native-born black	0.0122	0.0121
All foreign born	0.0629 *	0.0156
Intercept	-4.3539 *	1.3185

* Indicates significance at the 95% confidence level.

Table A5
County Foreclosure Rate in 2008 Regressed
on County Characteristics: Model 2

(Number of counties = 1,067; R-squared = 0.49)

Characteristic	Coefficient	Std. Error
Unemployment rate, 2008	0.1003 *	0.0315
% Change in home prices, 2005-07	-0.0309 *	0.0037
% Higher-priced loans, 2006		
Hispanic	0.0052 *	0.0012
Black	0.0040 *	0.0011
White	0.0059	0.0048
Loan amount as % of income, 2006	0.0097 *	0.0011
Homeownership rate, 2005-07		
Native-born Hispanic	0.0027 *	0.0014
Native-born white	-0.0004	0.0092
Native-born black	0.0023	0.0020
Other native born	0.0016	0.0026
Foreign-born Hispanic	0.0037 *	0.0013
Foreign-born non-Hispanic	0.0089 *	0.0020
% of household heads, 2005-07		
Native-born Hispanic	0.0055	0.0143
Native-born white	0.0069	0.0113
Native-born black	0.0128	0.0114
Foreign-born Hispanic	0.0829 *	0.0177
Foreign-born non-Hispanic	0.0417 *	0.0197
Intercept	-4.0237 *	1.2452

* Indicates significance at the 95% confidence level.

Appendix B: Data Sources and Methodology

This report uses data from a number of sources. Trends in homeownership are based on the analysis of Current Population Survey (CPS) data. The analysis of higher-priced loans utilizes data collected under the Home Mortgage Disclosure Act (HMDA). Foreclosure rates for the nation and U.S. counties were provided by RealtyTrac[®]. The statistical model that examines the relationship between foreclosure rates and the demographic and economic characteristics of counties combines data from RealtyTrac[®], the American Community Survey (ACS), HMDA, the Bureau of Labor Statistics (BLS) and the Federal Housing Finance Agency (FHFA).

Homeownership

The CPS is a monthly survey of approximately 55,000 households conducted by the U.S. Census Bureau for the Bureau of Labor Statistics. The homeownership status of the householder is noted in the survey each month. However, the microdata files released for public use by the Census Bureau do not contain that information. The Census Bureau instead releases the homeownership data on its website a few months after the fact. The Pew Hispanic Center collected the monthly homeownership data from January 1995 to June 2008 and appended those to the CPS public use microdata files.

The study reports trends in homeownership on an annual basis. Those are derived by combining the 12 monthly CPS files into a single annual file. The CPS sample design calls for a household to be interviewed for two periods of four consecutive months separated by a gap of eight months. This means that there can be multiple records for the same household within any calendar year. To avoid the duplication of records within an annual file, only the records of households in their fourth and eighth month of interviews were retained in the sample (in the terminology of the CPS, the annual file consists of outgoing rotation months only).

The typical annual CPS file constructed in that manner consisted of about 160,000 households. There are two notable exceptions. The homeownership variable was not available for the months of March 2001 and December 2003; therefore, the annual files for 2001 and 2003 are 11-month files consisting of about 150,000 households each. Also, the estimates for 2008 are based on a six-month file, from January through June, of about 81,000 households.

Information on people's nativity was not collected on a regular basis in the CPS until 1995. Therefore, the analysis in this study begins in 1995. There have been several revisions of the CPS since 1995, but they are not believed to have had an impact on the principal variable of interest—homeownership. One study ([Masnick, McArdle and Belsky, 1999](#)) suggests that revisions made to the CPS in

1994 affect the comparability of homeownership data from 1994 onwards with earlier years. In particular, the study argues that measured increases in homeownership between 1993 and 1996 are exaggerated by revisions of the CPS. That is not an issue for this study because the analysis begins in 1995.

Higher-Priced Loans

Data on the number and characteristics of higher-priced loans are from the Home Mortgage Disclosure Act. The data, tabulations from the data and additional information are available at <http://www.ffiec.gov/hmda/>. Under the terms of the act, mortgage lenders in metropolitan areas report information on their lending activity and major characteristics of the borrowers to the U.S. government. HMDA data encompass about 80% of all home-related lending in the U.S.

The 2007 HMDA data contain information on more than 21 million applications for home loans. Those consist of applications for home purchase (about 7 million), refinance (about 12 million) and home improvement (about 2 million).

This study is limited to conventional home purchase loans for owner-occupancy of one- to four-family homes, first liens only. Also, loans that are missing an applicant's gender, ethnicity or other key information are excluded. That limits the sample to about 4 million loan applications and 3 million loan originations.

HMDA data for 2006 were used in the analysis of differences in foreclosure rates across U.S. counties. Loan data were grouped by county to compute the following two variables: the county average of the loan amount as a percent of income and the percent of higher-priced loans to Hispanics, blacks and whites in a county.

Foreclosure Rates and the Characteristics of U.S. Counties

Data on foreclosure rates in U.S. counties were provided by RealtyTrac[®] (<http://www.realtytrac.com>). Those data were available for all 3,141 U.S. counties. Data from other sources were matched to the foreclosure data to analyze the relationship between foreclosure rates and counties' economic and demographic characteristics.

Demographic characteristics of U.S. counties were tabulated from the American Community Survey, Public Use Microdata Sample, 2005-07. That file is a three-year sample of the ACS consisting of about 3.5 million household records and describes the average characteristics of the U.S. population from 2005 to 2007.

The ACS includes geographic identifiers for areas with populations of 100,000 or more, known as Public Use Microdata Areas (PUMAs). Using a program developed by Jeffrey S. Passel of the Center, it was possible to map data for PUMAs into 3,140 counties. When a PUMA was matched into a group of counties, the same characteristics were assigned to all counties within the PUMA.

The specific demographic characteristics of counties computed from the ACS file were as follows: the race, ethnicity and nativity of the householder population in a county; the homeownership rate by the race, ethnicity and nativity of householders in a county; the race, ethnicity and nativity of homeowners in a county; and the race, ethnicity and nativity of mortgage holders in a county.

The unemployment rate in a county was determined from the local area unemployment database of the Bureau of Labor Statistics (<http://www.bls.gov/lau>). The county unemployment rate used in the statistical models is an average of the monthly, nonseasonally adjusted, unemployment rates from January through November of 2008.

Home price appreciation, or depreciation, in a county is measured by the change in the House Price Index (HPI) from the fourth quarter of 2005 to the fourth quarter of 2007. The HPI is estimated by the Federal Housing Finance Agency (FHFA; <http://www.fhfa.gov/>) for all metropolitan statistical areas (MSAs) in the U.S. MSA-level estimates were assigned to all counties within a specific MSA. As a result, HPI estimates for a total of 1,086 metropolitan counties were obtained for the analysis of differences in foreclosure rates across counties.

The estimates presented in the study, specifically in Tables A4 and A5, are representative of the results obtained from a number of different statistical models. One variant that was estimated excluded counties from California, Florida, Arizona and Nevada from the sample. That resulted in a somewhat weaker, but still statistically significant, relationship between foreclosure rates and the shares of immigrants in a county's population. Another variant included higher-priced loans for both home purchase and refinance in the analysis. There was no notable change in the resulting estimates.

In other variants of the statistical model, the foreclosure rate was altered to align it more closely with the population of homeowners. First, the homeownership rate in a county was divided into the foreclosure rate. The result is an estimate of the share of owner-occupied housing units in a county that entered into foreclosure, as opposed to the share of all housing units in a county that entered into foreclosure.

Second, the share of homeowners in a county with a mortgage was divided into the foreclosure rate. That was done because only homeowners with mortgages face the risk of foreclosure. The resulting foreclosure rate is an estimate of the share of homeowners with mortgages who entered into foreclosure. In both variants, the list of regression variables was suitably modified to align with the newly defined foreclosure rate. Results from the estimation of alternate models are available upon request.

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