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The Anatomy of the Low-Income Homeownership Boom
in the 1990s

Mark Duda and Eric S. Belsky

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Abstract

Despite an unprecedented boom in homeownership that added seven million net new owners between 1994 and 1999 and drove the homeownership rate nearly three percentage points higher to 66.8 percent, relatively little is known about where people have been buying homes and the types of homes they have been buying. This paper fills in some of gaps in our knowledge of what and where low-income and minority homebuyers have been buying using the American Housing Survey and data reported pursuant to the Home Mortgage Disclosure Act. Manufactured housing is shown to play a particularly important role in satisfying low-income buyers' housing demand. More than one-quarter of such buyers purchased manufactured homes nationwide in 1997, and in the South in 1997 fully 40 percent bought them. In the Northeast and in central cities, apartment condos also have played an important role in meeting low-income ownership demand—as much as one-quarter—but for only about 10 percent of that demand nationwide.

Large shares of low-income and minority borrowers are purchasing in the suburbs and outside of low-income census tracts. The extent to which the move to low-income homeownership has been associated with a move to opportunity remains an open question, but it appears that it has led to at least some income mixing in the suburbs as significant portions of low-income borrowers in the suburbs have been purchasing homes in moderate and middle-income census tracts. It also appears, however, that it has not led to materially lower levels of segregation by race in the case of blacks, but it is less clear whether it has done so for Hispanics. It is also the case that whites and Asians have largely avoided buying homes in areas where a majority of other buyers over the 1993-99 period have been minorities. In both the cases of the income and the race/ethnicity of homebuyers, however, clustering remains more the rule than the exception. Low-income homebuyers, although less clustered near the urban core than low-income renters, nevertheless are far more likely to buy near the CBD than are high-income buyers. Minorities also tend to purchase homes closer to the CBD but the degree to which this is the case varies widely in the nine Metropolitan Statistical Areas (MSAs) examined, and is much truer for blacks than Hispanics. In most places, there are many census tracts where more than half of buyers are low-income and are minorities, and these are typically contiguously located close to the center of the city.

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I. Introduction

Despite an unprecedented boom in homeownership that added seven million net new owners between 1994 and 1999 and drove the homeownership rate nearly three percentage points higher to 66.8 percent,¹ relatively little is known about where people have been buying homes and the types of homes they have been buying. Analysis of the current boom has principally focused on describing who is buying—by income, racial, ethnic, and family characteristics—not on where and what homes they are buying (Bostic and Surrrette 2000; Wachter 1999; Masnick 1998).

The concentration of the growth in homeowners among minorities has been especially striking. Though in 1993 minority households accounted for only 15 percent of owners, over the next five years they accounted for 41 percent of net growth in owners.

While the number of low-income (those earning less than 80 percent of area median) non-Hispanic white owners actually declined by 225,000 over the period, the number of low-income minority owners rose by more than 800,000 and accounted for nearly 11 percent of the net growth in owners. This shift in the racial and ethnic composition of low-income homeowners reflects the faster household growth of minorities through immigration and the younger age distribution of minorities. Fewer low-income non-Hispanic whites became owners than were lost through shifts of tenure, changes in income, and death and institutionalization of old-aged owners. Minorities, on the other hand, accounted for a growing share of first-time buyers, as a larger proportion of a faster growing population reached their first-time buying years. Indeed, minority first-time buyers as a share of all first-time buyers, rose from 19.1 percent in 1993 to 30 percent in 1999.

As a consequence, homeownership rates of those with low-incomes and of minority households have been rising more rapidly than for others. The share of mortgage loans made to both low-income and minority households have also surged. While the number of loans to high-income buyers (those earning 120 percent or more of the area median) grew by 52 percent, loans to low-income home buyers surged by 94 percent. Meanwhile, growth in loans to white home

¹ The homeownership rate for 2000 was 67.4 percent.

buyers was a more modest 42 percent when compared to the 98 percent growth in loans to black buyers and the 125 percent growth in loans to Hispanic buyers.

Interest is mounting in understanding where low-income homebuyers have been purchasing, as businesses strive to serve these buyers and policy makers consider the social and economic implications of the recent surge in low-income homeownership. The social and economic implications of their tenure choices are significant because owners tend to remain longer in the same home and therefore make a longer-term commitment to an area. Indeed, while half of renters move in 3 years or less, half of owners stay in their homes for 10 years or more.² In addition, investment in homes can result in significant returns to owners, significant lost opportunities to invest funds in other assets or outright losses of principal and credit reputation.

The spatial pattern of home purchases by low-income buyers is so important because it determines their access to education and other public goods as well as to jobs and social networks. Access to education, jobs, and social capital are, in turn, key to economic and social mobility (Temkin and Rohe 1998; DiPasquale and Glaeser 1999) and evidence suggests that the children of homeowners do better on a variety of achievement indicators (Boehm and Gordon 1999; Green and White 1997). Location is also important because house price appreciation varies with location and therefore plays a central role in determining the financial returns to homeownership (Goetzmann and Spiegel 1997; Case and Mayer 1995; Case and Marynchenko 2000; Smith and Ho 1996; Li and Rosenblatt 1997).

As a result, some scholars have questioned whether moves by low-income and minority home buyers herald an improvement in their opportunity set—a move up as well as out (Stuart 2000). Answering this question requires detailed information about the locations to which low-income and minority buyers are moving. To date, however, few studies have examined the spatial patterns of home purchases. Wyly and Hammell (1999) examined these patterns to identify central city neighborhoods that attracted a significant share of high-income homebuyers in an effort to find gentrifying and mixed-income neighborhoods. The Joint Center for Housing Studies (2000) found that few high-income buyers have been purchasing homes in low-income neighborhoods in central cities but that large shares of minority and low-income buyers have been purchasing homes in suburbs—including middle and higher-income suburbs. Detailed

² More than 50 percent of renters and owners had been in their homes for three and ten years respectively according to both the 1999 and 1997 AHS (variable = MOVED).

research in Boston indicates that the relocation of low-income and minority buyers to suburbs is not necessarily associated with reduced segregation. In fact, Stuart (2000) found that the suburbanization of minorities has been largely concentrated in just a handful of communities. Similarly, in Chicago, Immergluck (1998) found that almost half of all black buyers over the 1995-96 period purchased homes in predominantly minority census tracts, though just 27 percent had five years earlier. A series of papers by Frey and colleagues (Frey and Farley 1996; Frey and Geverdt 1998; Frey and Speare 1995) examine settlement patterns by race and income for all households, not just owners, with Frey and Farley (1996) reporting that segregation decreased for blacks, though it remains high, and increased for Hispanics and Asians over the decade of the 1980s.

Still, many questions remain unanswered. At a descriptive level, the following are the most fundamental questions. Where are low-income mortgage borrowers purchasing homes? How does this differ from the places where those with higher incomes are purchasing? Do these patterns vary by race and ethnicity? And to what extent do these patterns vary among metropolitan areas with different economic, social, and demographic characteristics and different patterns of access to credit? Once these questions are answered, more fundamental policy questions can also be addressed, such as the returns these buyers reap in terms of improved access to education and other opportunities for themselves and their children.

This paper examines the where and what of the low-income homeownership boom. The paper also aims to provide insights into variations in the patterns of low-income home buying in metropolitan areas by examining nine metropolitan areas that differ in terms of size, racial and ethnic composition, the size of their central cities, regional location, and economic condition. While many of our results are presented in terms of the standard geographic distinction between central city and suburb, our analysis of these nine areas also examines differences in the distances from the city center that low-income movers are settling when they buy homes. Because of variations in the political geography of metropolitan areas, the suburbs of large cities may begin within a mile of the central business district (e.g., Boston) or tens of miles outside (e.g., Phoenix, San Antonio). Consequently, more distant places that attract buyers may fall within central cities in some Metropolitan Statistical Areas (MSAs), but require a move to the suburbs in others, even though absolute distance from the central business district (CBD) may be

equal. Put another way, the term “city” and “suburb” do not sufficiently distinguish between the locational characteristics of places in terms of their distance from the CBD.

II. Constraints, Patterns, and Progress in Low-Income and Minority Homeownership

Much of the research relevant to the present study has been concerned with identifying the problems encountered by low-income/low-wealth buyers attempting to become homeowners and with specifying solutions to help them overcome the hurdles blocking their path to this goal. A related research stream attempts to discern if, and to what extent, minority groups face additional barriers to homeownership, over and above the income and wealth constraints facing buyers of all racial and ethnic backgrounds. Several other studies have examined the racial and ethnic composition of the growth in homeowners and what happens when low-income and minority buyers do manage to become homeowners by describing the spatial distribution of buyers within MSA housing markets by income and race.

Constraints Faced by Low-Income/Low-Wealth Buyers and Efforts to Overcome Them

As noted above one vein of homeownership research examines the constraints on achieving homeownership posed by low incomes and wealth. Linneman and his colleagues (1997) explain that mortgage underwriting criteria present two potential borrowing constraints for low-income home buyers, both of which arise because lenders ration credit rather than price for risk. The wealth constraint results from the buyers’ need to amass downpayment capital and funds to cover other up-front costs necessary to initiate the transaction. Engelhardt and Mayer (1998) emphasize the centrality of wealth in home buying, showing that recipients of intergenerational transfers spend less time saving for a downpayment, put down a larger share of the home's value, and buy larger homes than nonrecipients. The income constraint results from maximum allowable total debt-to-income and/or housing debt-to-income ratios employed in mortgage underwriting. Simulations run by Linneman and colleagues indicate that relaxing both constraints³ could

³ Raising average loan-to-value ratio from 80 to 95 percent and debt-to-income ratio from .28 to .33 simultaneously.

increase the homeownership rate by three percentage points.⁴ Among others, Engelhardt (1994), Engelhardt and Mayer (1998), and Haurin, Hendershott and Wachter (1996) have also stressed the importance of wealth in the decision to own a home.

Linneman and Wachter (1989) and Linneman and colleagues (1997) assess the relative importance of the two borrowing constraints and found that, while each constraint acts to lower the rate of homeownership, wealth has a more pronounced effect. Comparing results from the earlier and later papers indicates that the effect of the income constraint has weakened over time, a fact the authors attribute to the increased use of adjustable rate mortgages (ARMs) during the 1980s which lower monthly payments, and hence debt-to-income ratios, by reducing interest rates. The large shares of borrowers using high LTV products has likely had a similar impact on the wealth constraint over the 1990s. In either case, however, borrowers and lenders must trade one constraint off against the other, and trade off interest rate and collateral risk. Lowering downpayments increases monthly costs and hence income necessary to qualify for a loan while increasing collateral risk for lenders. Borrowers relaxing income constraints by lowering monthly carrying cost through the choice of adjustable rate loans are increasing their vulnerability to interest rate movements and potentially raising their risk of default if rates rise higher than they can afford.

The two borrowing constraints are often viewed as policy targets. Galster, Aron and Reeder (1999) point out that GSE underserved markets/borrowers goals imply that today's pool of renters harbors a large subset of would-be owners—a finding supported by surveys in which two-thirds of renters indicate that they intend to buy a home. The authors compare a renter pool to owners and find on the basis of their sample that roughly five million renter households are at least as pre-disposed to homeownership as is the average owner, and that half of these households have low- to moderate-incomes. Further, these same households pose little additional default risk to lenders when compared to existing owners. In order to make homeownership available to these renters, the authors advocate targeting them in outreach efforts, encouraging primary lending to low-income and minority borrowers, enhancing civil rights enforcement, and making more low-cost housing available through urban revitalization.

⁴ The magnitude of this effect is underscored by the study's revelation that the homeownership rate responds with only a 1.2 percentage point drop as a result of increasing the mortgage interest rate from 7 to 13 percent.

Eggers and Burke (1996) attempt to gauge the potential impact of different policy interventions by examining the effect of reducing barriers to homeownership. They assume that high-income whites—those earning in excess of \$80,000 annually—are fully able to exercise their tenure preferences and calculate the impact, in additional owners, of narrowing income and race-based discrepancies. Simultaneously eliminating both barriers raises overall homeownership to 85 percent, but most of this gain is achieved by removing income-based barriers because lifting them alone increases the overall rate to 83 percent. Eliminating racial barriers without accounting for income brings overall ownership up only slightly to 69 percent (from a base of 65 percent in each case).⁵ Gyourko, Linneman and Wachter (1999) found little difference in ownership rates among unconstrained households, but that minorities are far more likely to be wealth-constrained than whites.⁶ They also found that, controlling for wealth, minorities are far more likely to own in central cities than whites. In fact, wealth-constrained whites are more likely to live in suburbs than unconstrained minorities.⁷

Race/Ethnicity and Homeownership

Because pronounced and persistent gaps exist between the ownership rates of whites and minorities (Collins and Margo 1999; Joint Center for Housing Studies 2000), numerous studies have attempted to determine whether these gaps can be explained by other factors or whether they appear to result from discrimination. In addition to Eggers and Burke (1996) and Gyourko, Linneman, and Wachter (1999), Rosenbaum (1996) also explored the reasons for gaps in minority and white homeownership. She found that minorities in the New York metropolitan area were less likely to own their own homes and more likely to live in lower quality housing, even after controlling for income and family composition. She ascribes this result at least in part to the way minority home seekers were treated by housing market agents. Herbert (1997) finds that supply-side factors, especially the greater concentration of multifamily housing in the areas where blacks tend to live more than others, partially explains their lower ownership rates.

⁵ Although, minorities of all income levels have lower homeownership rates than whites, eliminating income-based barriers has a larger impact on overall ownership because almost all households are affected by income constraints while only the one-fifth of households are minority.

⁶ They find half of minority households but only one-third of whites are constrained.

⁷ The authors note that this tendency could impact minority wealth-building through homeownership because suburban housing markets have historically outperformed urban ones.

Wachter and Megbolugbe (1992), using data from the 1989 American Housing Survey (AHS) found that variation in “endowment” factors explained 80 percent of the racial and ethnic gap in homeownership rates. Of the household endowment factors (income, age, education, family type, and gender) and market endowments (price and location) they consider, income is the most important, followed by marital status and gender of the household head. Further, the likelihood that minority households will become owners is more income elastic than that of majority households. Wachter and Megbolugbe attribute the 20 percent of the homeownership gap that is unexplained by their regression model to racial or ethnic discrimination, but caution that other unobserved influences may account for some of this residual.⁸

Focusing on changes in patterns and levels of low-income lending that have occurred amid the robust economy, dynamic lending innovation, and policy changes of the 1990s, Wachter's (1999) research using data from the 1997 AHS suggests that policies of the federal government may be lifting homeownership among low-income and minority borrowers.⁹ She compares actual ownership rates by race and income in 1997 to rates for 1997 projected from 1991 ownership rates. While virtually all categories exceeded their projections and the overall homeownership in 1997 was 2.4 percentage points above its projected rate, the rates for the lowest income categories, under \$20,000 and \$20,000-40,000 exceeded their projections by a greater 2.9 and 3.2 percentage points respectively. More strikingly, minorities in the \$20,000-40,000 category exceeded their projected ownership rate by fully 4.2 percentage points. Bostic and Surette (2000) also conclude that public policies have likely played a role in boosting homeownership over the last decade. They report that, while homeownership is up across the board, it is only amongst low-income borrowers (including lower-income minorities) that it cannot be explained by socioeconomic and demographic changes. While noting that their conclusions are not definitive, they believe that their findings indicate that housing policy has helped change the mortgage-lending environment and led to elevated homeownership rates.

Wachter also found support for her argument that policy has had an effect on low-income and minority lending in the 1990s by examining ownership by race and age, and race and intra-metropolitan location. She found that, while the ownership rate for 25–34 year-old minorities is

⁸ Since this is a residual category, it may be pulling in the effects of employment and credit histories, and cultural disposition toward homeownership, among others.

barely above its projected level, that for minorities in the 35–44 age group is fully 5.7 percentage points above projection, nearly double the differential for all groups. For whites, the biggest differences between actual and projected rates are among those between 25 and 34 years and those under 25. Wachter attributes these patterns to the effect that policy has had on lowering downpayment constraints for all buyers, an effect that reaches minorities later in life because it takes them longer to overcome wealth and income constraints. Again looking at racial differentials in projected versus actual ownership rates, Wachter found both whites and minorities exceeding projections by similar rates (1.6 and 1.9 percentage points) in central cities, but with a somewhat more noticeable difference in the suburbs (2.1 and 2.6 percentage points). Suburban households earning less than \$20,000 had actual ownership rates that were 4 percentage points above their projected ownership rates, while in central cities this group's actual rates did not exceed their expected by any more than others. Of all income groups, those earning \$20,000-40,000 surpassed expectations by the largest amount—3.6 percentage points above projections.

For Hispanics and Asians, gaps in homeownership with whites are partially explained by immigration, and their younger age structure and higher fertility rates (Masnick 1998). Additionally, these groups are not evenly dispersed throughout the United States and both groups (but Asians in particular) tend to live in relatively high-cost MSAs, further reducing their likelihood of homeownership (Coulson 1999). Controlling for these differences, he found that Asians are actually more likely to be homeowners than whites, and the same factors, plus education, explain all or most of the difference between black and Hispanic rates (Coulson 1999). Controlling for immigration and housing market effects, Hispanics own at almost the rate of whites, have less crowded housing, and pay less for it (Krivo 1995). Simply disaggregating Hispanics into foreign- and native-born shows the ownership rate of the former lagging that of blacks and the latter leading it. Additionally, while being an immigrant negatively affects one's probability of homeownership within racial and ethnic groups, the effect all but disappears with time (Coulson 1999; Krivo 1995; Masnick 1998; Masnick, McArdle and Belsky 1999).

Being an immigrant can work against ownership at both the individual and aggregate levels. Individual immigrants are disadvantaged in accessing information and networks, dealing with

⁹ In particular, Wachter speculates that the superior performance of low-income homeownership rates in general, and minority rates in particular, beyond demographic expectations is evidence of the combined impact on these rates of CRA enforcement,

realtors, mortgage providers, and landlords, demonstrating solid credit, and through discrimination. Further, location in immigrant enclaves reinforces attachments to these areas which decreases motivation for integration and mobility. If Hispanic immigrants' housing searches are limited to Hispanic neighborhoods, the result can be housing that is likely to be small, inferior, and rented (Krivo 1995).¹⁰

Spatial Patterns of Homeownership at the MSA Level

Few studies have looked at the spatial pattern of home buying or the implications of homeownership policies. Eggers and Burke (1996) used information on the distribution of homeowners by age, race/ethnicity, household type, income, and tenure from the 1991 AHS and household projections to 2000 by Masnick and McArdle (1993) to project the spatial results of policies aimed at eliminating income and wealth constraints to homeownership. They estimated that central cities would gain nearly 1.5 million homeowners. The number of suburban households would only increase slightly but there would be an additional one and three-quarters million homeowners there, while nonmetro ownership ranks would rise by one and one-quarter million owners.

Stuart (2000) examined metropolitan patterns of home buying at the township level in the Boston PMSA. As Frey and Gerverdt (1998) found for all households, Stuart found relatively high levels of suburbanization among minority buyers.¹¹ He also found, however, that half of black and Hispanic buyers moved to just seven of the 126 communities in metro-Boston (excluding the City of Boston).¹² Further, about a quarter of all blacks, Hispanics and Asians bought homes in suburbs where they comprised an above average share of homebuyers. Looking at income, Stuart found that families with different incomes bought into different communities, and that whites with the lowest incomes were as segregated from whites in the highest income category as whites were from blacks in Boston's suburbs. Additionally, Stuart found that the likelihood of buying in the city of Boston itself decreased steadily with income in the case of Hispanics and sharply in the case of blacks.

Justice Department fair-housing cases, and a revitalized FHA.

¹⁰ Ratner (1996) notes that there is significant variation in the home buying behavior and experience of immigrants based on country of origin, and that those from English-speaking countries more closely mirrors those of native born citizens.

¹¹ Forty percent of African Americans and 60 percent of Hispanic home buyers located outside the city of Boston, against 90 percent for whites.

¹² Chelsea, Randolph, Everett, Lynn, Somerville, Milton, and Malden.

Immergluck (1998) found a similar pattern for black home buyers in Chicago, where the proportion of blacks buying in tracts where 75 percent or more of all buyers were black increased from 27 percent in 1990-91 to 45 percent by 1995-96. Further, just five percent of all tracts where the share of black homebuyers increased over the period accounted for 50 percent of the total increase in black buyers.¹³ He noted that despite the positive side of increased black homeownership, these findings raise concern because the socioeconomic problems of blacks have been linked to segregation and spatial isolation. Specifically, he notes that other studies have linked segregation and isolation to reduced access to employment, concentration of poverty, weak local economies, lower socioeconomic status, and lower wealth accumulation through reduced house price appreciation. Immergluck concludes that government must turn toward opening up housing markets as aggressively as it has extended credit options to minority borrowers. By calling attention to the increasing segregation of black owners in Chicago, he calls into question whether homeownership rates alone are the correct metric for evaluating the impact of these policies aimed at increasing these rates among minorities.

Stuart and Immergluck both underscore the importance of delving below the level of the metropolitan area to gauge the impact of the move to homeownership on the spatial access of new low-income and minority owners to education, employment, and social capital. Their works suggest productive veins for future research aimed at assessing the relationship of ownership gains to expanded opportunities.

III. The “Who” and “What” of Low-Income Home Buying: Results from the 1997 AHS

The American Housing Survey provides a rich data set for comparing the demographic and housing characteristics of homes being purchased by buyers in different income and racial/ethnic groups because it contains information about both sets of characteristics. To date, the construction of the income cutoffs used to classify households relative to local area medians in the 1997 AHS make it better suited than the 1999 AHS for comparing income groups.¹⁴

¹³ These tracts also accounted for 13 percent of the increase in white buyers over the period.

¹⁴ In order to generate respondent income classes as a share of MSA median income, we merged HUD’s 1997 MSA median income data file with the AHS data. After eliminating all records that were either vacant or where the interviewee was not

Focusing on recent buyers who purchased their homes in the year leading up to the 1997 survey reveals that much larger shares of low-income recent buyers than those who remained low-income renters were parts of married couples (Figure 1). Given the greater propensity of married couples, especially those with children, to buy homes across all income categories this is unsurprising. Also unsurprising is the fact that the mean household incomes of low-income recent buyers were one-quarter higher than that of low-income renters while the median income of these buyers, at \$20,000, was over 50 percent greater than the median income of the continuing renters. All else equal, one would expect the incomes of low-income buyers to mass closer to the upward cutoff than among those less able to afford homeownership and thus more apt to remain renters. Similarly, the age distribution of low-income renters who recently bought is skewed slightly toward younger age groups, especially among those aged 35–44—the ages when minority first time home buying rates peak. The difference is balanced by a larger share of continuing low-income renters in the over-55 bracket. Finally, recent low-income renters who recently bought were nearly half as likely to buy in cities and twice as likely to buy in nonmetropolitan areas than continuing low-income renters were likely to rent in them.

As noted above, however, this is not an entirely appropriate comparison because recent low-income renters who buy homes are drawn more heavily from the top of the low-income band than those who remain renters. A more appropriate comparison therefore is between recent renters with household incomes between 50 and 80 percent of area median income who bought and those in the same income band who remained renters (Figure 1) because about half of low-income home buyers typically fall in this income range. Doing so equalizes the comparison of the two because renters and new owners in this income range have nearly identical mean and median incomes. Importantly, differences in distribution by family type remain. Recent owners that formerly rented are one-third more likely to be married with no children and even more likely—65 percent more likely—to be married with children than continuing renters. Continuing renters are also about one-third more likely to be single. Differences in the geographic distribution also remain, with those making the recent move to homeownership more

present and weighting the data to reflect the nation's housing stock, we throw out all respondents that report both negative incomes and rent above fair market. Finally, we add income cutoffs to match the borrower categories used in the HMDA analysis presented later based on the area median income and the family size of respondents.

concentrated in nonmetropolitan areas and less concentrated in cities. In all likelihood, these results reflect the fact that access to low-cost manufactured housing, which is more available in

Figure 1: Demographic Characteristics of Low-Income Recent Buyers and Low-Income Current Renters

	<80% AMI				50-80% AMI			
	Recent Buyers		Current Renters		Recent Buyers		Current Renters	
	Recent Buyers	Previous Renters	Current Renters	Current Renters	Recent Buyers	Previous Renters	Current Renters	Current Renters
Mean Income	\$19,24		\$14,501		\$25,242		\$24,873	
Median Income	\$20,00		\$13,012		\$24,800		\$24,000	
Age of head								
<35	352,27	44.3%	8,797,77	41.6%	328,316	44.5%	3,033,82	46.9
35-44	224,29	28.2%	4,438,23	21.0%	188,654	25.6%	1,445,28	22.4
45-54	89,876	11.3%	2,532,00	12.0%	76,701	10.4%	852,023	13.2
55+	127,98	16.1%	5,362,87	25.4%	144,133	19.5%	1,133,20	17.5
Total	794,43	100.0	21,130,8	100.0	737,804	100.0	6,464,34	100.0
Family Type								
Married no children	86,752	10.9%	1,886,68	8.9%	119,446	16.2%	783,437	12.1
Married with own	251,04	31.6%	3,458,52	16.4%	255,921	34.7%	1,367,70	21.2
Other with own	154,85	19.5%	4,558,99	21.6%	93,099	12.6%	1,009,54	15.6
All other	51,198	6.4%	1,561,65	7.4%	32,300	4.4%	520,569	8.1%
Single	209,39	26.4%	8,178,96	38.7%	201,370	27.3%	2,229,44	34.5
Non-family, no	41,185	5.2%	1,486,06	7.0%	35,668	4.8%	553,643	8.6%
Total	794,43	100.0	21,130,8	100.0	737,804	100.0	6,464,34	100.0
Racial/Ethnic								
Hispanic	135,74	17.1%	3,665,61	17.3%	103,543	14.0%	933,371	14.4
Black	141,38	17.8%	4,750,55	22.5%	76,258	10.3%	1,153,19	17.8
Non-Hispanic White	482,04	60.7%	11,559,8	54.7%	520,147	70.5%	4,053,54	62.7
Other	35,259	4.4%	1,154,84	5.5%	37,856	5.1%	324,241	5.0%
Total	794,43	100.0	21,130,8	100.0	737,804	100.0	6,464,34	100.0
Location								
Central City	211,48	26.6%	10,178,0	48.2%	169,007	22.9%	2,776,40	42.9
Suburb	299,68	37.7%	7,441,29	35.2%	327,364	44.4%	2,635,60	40.8
Non-metro	283,25	35.7%	3,511,52	16.6%	241,433	32.7%	1,052,34	16.3
Total	794,43	100.0	21,130,8	100.0	737,804	100.0	6,464,34	100.0

Source: Joint Center Tabulations of the 1997 American Housing Survey.

rural areas, plays a major role in explaining which low-income renters are able to make the move to homeownership.

There are also marked differences in the types of homes that low- and high-income households have been buying. While a majority of all new owners purchased single family homes, the share of high-income buyers who bought them, at 87 percent, was much greater than the share of low-income buyers who did so (Figure 2). Mostly this is because much larger shares of low-income buyers bought manufactured homes instead of conventional stick-built single-family homes. In fact, more than one-quarter of new, low-income owners purchased manufactured homes while only 15 percent of middle-income and five percent of high-income recent buyers did so. In the South, fully 40 percent of low-income buyers bought manufactured homes, while in the other regions they satisfied closer to one-fifth of low-income ownership demand. Multifamily condos were more important to satisfying low-income than high-income demand for ownership, but only 10 percent of low-income buyers nationwide purchased condos. In the Northeast and central cities, however, fully one-quarter of recent low-income buyers bought apartment condos. A larger share of low-income buyers in cities (71 percent) than in suburbs (66 percent) and non-metropolitan areas (52 percent) bought single-family homes because manufactured homes were a more common choice in these areas.

Differences in housing type by racial and ethnic characteristics of homebuyers are less pronounced, with the share of non-Hispanic whites purchasing single-family homes only slightly higher than for minorities. However, blacks were significantly more likely to purchase a manufactured home than non-Hispanic whites, and Hispanics and Asians were significantly more likely to purchase multifamily condos than non-Hispanics whites. Minorities were especially likely to purchase apartment condos in the Northeast. There, fully one-third of minorities bought apartment condos compared with only about one in ten non-Hispanic whites. Minorities were slightly less likely to buy manufactured homes than non-Hispanic whites in every region but the South. Minorities living in non-metropolitan areas were much more likely to buy manufactured homes but about as likely as non-Hispanic whites to do so in the suburbs.

Differences in the characteristics of housing units purchased by recent buyers with different incomes and of different races and ethnicity are also evident. Not surprisingly, the homes of low-income buyers are more likely to lack the amenities that higher income buyers are better able to afford. Recent low-income homebuyers were less likely to have air conditioning or at least three bedrooms than either middle or high-income buyers. Differences in unit characteristics and neighborhoods likely give rise to the seven percentage point gap between the shares of low- and high-income buyers registering high levels of satisfaction with the unit they purchased.¹⁵

¹⁵ Satisfaction is computed from AHS variable HowH2 which asks the occupant to rate the housing unit as “a place to live” on a scale from 1 (worst) to 10 (best). The discussion here and in the figures refers to the proportion of householders answering 8-10, which we label the high satisfaction share.

**Figure 2: Structure Type and Characteristics of Housing
by Income Class and Race/Ethnicity**

	Percent of weighted sample		Single family (attached and detached)		Multi family		Mobile homes	
Income								
Low	1,452,000	28.5%	896,675	61.8%	143,377	9.9%	411,948	28.4%
Medium	1,041,679	20.5%	845,261	81.1%	64,764	6.2%	131,654	12.6%
High	2,599,785	51.0%	2,271,167	87.4%	133,462	5.1%	195,156	7.5%
Total	5,093,464	100.0%	4,013,103	78.8%	341,603	6.7%	738,758	14.5%
Race/Ethnicity								
Non-Hispanic	4,014,601	78.8%	3,211,443	80.0%	239,675	6.0%	563,483	14.0%
Minority	1,078,863	21.2%	801,660	74.3%	101,928	9.4%	175,275	16.2%
Black	455,616	8.9%	312,947	68.7%	34,433	7.6%	108,236	23.8%
Hispanic	399,887	7.9%	31,220	78.6%	39,571	9.9%	46,096	11.5%
Asian	165,440	3.2%	134,781	81.5%	22,738	13.7%	7,921	4.8%
Other	57,920	1.1%	39,712	68.6%	5,186	9.0%	13,022	22.5%
Total	5,093,464	100.0%	4,013,103	78.8%	341,603	6.7%	738,758	14.5%

	High satisfaction Share 8-10		Share >=3 bedrooms		Unit had A/C	
Income						
Low	1,077,117	74.2%	837,722	57.7%	796,939	54.9%
Medium	796,243	76.4%	746,417	71.7%	596,807	57.3%
High	2,164,054	83.2%	2,062,432	79.3%	1,889,776	72.7%
Total	4,037,414	79.3%	3,646,571	71.6%	3,283,522	64.5%
Race/Ethnicity						
Non-Hispanic	3,209,910	80.0%	2,853,731	71.1%	2,627,616	65.5%
Minority	827,504	76.7%	792,840	73.5%	655,906	60.8%
Black	379,994	83.4%	361,365	79.3%	319,944	70.2%
Hispanic	295,922	74.0%	258,816	64.7%	216,917	54.2%
Asian	109,627	66.3%	127,623	77.1%	90,211	54.5%
Other	41,961	72.4%	45,036	77.8%	28,834	49.8%
Total	4,037,414	79.3%	3,646,571	71.6%	3,283,522	64.5%

Source: Joint Center Tabulations of the 1997 American Housing Survey.

Despite their lower average incomes and wealth, however, slightly larger shares of minority homebuyers bought homes with three or more bedrooms and, because of their greater concentration in the South, larger shares of black homebuyers than any other group, bought homes with air conditioning. When broken out by region however, a smaller share of minority than non-Hispanic white buyers bought air-conditioned homes in each region.

Turning now to how the housing purchased by low-income buyers that previously rented compares to that of those who remained renters, nearly two-thirds who previously rented bought single family homes while only a little more than one-quarter of renters lived in single family homes. Nearly one-third bought manufactured homes while only one-twentieth of renters rented them (Figure 3). The shares of previous low-income renters who had the highest satisfaction with their homes, at 75 percent, was much greater than the 54 percent registered by continuing low-income renters. This is strongly suggestive that the move to homeownership was associated with dramatic shifts in the types of homes and satisfaction levels of low-income buyers, though lack of information on their previous unit and satisfaction makes direct comparisons impossible to draw from the AHS. Similar dramatic shifts are evident among previous minority renters when compared to continuing minority renters.

Figure 3: Structure Type and Characteristics of Recent Buyers Who Rented Before and Current Renters by Income Class and Race/Ethnicity

	Low Income (<80% AMI) Previous Renters		Low Income (<80% AMI) Current Renters	
	Single family share	484,286	61.0%	6,502,407
Multi family share	75,240	9.5%	13,724,683	65.0%
Mobile home share	234,904	29.6%	903,797	4.3%
Share w/ at least 3 bedrooms	469,366	59.1%	4,833,797	22.9%
Unit has A/C	409,974	51.6%	7,065,483	33.4%
High Satisfaction with unit				
6-10	730,071	91.9%	16,983,510	80.4%
8-10	594,967	74.9%	11,748,883	55.6%
Weighted count	794,430		21,130,887	
% of weighted sample	33.0%		62.1%	
	Non-Hispanic White Previous Renters		Non-Hispanic White Current Renters	
Single family share	1,342,048	78.4%	7,224,161	34.8%
Multi family share	106,546	6.2%	12,494,678	60.3%
Mobile home share	263,420	15.4%	1,011,514	4.9%
Share w/ at least 3 bedrooms	1,182,316	69.1%	5,203,793	25.1%
Unit has A/C	1,009,085	58.9%	8,352,933	40.3%
High Satisfaction with unit				
6-10	1,606,531	93.8%	17,447,150	84.2%
8-10	1,307,678	76.4%	11,742,647	56.6%
Weighted count	1,712,014		20,730,353	
% of weighted sample	71.0%		61.0%	

Source: Joint Center tabulations of the 1997 American Housing Survey.

IV. The “Where” of Low-Income Home Buying: Results from the Home Mortgage Disclosure Act Data

Data reported under the Home Mortgage Disclosure Act (HMDA) permit detailed geographic analysis of the places that low-income and minority homebuyers have been purchasing homes. HMDA does not provide a complete census of home buyers because not all financial institutions that originate mortgages are required to disclose information, the quality of information from reporting mortgage companies is not as good as for banks and thrifts, and no seller-financed or all-cash home purchases are captured.¹⁶ In addition, coverage outside of MSAs is limited to the activities of lenders also active in MSAs. It is likely that these coverage issues introduce a spatial bias within MSAs because mortgage companies play a more significant role in low- and moderate-income areas than elsewhere and seller financing is arguably more common in these areas. However, the extent of the bias is difficult to quantify and broad patterns observed in HMDA are likely accurate reflections of the pattern of purchases.

Suburban Shares of Low-Income Home Buying

National analysis of HMDA data reveals that the majority of both low-income and minority borrowers have been purchasing homes in the suburbs and outside of low-income census tracts, but also reveals considerable cross-metropolitan variations in these shares. Similarly, the data show that very small fractions of high-income buyers have been purchasing homes in low-income, especially central-city low-income, census tracts.

Over the 1993-99 period low-income buyers and minorities have each received substantial shares of all loans. Of the loans reported in these years, over 27 percent have gone to low-income borrowers and just under 20 percent have gone to minorities. Though both groups accounted for a larger share of all loans in 1999 than in 1993, minorities' share increased one percentage point more (six versus five percentage points). Turning to the distributions by tract incomes, low-income borrowers purchased roughly equal shares of homes in low- and high-income tracts, with an additional 59 percent occurring in middle-income areas. By comparison, less than seven percent of high-income borrowers bought homes in low-income tracts.

¹⁶ See Berkovic and Zorn (1996) for an assessment of the completeness of HMDA coverage of the mortgage market.

Combining buyer race and ethnicity shows that the composition of the change is similar for both groups. High-income whites, who received 35 percent of all loans over the 1993-99 period, had a share 5.8 percentage points lower by the end of the period than they had at the beginning, while low-income whites' share was up three percent. Low-income minorities' share of all loans grew by 3.2 percentage points while that of high-income minorities managed to grow half of one percentage point. Low-income minorities, in fact, made up a larger share of all loans recorded over the study period than high-income minorities.

Focusing on low-income minorities reveals that, while one-third of these borrowers bought homes in low-income tracts, more than half chose middle-income tracts and 13 percent moved to high-income areas. Further, less than two percent of low-income minorities moved to low-income, predominantly minority areas.

Loans to central cities as a share of the total were down slightly over the period, to about 30 percent of the total, as buyers continued to head to the suburbs. Central city figures are higher among low-income and minority borrowers, however, as 35 percent of purchases by the former and 40 percent by the latter occurred in the central city. However, even a slight majority of low-income minority borrowers (53 percent) bought homes in the suburbs. Both high-income and white shares in the central city were somewhat below the 30 percent average figure, at 27.3 and 27.5 percent respectively.

Explaining Geographic Home Purchasing Patterns

Stuart (2000) and Immergluck (1998) each provide a compelling case that in Boston and Chicago minorities and low-income home buyers are sharply segregated from non-Hispanic white and high-income home buyers. These studies contribute to a vast literature that underscores the segregation of residential space in metropolitan America. Both their findings and those just discussed suggest that the move to homeownership for both low-income people and minorities has not necessarily resulted in significantly lower levels of segregation by race and income.

Less studied is why such large shares of low-income and minority home buyers opt to live outside central cities and why there are significant cross-MSA variations in these shares. Certainly, part of the explanation for the cross-sectional variations lies in the simple fact that in some cities significantly more of the metropolitan land area is defined as central city than in

others for the purposes of federal and state data collection. But it likely lies equally in variations in the forces that tend to deter people from buying homes in the central city (push factors) and that attract people to suburbs and less densely settled patterns of development in general (pull factors).

For more than 100 years, Americans of all income levels have demonstrated a preference for decentralized living (Jackson 1985). Today, the strong preference for the suburbs remains intact and is evident in the consistently faster rates of suburban than city population and housing growth (McArdle 1999; Joint Center for Housing Studies 2000). Especially over the last three decades, the decentralization of employment has further buttressed the trend towards population decentralization drawing workers out of the city and further out into lower density fringes. Suburban employment centers drive demand for housing in the suburbs and increasingly make it possible for workers to live in rural or non-urbanized parts of metropolitan regions (Garreau 1991).

To act on their preference for living in the suburbs, however, the interest of low-income people must be joined with supply-side opportunities to purchase affordable homes in the suburbs. The greater the supply of pre-existing affordable housing and the fewer the restrictions on its future development, the higher the likely share of low-income buyers living outside the central city should be. The more restrictive the laws and the more fragmented the local political geography, the fewer will be the options for low-income buyers to find suburban homes and the more likely that they will end up segregated in different towns from higher-income buyers. Income growth, by making relatively more expensive suburban housing affordable and by making the tax advantages of owner-occupied housing more appealing can also pull buyers out to the suburbs.

Another likely influence on the extent to which pull factors are at work is the nexus between an MSA's variations in school quality, its age structure, and its distribution of household types. Because of the ongoing disparity between the quality of urban and suburban public schools, having children often precipitates a move to the suburbs in search of better educational opportunities. Because childbearing and rearing occurs during specific phases of the life cycle, the suburbs should exert a stronger pull on the overall population in MSAs where the age distribution is skewed toward those in their childbearing years. This factor is also conditioned,

however, on the distribution of household types, which measures the demand for schools among families.

On the push side, the well-known suite of urban ills such as crime, noise, and pollution, collectively influence the quality of life in the central city and hence the willingness of residents' of all income and racial/ethnic groups to live there. A related issue is the degree to which poverty is concentrated in the central cities, which simultaneously pushes out those who can afford to leave it, and confines many of the poor to specific parts of the MSA. Similarly, the age, type, size, and quality distributions of the housing stock are important as people may head outward in pursuit of housing that is more likely to be single-family, newer, and equipped with modern conveniences. The demonstrated preference of whites for segregated living can also be considered a push factor where minorities are disproportionately concentrated in central cities.

Despite a relatively straightforward set of testable hypotheses for cross-MSA variations in the share of low-income buyers purchasing homes in the suburbs, these hypotheses have not yet been tested.

Moving Beyond the Central City/Suburb Dichotomy

The conventional distinction between central city and suburb, while broadly descriptive of real distinctions between parts of metropolitan area housing markets, is limiting. The most notable body of work questioning and attempting to move beyond the city/suburb dichotomy is a series of papers by Frey, Speare, and colleagues (Speare 1993; Frey and Speare 1995; Frey and Farley 1996; Frey and Geverdt 1998.).¹⁷ They develop a “functional” typology of intra-MSA communities based on distance from central city, racial/ethnic composition and economic performance, and conclude that different processes produce different settlement patterns in each type of area.¹⁸ Frey and Farley (1996), for instance, found that while black segregation decreased almost everywhere during the 1980s, it was lowest (and most likely to have declined) in multi-ethnic MSAs—places where other minorities' share grew faster than blacks' did. The authors attribute this to action of Asian and Hispanic immigration dispersing entrenched racial minorities as well as long-term, relatively assimilated, immigrants.

¹⁷ Their six intra-MSA community types are Major City; Inner Employment Center; Outer Employment Center; Inner Residential Suburbs; Outer Residential Suburbs; and Low Density Area.

¹⁸ Los Angeles, for example is a "Multiethnic, High Immigration area," Atlanta a "White-Black Fast Growing area," and Detroit a "White-Black Slow Growing area."

In an effort to understand the distances that low-income and minority home buyers are buying from the traditional urban core, we create a distance-to-central business district (CBD)¹⁹ measure and apply it to home purchases over the 1993 to 1999 period in nine MSAs: Atlanta, Detroit, Hartford, Houston, Miami, Milwaukee, Philadelphia, Phoenix, and Portland. These areas were selected because they are not multinucleated and because they vary in the geographic size of the city relative to the suburbs and in terms of the proportion of minorities living in them. We impose the mono-centrism constraint to reduce the complexity arising from understanding purchasing patterns in places with multiple urban cores.

Four distance bands were drawn in concentric circles around the centroid of the central business district in each place. The first band, less than or equal to eight miles, is intended to capture central urbanized core areas, whether or not they are defined as parts of central cities or inner ring suburbs. The next one, 8-14 miles captures those places that offer easy commuting to the city but are likely to have the lower densities typically associated with suburban living. The third band, 14-20 miles, represent outer suburbs, and the final band, beyond 20 miles, is intended to capture housing located at great distances from the center of the city.

In most MSAs the band²⁰ nearest to the CBD contains the largest share of all tracts, with the share typically trailing off with distance, reflecting the much higher population densities at the urban core. In all of the MSAs, low-income tracts are found overwhelmingly in the innermost ring while high- and middle-income tracts are spread relatively evenly throughout. Likewise, more than half the predominantly minority tracts are located within 8 miles of the CBD in all nine places.

Income segregation of home purchases by distance from the CBD varied considerably among the nine MSAs, but was generally less severe than segregation by race and ethnicity (Figure 4). For instance, home buying in the 8 miles closest to CBD accounted for about 40 percent of low-income borrowers' total in Hartford, Philadelphia, and Portland, and fully 59 percent in Milwaukee, but not more than 22 percent (and as little as 8 percent) in the other five MSAs. Unsurprisingly, geographically large MSAs like Houston and Atlanta had high shares of borrowers of all income classes, including more than 30 percent of low-income home buyers, buying homes at least 20 miles from the CBD, as did Detroit. With the exception of Milwaukee, a majority of low-income borrowers were buying homes at least eight miles from the CBD, indicating ongoing decentralization of low-income buyers in these places.

¹⁹ See Appendix A for central business district definitions.

²⁰ See Appendix B for distance band selection methods.

Figure 4a: Share of Buyers by Borrower and Tract Income Characteristics (percent)

Total		Borrower Income (%AMI)			Tract Income (%AMI)		
		<80	80-119.9	>=120	<80	80-119.9	>=120
All 9 MSAs							
8 mi. or less	481,540	22.1	14.5	14.3	50.7	14.8	9.7
8.01-14 mi.	738,771	28.8	26.1	23.3	21.3	29.1	24.2
14.01-20 mi.	700,005	21.5	25.9	25.9	7.3	21.8	32.5
20+ miles	939,317	27.7	33.6	36.5	20.7	34.3	33.5
Total Count	2,859,633	916,361	804,355	1,138,917	318,149	1,301,118	1,208,428
Atlanta							
8 mi. or less	59,153	11.1	9.2	12.6	39.2	6.5	9.4
8.01-14 mi.	78,257	18.6	13.0	12.3	17.7	17.2	12.7
14.01-20 mi.	128,588	24.7	23.2	24.3	6.1	24.4	29.9
20+ miles	266,770	45.6	54.6	50.8	37.1	51.9	48.0
Total Count	532,768	185,887	150,556	196,325	185,887	150,556	196,325
Detroit							
8 mi. or less	24,046	8.2	3.7	3.0	25.8	2.6	2.0
8.01-14 mi.	118,454	35.8	24.8	13.7	38.9	33.1	9.6
14.01-20 mi.	111,296	21.0	26.2	23.7	7.3	22.0	30.5
20+ miles	220,714	35.1	45.3	59.6	28.0	42.4	58.0
Total Count	474,510	171,695	139,487	163,328	171,695	139,487	163,328
Hartford							
8 mi. or less	31,034	37.5	30.8	27.2	50.4	32.4	26.4
8.01-14 mi.	32,940	31.6	31.9	38.3	31.1	28.1	46.8
14.01-20 mi.	23,894	21.7	26.8	25.7	8.6	27.5	22.7
20+ miles	9,206	9.2	10.5	8.8	9.9	12.0	4.1
Total Count	97,074	34,322	30,324	32,428	34,322	30,324	32,428
Houston							
8 mi. or less	46,320	12.9	8.6	14.5	38.6	7.1	10.1
8.01-14 mi.	67,526	30.8	17.7	10.9	36.7	26.9	9.9
14.01-20 mi.	105,601	25.9	33.4	28.3	4.5	26.9	35.6
20+ miles	147,198	30.4	40.2	46.3	20.1	39.1	44.4
Total Count	366,645	108,025	87,695	170,925	108,025	87,695	170,925
Miami							
8 mi. or less	47,207	20.9	19.5	28.7	79.7	23.0	13.3
8.01-14 mi.	79,142	46.2	41.7	38.0	14.4	56.5	36.9
14.01-20 mi.	59,034	26.3	34.2	30.1	4.0	11.1	48.1
20+ miles	8,385	6.6	4.7	3.1	2.0	9.4	1.7
Total Count	193,768	41,655	56,309	95,804	41,655	56,309	95,804
Milwaukee							
8 mi. or less	51,275	59.0	38.7	23.4	94.1	45.9	13.4
8.01-14 mi.	30,732	16.2	21.9	29.2	4.3	16.2	37.5
14.01-20 mi.	24,350	12.0	18.3	23.0	0.5	14.6	28.2
20+ miles	26,700	12.9	21.2	24.4	1.1	23.3	20.9
Total Count	133,057	38,209	42,893	51,955	38,209	42,893	51,955
Philadelphia							
8 mi. or less	89,918	40.3	17.3	10.2	78.5	22.4	6.9
8.01-14 mi.	89,423	20.4	24.0	21.8	10.1	22.8	24.1
14.01-20 mi.	90,892	16.8	23.4	26.1	3.6	19.9	29.8
20+ miles	137,547	22.6	35.3	41.9	7.8	35.0	39.2
Total Count	407,780	135,426	108,288	164,066	135,426	108,288	164,066
Phoenix							
8 mi. or less	58,972	22.1	10.1	8.6	37.1	12.7	6.7
8.01-14 mi.	150,586	34.8	35.3	33.9	16.4	31.8	43.1
14.01-20 mi.	127,273	24.0	31.2	32.4	18.5	24.1	37.4
20+ miles	98,146	19.0	23.4	25.1	28.0	31.4	12.8
Total Count	434,977	146,774	118,935	169,268	146,774	118,935	169,268
Portland							
8 mi. or less	73,615	41.6	32.0	30.2	76.0	24.4	35.4
8.01-14 mi.	91,711	35.3	42.0	45.5	11.3	44.5	53.3
14.01-20 mi.	29,077	11.2	13.8	14.1	0.0	18.1	9.4
20+ miles	24,651	11.9	12.3	10.1	12.7	13.0	1.8
Total Count	219,054	54,368	69,868	94,818	54,368	69,868	94,818

Source: Authors' tabulations of 1933-1999 HMDA data.

Figure 4b: Share of Buyers by Borrower and Tract Racial Characteristics (percent)

Total	Borrower Race				Tract Minority Percentage			
	Asian	Black	Hispanic	White	<10	10-19.9	20-49.9	>=50
All 9 MSAs								
8 mi. or less	17.7	27.0	27.0	14.3	11.3	17.8	21.3	37.5
8.01-14 mi.	27.0	34.1	34.5	23.8	23.8	27.0	27.5	35.2
14.01-20 mi.	31.2	25.0	27.9	23.7	22.5	30.8	27.8	23.0
20+ miles	24.1	13.8	10.6	38.2	42.4	24.4	23.4	4.3
Total Count	72,680	246,069	246,239	2,066,608	1,616,982	476,969	434,533	299,211
Atlanta								
8 mi. or less	4.9	12.9	7.3	11.0	4.3	12.8	16.1	39.7
8.01-14 mi.	19.4	32.0	21.4	10.2	6.0	20.8	31.6	40.7
14.01-20 mi.	31.6	35.0	32.4	20.9	22.6	36.1	27.9	15.5
20+ miles	44.0	20.0	38.9	57.9	67.0	30.3	24.4	4.1
Total Count	13,998	89,672	11,862	379,133	302,592	92,921	71,105	44,643
Detroit								
8 mi. or less	6.2	21.7	14.2	3.1	2.5	3.7	10.3	40.9
8.01-14 mi.	15.1	51.6	30.6	22.5	23.1	20.2	34.8	51.0
14.01-20 mi.	32.5	15.2	16.9	24.2	23.7	29.5	34.2	3.2
20+ miles	46.2	11.5	38.2	50.3	50.6	46.6	20.8	4.9
Total Count	8,812	42,520	3,527	391,971	394,480	33,013	20,637	26,019
Hartford								
8 mi. or less	53.2	73.6	63.8	26.6	25.1	47.9	64.9	98.9
8.01-14 mi.	31.6	20.8	26.1	35.3	35.2	38.4	24.7	0.0
14.01-20 mi.	10.4	4.6	5.5	27.6	29.2	5.4	7.1	1.1
20+ miles	4.8	1.0	4.7	10.5	10.4	8.3	3.3	0.0
Total Count	1,495	5,973	3,826	79,089	78,447	9,796	6,190	2,623
Houston								
8 mi. or less	6.9	9.2	16.2	12.7	12.3	8.8	9.3	27.0
8.01-14 mi.	20.8	34.2	40.0	11.9	7.5	7.9	21.8	48.4
14.01-20 mi.	51.4	40.1	25.3	26.2	5.9	33.1	42.2	20.6
20+ miles	20.9	16.5	18.5	49.2	74.3	50.1	26.6	4.0
Total Count	18,156	28,420	52,856	232,836	74,892	100,165	136,808	49,743
Miami								
8 mi. or less	16.0	19.8	22.1	32.6	1.3	7.7	25.0	25.5
8.01-14 mi.	46.2	57.7	38.3	40.1	98.7	92.3	36.8	37.4
14.01-20 mi.	34.6	18.2	36.4	20.6	0.0	0.0	29.3	34.3
20+ miles	3.2	4.3	3.3	6.8	0.0	0.0	9.0	2.8
Total Count	2,185	19,427	112,718	41,249	2,517	10,485	55,055	124,990
Milwaukee								
8 mi. or less	51.1	79.0	83.7	33.6	31.6	63.0	63.1	100.0
8.01-14 mi.	33.4	19.0	8.6	23.5	22.8	31.9	33.2	0.0
14.01-20 mi.	11.2	1.6	5.4	20.2	21.4	5.1	3.7	0.0
20+ miles	4.3	0.4	2.4	22.7	24.2	0.0	0.0	0.0
Total Count	1,835	8,676	3,111	111,253	110,295	9,010	8,214	5,471
Philadelphia								
8 mi. or less	36.3	59.8	68.6	14.8	16.3	17.8	39.1	72.7
8.01-14 mi.	23.0	14.5	11.6	23.3	24.5	20.0	15.1	8.1
14.01-20 mi.	20.9	15.2	9.3	23.7	19.8	39.9	14.7	12.9
20+ miles	19.8	10.5	10.5	38.2	39.4	22.3	31.1	6.3
Total Count	9,844	41,342	12,112	309,537	279,378	68,161	34,508	25,495
Phoenix								
8 mi. or less	14.1	22.8	40.6	10.3	5.0	15.0	24.6	51.5
8.01-14 mi.	39.1	37.1	30.4	35.0	33.4	44.8	31.5	5.7
14.01-20 mi.	31.7	25.2	18.1	30.6	32.6	35.5	15.0	26.6
20+ miles	15.1	14.9	10.9	24.2	28.9	4.8	28.9	16.2
Total Count	7,476	7,847	41,941	336,816	218,198	105,226	94,036	17,336
Portland								
8 mi. or less	41.0	64.6	31.5	32.9	25.2	49.5	85.5	100.0
8.01-14 mi.	50.7	29.0	38.6	41.5	46.9	37.1	7.1	0.0
14.01-20 mi.	6.1	5.2	16.4	13.7	15.3	10.6	0.0	0.0
20+ miles	2.2	1.3	13.6	11.9	12.6	2.8	7.4	0.0
Total Count	8,879	2,192	4,286	184,724	156,183	48,192	7,980	2,891

Source: Authors' tabulations of 1933-1999 HMDA data.

Further evidence for the dispersal of low-income borrowers comes from data on the share of low-income purchases in low-income tracts. In several places (Atlanta, Phoenix, Detroit, Hartford, and Houston), these purchases are notably more spread out than the tracts themselves. The difference is most pronounced in Atlanta where 62 percent of low-income tracts are in the inner band, but only 39 percent of all *purchases made in low-income tracts* take place in this band. The disparity between the share of low-income tracts in the inner band and the share of purchases occurring in low-income tracts likely reflects buyers' continued preference to leave central cities, even if the area they choose outside of the inner band is still a low-income area.²¹

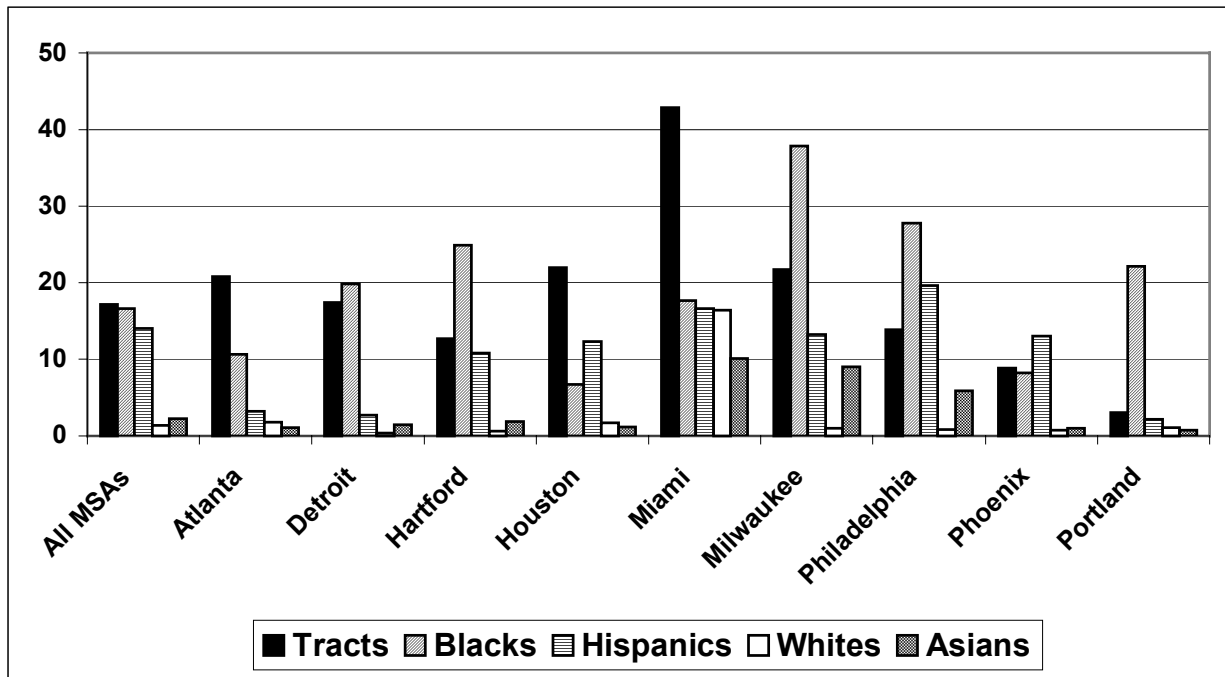
Despite the fact that more than half of the predominantly minority tracts were located within 8 miles of the CBD, only 27 percent of Blacks and Hispanics and only 18 percent of Asians bought homes within that closest ring. The race-by-distance data suggest that there are two types of MSAs, those where minority purchasers are heavily concentrated in central areas, and those where minorities have been able to move to the middle rings. In Atlanta, Detroit, Houston, Miami, and Phoenix, black and Hispanic buyers are purchasing homes mostly in the second and third rings (Figure 4). In Hartford, Milwaukee and to a lesser extent Portland and Philadelphia, however, black and Hispanic buyers remain concentrated near the urban core. In fact as many as from 60 to 84 percent, of black and Hispanic homebuyers in Hartford, Milwaukee, and Philadelphia purchased homes within 8 miles of the CBD. And this despite the fact that white purchases were fairly evenly dispersed across our four distance categories in these places.

As Figure 5 indicates, in many places the *share of blacks buying in majority minority tracts near the CBD* actually exceeds the share of all tracts with these characteristics in these areas. In other words, black home buyers are to some degree concentrating in predominantly minority inner census tracts in Milwaukee, Philadelphia, Hartford, Portland, and are slightly over-represented among them in Detroit.

Only in Miami and Houston, the places where mostly white tracts represent the smallest shares of the total, are less than half of all white purchases made outside mostly white tracts. Where the share of mostly white tracts is high (Hartford 62 percent, Milwaukee 57 percent, Philadelphia 58 percent, Portland 63 percent), the share of whites buying in these tracts (88 percent, 91 percent, 76 percent, 74 percent) is even higher, and spread across all distance bands. This pattern is repeated in places like Atlanta and Phoenix where 68 and 55 percent of whites bought in mostly white tracts though only 35 and 33 percent of all tracts are mostly white.

²¹Further evidence of the preference for suburban style living comes from high-income tract results. Though only 25 percent of higher-income census tracts are located 20 miles or more from the CBD, 34 percent of purchases in high-income tracts occurred there.

Figure 5: Share of All Tracts that are Majority Minority and Located in Inner Distance Band, and Share of Purchases in These Tracts by Borrower Race/Ethnicity



Minorities are not necessarily settling in less segregated communities outside the innermost ring. In fact, although 69 percent of all predominantly minority tracts are located in the innermost band across the nine metro areas, only 38 percent of *purchases by minorities in predominantly minority tracts* occurred in this band. Thus, the majority of minority purchases in mostly minority tracts are occurring more than eight miles out from the CBD.

Whites are far more likely to buy 20 miles or more from the CBD in every area. There is evidence from each MSA that whites and minorities are not heading for the same zones of the MSA. In the 9 MSAs combined, just 3 percent of whites and 9 percent of Asians bought homes in predominantly minority tracts, while 40 percent of blacks and 46 percent of Hispanics did so (Figure 6). The differential between an MSA's share of mostly white tracts and the share of blacks purchasing homes in these tracts is generally quite large. Milwaukee is the leader in this regard with 12 percent of black purchases occurring in mostly white tracts though these tracts represent 57 percent of the total, a ratio of nearly 1 to 5.

Figure 6a: Location by Tract Minority Percentage and Distance to CBD of Borrowers by Race/Ethnicity 1993-99 (percent)

Tract Minority %	Asian Borrowers					Black Borrowers				
	<10	10-19.99	20-49.99	>= 50	Total	<10	10-19.99	20-49.99	>= 50	Total
All 9 MSAs										
8 mi. or less	6.4	4.5	4.4	2.2	17.6	3.4	2.2	4.9	16.6	27.0
8.01=14 mi.	11.8	6.0	5.8	3.5	27.1	4.0	3.9	9.5	16.9	34.4
14.01-20 mi.	10.0	7.9	10.7	2.8	31.4	4.7	6.1	8.4	5.9	25.2
20+ mi.	15.7	4.3	3.7	0.2	24.0	7.2	2.5	2.9	0.9	13.5
Total	43.8	22.7	24.7	8.8	100.0	19.3	14.7	25.7	40.3	100.0
Count	31,743	16,453	17,858	6,369	72,423	47,168	35,968	62,800	98,449	244,385
Atlanta										
8 mi. or less	1.1	1.1	1.4	1.1	4.7	0.6	0.6	1.0	10.6	12.8
8.01=14 mi.	3.2	4.2	10.2	2.0	19.6	2.2	4.3	10.1	15.9	32.5
14.01-20 mi.	15.3	10.0	6.4	0.3	32.0	8.0	10.2	10.8	6.4	35.4
20+ mi.	34.6	8.1	0.9	0.1	43.7	13.1	3.4	2.3	0.5	19.3
Total	54.3	23.4	18.9	3.4	100.0	24.0	18.4	24.2	33.4	100.0
Count	7,514	3,235	2,620	473	13,842	21,205	16,321	21,420	29,548	88,494
Detroit										
8 mi. or less	2.6	0.6	1.7	1.4	6.2	0.2	0.2	1.4	19.8	21.6
8.01=14 mi.	12.6	0.8	1.3	0.4	15.1	7.9	5.8	11.3	26.7	51.7
14.01-20 mi.	24.6	6.9	1.0	0.0	32.5	4.2	3.5	6.4	1.1	15.2
20+ mi.	38.3	6.9	0.6	0.4	46.2	7.0	1.8	1.6	1.2	11.5
Total	78.0	15.2	4.6	2.2	100.0	19.3	11.2	20.7	48.8	100.0
Count	6,873	1,340	405	190	8,808	8,188	4,776	8,780	20,744	42,488
Hartford										
8 mi. or less	34.0	10.4	6.8	1.9	53.1	11.6	11.7	25.5	24.9	73.6
8.01=14 mi.	24.4	4.9	2.3	0.0	31.6	8.4	8.8	3.7	0.0	20.9
14.01-20 mi.	9.6	0.5	0.4	0.0	10.4	3.5	0.5	0.6	0.0	4.6
20+ mi.	3.7	1.1	0.0	0.0	4.8	0.6	0.2	0.1	0.0	1.0
Total	71.8	16.9	9.5	1.9	100.0	24.0	21.2	29.9	24.9	100.0
Count	1,072	252	142	28	1,494	1,433	1,268	1,783	1,487	5,971
Houston										
8 mi. or less	1.7	1.3	2.5	1.2	6.7	0.3	0.4	1.2	6.7	8.7
8.01=14 mi.	1.1	1.5	8.1	10.1	20.8	0.2	0.6	13.2	20.7	34.7
14.01-20 mi.	0.2	9.7	34.3	7.4	51.6	0.2	5.2	22.0	13.2	40.6
20+ mi.	3.9	6.3	10.4	0.3	20.9	2.9	5.1	7.3	0.8	16.0
Total	7.0	18.8	55.3	19.0	100.0	3.6	11.3	43.7	41.4	100.0
Count	1,261	3,404	9,999	3,430	18,094	1,018	3,167	12,261	11,621	
Miami										
8 mi. or less	0.0	0.2	5.5	10.1	15.8	0.0	0.1	1.7	17.7	19.6
8.01=14 mi.	1.5	6.1	20.2	18.5	46.3	0.7	1.3	11.4	44.4	57.8
14.01-20 mi.	0.0	0.0	11.2	23.4	34.7	0.0	0.0	5.1	13.1	18.3
20+ mi.	0.0	0.0	2.3	0.9	3.2	0.0	0.0	1.6	2.7	4.3
Total	1.5	6.3	39.2	53.0	100.0	0.7	1.4	19.9	78.0	100.0
Count	33	137	855	1,156	2,181	141	269	3,859	15,100	19,369
Milwaukee										
8 mi. or less	17.7	10.9	13.5	9.0	51.1	5.2	13.5	22.4	37.9	79.0
8.01=14 mi.	24.2	4.8	4.4	0.0	33.4	4.6	5.1	9.3	0.0	19.0
14.01-20 mi.	10.8	0.2	0.2	0.0	11.2	1.6	0.0	0.0	0.0	1.6
20+ mi.	4.3	0.0	0.0	0.0	4.3	0.4	0.0	0.0	0.0	0.4
Total	57.0	15.9	18.1	9.0	100.0	11.8	18.6	31.7	37.9	100.0
Count	1,046	291	333	165	1,835	1,022	1,609	2,753	3,289	8,673
Philadelphia										
8 mi. or less	12.0	6.6	11.9	5.9	36.3	14.4	5.2	12.4	27.8	59.8
8.01=14 mi.	16.0	5.9	1.0	0.2	23.0	5.4	2.2	3.2	3.8	14.5
14.01-20 mi.	12.2	7.3	0.7	0.7	20.9	3.1	5.4	1.9	4.7	15.2
20+ mi.	16.3	2.1	1.2	0.3	19.8	3.9	2.2	3.7	0.7	10.5
Total	56.4	21.9	14.7	7.0	100.0	26.8	15.0	21.2	37.0	100.0
Count	5,551	2,152	1,449	687	9,839	11,075	6,194	8,742	15,286	41,297
Phoenix										
8 mi. or less	1.6	4.7	6.8	1.0	14.1	1.2	3.9	9.5	8.2	22.8
8.01=14 mi.	17.0	14.8	7.2	0.1	39.1	10.2	10.2	16.3	0.4	37.1
14.01-20 mi.	12.6	14.7	3.4	1.0	31.7	9.9	9.1	4.3	1.9	25.2
20+ mi.	8.3	0.4	6.2	0.3	15.1	8.3	0.5	5.2	0.9	14.9
Total	39.4	34.6	23.6	2.4	100.0	29.6	23.7	35.3	11.4	100.0
Count	2,944	2,589	1,763	177	7,473	2,323	1,861	2,766	891	7,841
Portland										
8 mi. or less	20.3	16.9	3.1	0.7	41.0	10.2	12.6	19.8	22.1	64.7
8.01=14 mi.	34.7	16.0	0.1	0.0	50.9	19.5	9.4	0.1	0.0	29.1
14.01-20 mi.	4.6	1.5	0.0	0.0	6.1	4.3	0.9	0.0	0.0	5.2
20+ mi.	1.9	0.1	0.1	0.0	2.0	0.9	0.1	0.0	0.0	1.1
Total	61.5	34.5	3.3	0.7	100.0	34.9	23.0	20.0	22.1	100.0
Count	5,449	3,053	292	63	8,857	763	503	436	483	2,185

Source: Authors' tabulations of 1993-99 HMDA data.

Figure 6b: Location by Tract Minority Percentage and Distance to CBD of Borrowers by Race/Ethnicity 1993-99 (percent)

Tract Minority %	Hispanic Borrowers					White Borrowers				
	<10	10-19.99	20-49.99	>= 50	Total	<10	10-19.99	20-49.99	>= 50	Total
All 9 MSAs					26.8					
8 mi. or less	2.5	2.2	8.2	14.0	26.8	7.3	3.1	2.4	1.3	14.2
8.01=14 mi.	3.1	3.7	11.4	16.5	34.7	16.2	4.6	2.6	0.7	24.1
14.01-20 mi.	2.0	3.0	8.6	14.5	28.0	15.3	5.2	2.9	0.6	24.0
20+ mi.	3.8	2.0	3.5	1.2	10.5	29.2	4.5	3.6	0.3	37.7
Total	11.5	10.8	31.7	46.1	100.0	68.1	17.4	11.6	2.9	100.0
Count	28,068	26,324	77,534	112,919	244,845	1,388,833	355,830	236,980	58,221	2,039,866
Atlanta										
8 mi. or less	0.9	1.0	1.9	3.2	7.0	3.1	2.9	2.6	1.8	10.4
8.01=14 mi.	3.2	5.3	10.9	2.5	21.9	3.9	3.6	2.6	0.7	10.7
14.01-20 mi.	10.9	11.8	9.6	0.8	33.1	14.6	5.3	1.9	0.2	22.0
20+ mi.	29.0	7.1	1.8	0.1	38.0	46.6	6.0	3.9	0.4	56.9
Total	44.0	25.1	24.3	6.6	100.0	68.3	17.7	11.0	3.0	100.0
Count	5,109	2,920	2,818	768	11,615	245,849	63,895	39,669	10,791	360,204
Detroit										
8 mi. or less	2.6	1.5	7.3	2.7	14.1	2.2	0.2	0.2	0.4	3.0
8.01=14 mi.	24.2	3.1	2.2	1.2	30.7	20.8	0.9	0.5	0.3	22.5
14.01-20 mi.	13.7	1.6	1.4	0.2	16.9	21.4	1.7	1.0	0.1	24.2
20+ mi.	27.1	4.8	4.5	1.9	38.3	46.1	3.2	0.8	0.1	50.3
Total	67.6	11.0	15.5	5.9	100.0	90.5	6.2	2.5	0.9	100.0
Count	2,380	387	547	208	3,522	354,585	24,090	9,634	3,361	391,670
Hartford										
8 mi. or less	17.0	19.7	16.2	10.8	63.8	20.7	3.4	1.9	0.6	26.6
8.01=14 mi.	9.4	3.9	12.8	0.0	26.1	31.1	3.4	0.9	0.0	35.3
14.01-20 mi.	5.0	0.3	0.3	0.0	5.5	26.6	0.6	0.4	0.0	27.6
20+ mi.	1.4	2.2	1.0	0.0	4.7	9.5	0.8	0.2	0.0	10.5
Total	32.7	26.1	30.3	10.8	100.0	87.9	8.2	3.3	0.6	100.0
Count	1,252	1,000	1,159	415	3,826	69,511	6,451	2,633	482	79,077
Houston										
8 mi. or less	0.5	0.6	2.3	12.3	15.6	3.3	3.2	4.1	1.7	12.3
8.01=14 mi.	0.3	2.5	19.3	18.4	40.5	2.0	2.4	5.4	2.3	12.1
14.01-20 mi.	0.5	4.7	16.6	3.8	25.6	1.6	10.5	13.5	1.0	26.6
20+ mi.	3.8	5.9	7.4	1.1	18.3	20.5	17.3	10.8	0.4	49.0
Total	5.0	13.7	45.6	35.6	100.0	27.4	33.4	33.7	5.5	100.0
Count	2,630	7,156	23,797	18,595	52,178	62,857	76,533	77,348	12,517	229,255
Miami										
8 mi. or less	0.0	0.2	5.0	16.6	21.8	0.0	1.2	14.6	16.4	32.3
8.01=14 mi.	0.8	2.8	8.0	26.8	38.4	2.8	12.2	15.5	9.7	40.2
14.01-20 mi.	0.0	0.0	7.9	28.6	36.5	0.0	0.0	10.2	10.5	20.7
20+ mi.	0.0	0.0	1.8	1.5	3.3	0.0	0.0	4.8	2.0	6.8
Total	0.8	2.9	22.8	73.5	100.0	2.8	13.4	45.1	38.6	100.0
Count	943	3,288	25,570	82,530	112,331	1,166	5,526	18,517	15,881	41,090
Milwaukee										
8 mi. or less	24.9	21.5	24.1	13.2	83.7	27.9	2.9	1.7	1.0	33.6
8.01=14 mi.	5.7	1.3	1.6	0.0	8.6	20.3	1.9	1.4	0.0	23.5
14.01-20 mi.	3.9	0.5	1.0	0.0	5.4	19.6	0.4	0.2	0.0	20.2
20+ mi.	2.4	0.0	0.0	0.0	2.4	22.7	0.0	0.0	0.0	22.7
Total	36.8	23.2	26.7	13.2	100.0	90.5	5.2	3.3	1.0	100.0
Count	1,145	722	831	412	3,110	100,622	5,746	3,668	1,156	111,192
Philadelphia										
8 mi. or less	27.8	7.4	13.8	19.6	68.5	10.2	2.3	1.4	0.8	14.8
8.01=14 mi.	8.9	1.7	0.8	0.3	11.7	18.8	3.5	1.0	0.1	23.3
14.01-20 mi.	3.6	3.2	1.2	1.3	9.3	15.4	6.9	1.2	0.3	23.7
20+ mi.	5.3	2.2	2.6	0.4	10.5	31.3	4.1	2.5	0.3	38.2
Total	45.6	14.5	18.3	21.6	100.0	75.7	16.7	6.1	1.5	100.0
Count	5,526	1,751	2,220	2,609	12,106	234,162	51,739	18,879	4,590	309,370
Phoenix										
8 mi. or less	0.6	4.4	22.5	13.0	40.5	2.9	3.5	3.2	0.7	10.2
8.01=14 mi.	6.3	7.3	16.1	0.8	30.5	18.2	11.1	5.4	0.2	35.0
14.01-20 mi.	4.5	6.1	5.0	2.5	18.1	18.1	8.7	3.0	0.9	30.6
20+ mi.	4.5	0.6	4.6	1.1	10.9	16.0	1.2	6.4	0.5	24.2
Total	15.9	18.5	48.2	17.4	100.0	55.2	24.6	17.9	2.2	100.0
Count	6,660	7,730	20,215	7,292	41,897	185,892	82,948	60,430	7,433	336,703
Portland										
8 mi. or less	12.9	11.5	5.1	2.1	31.6	18.3	10.8	2.9	1.1	33.1
8.01=14 mi.	27.2	9.1	2.5	0.0	38.8	34.3	7.8	0.2	0.0	42.3
14.01-20 mi.	6.9	9.6	0.0	0.0	16.5	11.7	2.3	0.0	0.0	14.0
20+ mi.	10.0	1.9	1.2	0.0	13.1	9.7	0.6	0.3	0.0	10.6
Total	56.9	32.2	8.8	2.1	100.0	74.0	21.5	3.4	1.1	100.0
Count	2,423	1,370	377	90	4,260	134,193	38,902	6,202	2,010	181,307

Source: Authors' tabulations of 1993-99 HMDA data.

This is of special concern because of the possibility that the “success” of minority homebuyers in moving away from urban cores is being met by white efforts to leave these areas. If this is the case, suburban segregation of minority owners may be replacing urban segregation of minority renters that many of these new minority owners intended to leave behind in the urban core (Orfield and Yun 1999).

Turning to the share of blacks purchasing homes in low-income areas (Figure 7), we find that the share increases with distance from the CBD in Atlanta, Detroit and to some extent Houston. This is also true of Hispanics in these places, and in Miami. In contrast, black purchases in low-income tracts are concentrated closer to the CBD in Hartford, Milwaukee, Philadelphia, and Portland.

Blacks that bought homes in high-income areas tend to be concentrated in one distance band, though which band varies from one MSA to the next. In Detroit, for example, 68 percent of black borrowers in high-income areas bought between 8 and 14 miles out, while Hartford, Miami, Philadelphia, and Milwaukee have similar concentrations in high-income tracts in either the first or second distance band.

More than any other group Hispanics have been concentrating in middle-income areas, but the location of these tracts again varies in each place. These areas were close to the CBD in Hartford, Milwaukee, Philadelphia, and Portland, but less so elsewhere. Whites and Asians both avoided low-income tracts generally, especially near the city center, but moderate shares of them bought close to downtown in Hartford, Philadelphia, and Milwaukee.

**Figure 7a: Distance to CBD by Tract Income (1990)
by Race of Borrower, 1993-99 (percent)**

	Asian				Black			
	<80% AMI	80-119.9	>=120% A	Total (%)	<80% AMI	80-119.10	>=120% A	Total (%)
All 9 MSAs								
8 mi. or less	7.4	6.6	3.6	17.6	4.9	15.6	8.4	28.8
8.01=14 mi.	2.3	12.7	12.0	27.1	7.5	6.2	19.3	33.0
14.01-20 mi.	0.6	11.7	19.0	31.4	8.7	1.0	14.0	23.7
20+ mi.	0.8	8.3	15.0	24.0	6.7	1.6	6.2	14.5
Total (%)	11.1	39.3	49.6	100.0	27.7	24.5	47.8	100.0
Total (Count)	8,046	28,458	35,919	72,423	72,423	63,983	124,761	261,167
Atlanta								
8 mi. or less	1.5	1.3	1.9	4.7	0.8	9.3	3.8	13.9
8.01=14 mi.	3.0	10.8	5.8	19.6	3.4	5.5	22.9	31.8
14.01-20 mi.	0.5	14.1	17.4	32.0	5.5	1.2	27.4	34.1
20+ mi.	0.8	16.2	26.6	43.7	7.5	2.4	10.3	20.3
Total (%)	5.8	42.5	51.7	100.0	17.2	18.4	64.4	100.0
Total (Count)	803	5,881	7,158	13,842	14,757	51,723	22,014	88,494
Detroit								
8 mi. or less	5.1	0.8	0.3	6.2	1.3	16.8	3.3	21.3
8.01=14 mi.	2.8	9.8	2.6	15.1	3.1	18.3	27.4	48.8
14.01-20 mi.	0.6	11.1	20.8	32.5	6.6	1.1	6.5	14.2
20+ mi.	3.1	10.0	33.1	46.2	9.4	3.0	3.3	15.6
Total (%)	11.6	31.7	56.7	100.0	20.4	39.1	40.5	100.0
Total (Count)	1,021	2,790	4,997	8,808	16,927	17,545	8,016	42,488
Hartford								
8 mi. or less	6.4	33.5	13.2	53.1	11.7	16.4	45.7	73.8
8.01=14 mi.	3.1	12.7	15.7	31.6	7.0	4.0	7.7	18.7
14.01-20 mi.	0.4	7.3	2.7	10.4	2.3	0.5	2.8	5.6
20+ mi.	0.3	3.6	0.9	4.8	1.1	0.1	0.7	1.9
Total (%)	10.3	57.2	32.5	100.0	22.1	21.0	56.9	100.0
Total (Count)	154	854	486	1,494	1,424	3,850	697	5,971
Houston								
8 mi. or less	1.4	1.4	3.9	6.7	3.4	5.0	0.9	9.3
8.01=14 mi.	2.9	11.5	6.4	20.8	10.5	5.6	13.6	29.7
14.01-20 mi.	0.4	20.4	30.8	51.6	26.0	0.5	17.4	43.9
20+ mi.	0.2	6.5	14.2	20.9	10.5	1.2	5.4	17.1
Total (%)	4.9	39.8	55.4	100.0	50.5	12.2	37.3	100.0
Total (Count)	881	7,195	10,018	18,094	4,388	13,375	10,304	28,067
Miami								
8 mi. or less	5.9	4.8	5.1	15.8	2.1	14.5	6.9	23.5
8.01=14 mi.	0.3	17.5	28.5	46.3	6.2	3.0	52.0	61.1
14.01-20 mi.	0.6	3.0	31.1	34.7	4.6	2.0	3.5	10.1
20+ mi.	0.0	2.2	1.0	3.2	0.4	0.5	4.3	5.2
Total (%)	6.8	27.5	65.7	100.0	13.4	19.9	66.7	100.0
Total (Count)	149	599	1,433	2,181	3,240	10,850	5,279	19,369
Milwaukee								
8 mi. or less	24.2	23.1	3.8	51.1	9.4	43.2	24.5	77.1
8.01=14 mi.	0.8	11.3	21.3	33.4	6.1	1.4	11.8	19.4
14.01-20 mi.	0.0	4.3	7.0	11.2	2.1	0.0	0.5	2.6
20+ mi.	0.0	1.9	2.4	4.3	0.8	0.0	0.2	1.0
Total (%)	25.0	40.5	34.4	100.0	18.4	44.6	37.0	100.0
Total (Count)	459	744	632	1,835	4,450	3,691	532	8,673
Philadelphia								
8 mi. or less	20.3	12.3	3.7	36.3	7.9	32.1	20.4	60.3
8.01=14 mi.	2.1	7.7	13.1	23.0	5.0	1.7	7.6	14.2
14.01-20 mi.	0.3	6.4	14.2	20.9	4.5	1.0	8.4	13.9
20+ mi.	0.2	6.8	12.8	19.8	4.3	0.8	6.4	11.5
Total (%)	23.0	33.2	43.8	100.0	21.6	35.6	42.8	100.0
Total (Count)	2,261	3,270	4,308	9,839	16,190	19,470	5,637	41,297
Phoenix								
8 mi. or less	5.5	6.7	1.9	14.1	8.4	7.4	5.8	21.6
8.01=14 mi.	2.2	11.8	25.0	39.1	23.4	2.0	10.2	35.6
14.01-20 mi.	2.7	8.1	21.0	31.7	19.0	2.0	5.4	26.3
20+ mi.	1.1	9.6	4.4	15.1	9.1	1.5	6.0	16.6
Total (%)	11.6	36.2	52.2	100.0	59.8	12.9	27.3	100.0
Total (Count)	864	2,705	3,904	7,473	1,615	3,413	2,813	7,841
Portland								
8 mi. or less	15.7	17.3	8.1	41.0	34.0	9.0	3.4	46.4
8.01=14 mi.	0.6	26.7	23.6	50.9	42.1	0.2	3.6	45.9
14.01-20 mi.	0.0	4.3	1.8	6.1	5.0	0.0	0.8	5.8
20+ mi.	0.2	1.7	0.2	2.0	1.7	0.0	0.2	1.9
Total (%)	16.4	49.9	33.7	100.0	82.8	9.3	7.9	100.0
Total (Count)	1,454	4,420	2,983	8,857	992	844	349	2,185

Source: Authors' tabulations of 1993-99 HMDA data.

**Figure 7: Distance to CBD by Tract Income (1990)
by Race of Borrower, 1993-99 (percent)**

	Hispanic				White			
	<80% AMI	80-119.11	>=120% A	Total (%)	<80% AMI	80-119.12	>=120% A	Total (%)
All 9 MDS								
8 mi. or less	0.9	18.5	10.1	29.6	5.1	1.7	15.1	21.9
8.01=14 mi.	4.9	23.6	3.6	32.1	10.4	6.2	19.6	36.2
14.01-20 mi.	6.3	17.3	0.8	24.5	4.5	10.6	15.8	30.9
20+ mi.	3.5	9.3	1.1	13.8	3.2	1.9	5.9	11.0
Total (%)	15.6	68.7	15.6	100.0	23.2	20.4	56.4	100.0
Total (Count)	55,614	100,597	88,634	244,845	166,638	953,102	920,128	2,039,868
Atlanta								
8 mi. or less	0.7	10.1	0.4	11.3	0.8	0.9	3.7	5.4
8.01=14 mi.	5.3	25.7	0.4	31.4	7.7	1.8	11.6	21.1
14.01-20 mi.	7.5	28.1	0.1	35.7	11.3	5.4	17.5	34.2
20+ mi.	6.1	15.3	0.2	21.6	10.0	9.1	20.1	39.2
Total (%)	19.7	79.2	1.1	100.0	29.8	17.3	52.9	100.0
Total (Count)	1,256	6,558	3,801	11,615	25,289	165,619	169,296	360,204
Detroit								
8 mi. or less	1.0	17.8	0.8	19.6	1.3	0.2	8.3	9.8
8.01=14 mi.	4.2	42.6	0.5	47.3	12.4	1.0	18.1	31.5
14.01-20 mi.	6.1	12.5	0.1	18.7	5.1	4.1	10.0	19.2
20+ mi.	4.3	9.5	0.7	14.5	9.2	7.7	22.6	39.5
Total (%)	15.5	82.4	2.1	100.0	28.0	13.0	59.0	100.0
Total (Count)	1,075	1,670	777	3,522	31,355	209,552	150,763	391,670
Hartford								
8 mi. or less	2.4	53.6	10.9	66.9	23.0	2.2	39.9	65.1
8.01=14 mi.	5.5	15.2	6.9	27.6	4.9	2.2	16.3	23.3
14.01-20 mi.	0.6	3.3	0.2	4.1	2.7	0.5	3.4	6.7
20+ mi.	0.0	0.7	0.7	1.4	1.9	0.1	2.9	4.9
Total (%)	8.5	72.8	18.7	100.0	32.5	5.0	62.5	100.0
Total (Count)	1,531	1,989	306	3,826	3,715	49,923	25,439	79,077
Houston								
8 mi. or less	0.6	4.6	12.4	17.6	1.0	0.7	9.1	10.8
8.01=14 mi.	5.4	18.2	12.9	36.5	13.9	2.1	23.7	39.6
14.01-20 mi.	9.3	21.3	0.7	31.4	7.4	7.2	15.0	29.5
20+ mi.	4.0	8.4	2.1	14.5	4.9	4.5	10.7	20.1
Total (%)	19.3	52.6	28.1	100.0	27.1	14.5	58.4	100.0
Total (Count)	15,033	24,194	12,951	52,178	16,964	68,123	144,168	229,255
Miami								
8 mi. or less	0.8	10.3	25.1	36.3	4.5	2.6	11.5	18.7
8.01=14 mi.	6.2	30.5	6.4	43.1	9.8	9.4	20.3	39.5
14.01-20 mi.	7.2	9.7	0.8	17.7	2.6	16.5	19.3	38.4
20+ mi.	0.1	2.3	0.6	3.0	1.2	0.4	1.7	3.4
Total (%)	14.4	52.8	32.9	100.0	18.2	28.9	52.8	100.0
Total (Count)	12,060	38,745	61,526	112,331	4,496	9,668	26,926	41,090
Milwaukee								
8 mi. or less	0.9	62.0	16.6	79.5	16.7	0.8	59.6	77.1
8.01=14 mi.	2.9	14.9	0.1	17.9	3.4	2.6	6.1	12.0
14.01-20 mi.	0.8	1.3	0.0	2.2	2.2	1.6	3.8	7.5
20+ mi.	0.1	0.3	0.0	0.5	0.9	0.8	1.7	3.3
Total (%)	4.8	78.4	16.7	100.0	23.1	5.7	71.2	100.0
Total (Count)	1,851	1,009	250	3,110	6,096	58,730	46,366	111,192
Philadelphia								
8 mi. or less	1.5	46.6	10.6	58.7	13.9	0.8	45.7	60.3
8.01=14 mi.	3.3	11.3	0.4	15.1	4.9	1.6	7.8	14.3
14.01-20 mi.	3.8	11.9	0.2	15.8	3.5	2.2	6.2	11.9
20+ mi.	2.0	8.2	0.2	10.4	4.5	1.9	7.0	13.4
Total (%)	10.6	77.9	11.4	100.0	26.8	6.5	66.6	100.0
Total (Count)	6,047	4,874	1,185	12,106	17,790	143,281	148,299	309,370
Phoenix								
8 mi. or less	0.5	6.8	39.0	46.3	9.2	0.7	25.0	34.8
8.01=14 mi.	5.2	11.0	7.1	23.4	10.4	5.6	18.8	34.7
14.01-20 mi.	4.0	7.5	7.6	19.1	4.4	3.8	11.1	19.3
20+ mi.	0.9	4.4	5.9	11.2	3.8	0.6	6.7	11.1
Total (%)	10.7	29.7	59.6	100.0	27.8	10.7	61.6	100.0
Total (Count)	15,728	18,889	7,280	41,897	39,280	135,410	162,013	336,703
Portland								
8 mi. or less	2.5	39.6	20.0	62.1	6.6	1.9	18.0	26.4
8.01=14 mi.	6.4	17.8	5.0	29.1	15.1	4.6	22.1	41.8
14.01-20 mi.	0.8	3.2	0.0	4.0	8.5	0.9	9.4	18.8
20+ mi.	0.1	0.6	4.0	4.8	5.4	0.1	7.5	13.0
Total (%)	9.8	61.3	29.0	100.0	35.6	7.5	56.9	100.0
Total (Count)	1,033	2,669	558	4,260	21,653	112,796	46,858	181,307

Borrower Income, Tract Income, Distance

As indicated by Figure 8, low-income borrowers in all MSAs were far more likely to buy in middle-income tracts, and about as likely to buy in high-income tracts, as they were to buy in low-income tracts. Low-income buyers were least likely to purchase homes in low-income tracts in Hartford, Atlanta, and Miami, where in each only about 15 percent did so.

Figure 8: Ratio of Low-Income Buyers' Purchases in Middle- and High-Income Tracts to Their Purchases in Low-Income Tracts, 1993-99

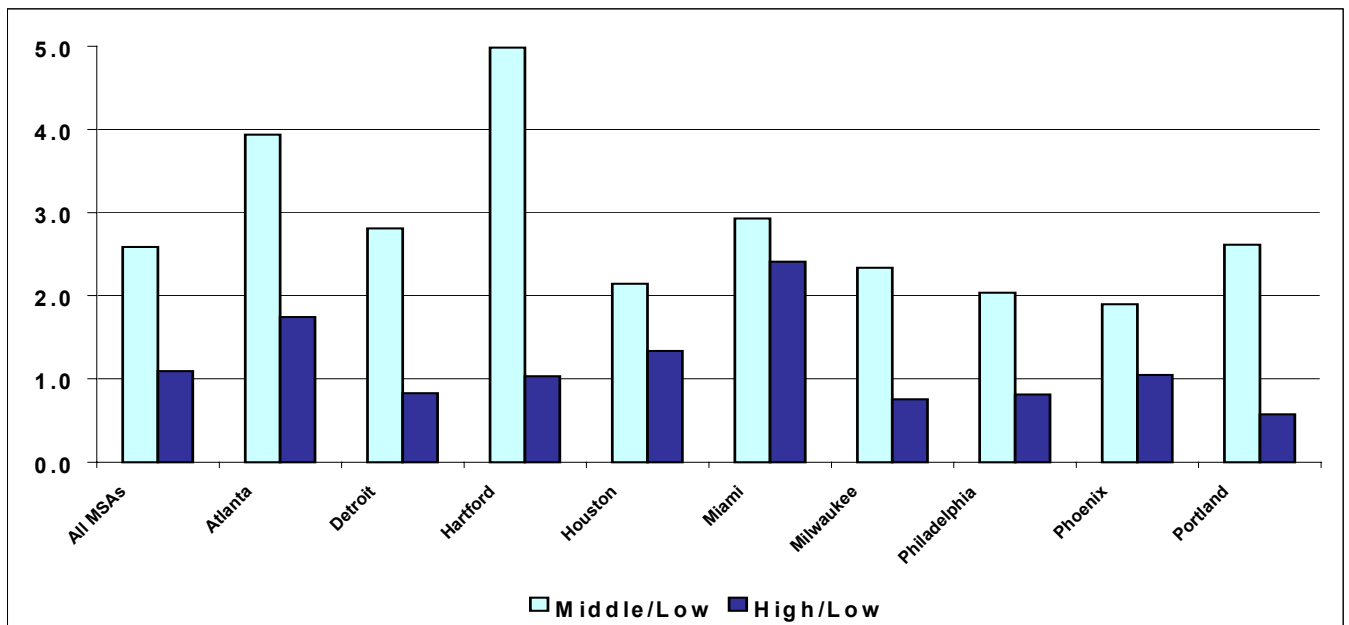


Figure 9 shows that, despite some cross-MSA similarities, low-income buyers purchasing in low-income tracts did so mostly within different distant bands in different MSAs. In Milwaukee, for instance, where 57 percent of low-income borrowers purchased homes in middle-income tracts, 58 percent of these tracts were located within 8 miles of the CBD. The pattern was quite different in Atlanta, Detroit, Houston, and Phoenix, where low-income purchases in middle-income tracts were spread evenly throughout the 2nd, 3rd, and 4th income bands. The pattern of low-income buyers' purchases in high-income tracts also varies from one MSA to the next. Nearly half of these purchases in Atlanta and Detroit occurred more than 20 miles from the CBD, and 70 percent or more occurred at least 14 miles from the CBD in Detroit, Houston, and Philadelphia. In contrast, low-income buyers' purchases in high-income tracts in Hartford, Phoenix, and Portland were concentrated much closer to the CBD.

Figure 9: Location by Tract Income and Distance to CBD of Borrowers by Income and MSA 1993-99 (percent)

Tract Income	Low Income Borrowers (%AMI)				Middle Income Borrowers (%AMI)				High Income Borrowers (%AMI)			
	< 80	80-119.99'	120+	Total	< 80	80-119.99'	120+	Total	< 80	80-119.99'	120+	Total
All 9 MSAs												
8 mi. or less	11.3	8.9	1.7	21.9	4.2	7.4	2.7	14.3	2.3	4.7	7.1	14.2
8.01-14 mi.	4.9	18.3	6.1	29.3	1.9	15.4	9.1	26.4	0.8	8.1	14.7	23.5
14.01-20 mi.	1.3	12.2	8.3	21.9	0.8	11.6	13.8	26.1	0.4	7.2	18.5	26.1
20+ mi.	3.8	15.8	7.3	26.9	2.3	18.5	12.4	33.2	1.1	13.8	21.3	36.3
Total	21.4	55.3	23.3	100.0	9.2	52.8	37.9	100.0	4.6	33.8	61.5	100.0
Count	192,447	497,969	210,272	900,688	73,388	420,040	301,771	795,199	52,314	383,109	696,385	1,131,808
Atlanta												
8 mi. or less	5.8	3.0	1.6	10.4	2.8	3.1	2.6	8.6	1.8	3.3	7.2	12.3
8.01-14 mi.	3.0	12.9	4.0	19.8	1.1	8.0	4.4	13.5	0.6	4.3	7.6	12.5
14.01-20 mi.	0.9	17.7	7.8	26.4	0.5	12.2	11.5	24.1	0.2	6.0	18.6	24.8
20+ mi.	5.3	25.4	12.7	43.4	3.3	29.3	21.2	53.8	1.4	21.4	27.6	50.4
Total	15.0	58.9	26.1	100.0	7.7	52.6	39.7	100.0	4.1	35.0	61.0	100.0
Count	26,056	102,610	45,481	174,147	11,157	75,980	57,349	144,486	7,825	67,340	117,463	192,628
Detroit												
8 mi. or less	5.9	1.9	0.2	8.1	1.7	1.3	0.6	3.6	0.8	0.8	1.4	2.9
8.01-14 mi.	9.4	24.6	1.9	35.8	2.5	18.7	3.6	24.8	0.8	7.7	5.2	13.7
14.01-20 mi.	1.3	13.7	6.0	21.0	0.8	13.3	12.2	26.2	0.4	7.1	16.3	23.7
20+ mi.	4.9	20.5	9.7	35.1	2.5	24.3	18.5	45.3	1.8	21.1	36.7	59.6
Total	21.6	60.6	17.8	100.0	7.4	57.7	34.9	100.0	3.8	36.7	59.6	100.0
Count	36,995	103,969	30,565	171,529	10,344	80,440	48,605	139,389	6,172	59,842	97,217	163,231
Hartford												
8 mi. or less	7.4	26.2	3.9	37.5	2.8	21.4	6.5	30.8	1.0	12.7	13.5	27.2
8.01-14 mi.	4.5	20.6	6.6	31.6	2.0	18.9	11.1	31.9	0.5	13.0	24.8	38.3
14.01-20 mi.	1.0	17.0	3.6	21.7	0.6	19.1	7.1	26.8	0.3	15.5	9.9	25.7
20+ mi.	1.3	7.2	0.6	9.2	0.7	8.6	1.2	10.5	0.2	6.7	1.9	8.8
Total	14.2	71.0	14.7	100.0	6.1	68.0	25.9	100.0	2.0	47.9	50.1	100.0
Count	4,889	24,375	5,050	34,314	1,844	20,624	7,853	30,321	661	15,516	16,244	32,421
Houston												
8 mi. or less	8.2	1.9	1.8	11.9	3.3	2.3	2.7	8.3	2.3	2.8	9.3	14.4
8.01-14 mi.	9.2	18.0	4.3	31.5	3.3	9.6	5.0	18.0	1.3	3.4	6.4	11.0
14.01-20 mi.	0.9	12.6	13.0	26.5	0.5	11.8	21.6	33.9	0.2	5.7	22.6	28.5
20+ mi.	4.1	15.4	10.7	30.1	2.5	16.1	21.2	39.8	1.0	10.6	34.4	46.0
Total	22.3	47.9	29.8	100.0	9.6	39.9	50.5	100.0	4.8	22.5	72.7	100.0
Count	23,592	50,562	31,513	105,667	8,321	34,502	43,679	86,502	8,201	38,079	123,159	169,439
Miami												
8 mi. or less	11.8	6.5	2.4	20.6	9.0	7.5	2.6	19.1	7.8	8.5	12.2	28.5
8.01-14 mi.	2.8	30.0	13.6	46.4	2.0	24.5	15.3	41.9	0.9	11.2	26.0	38.1
14.01-20 mi.	0.7	4.5	21.2	26.3	0.6	4.8	28.9	34.3	0.3	2.8	27.1	30.2
20+ mi.	0.6	5.2	0.9	6.7	0.2	3.7	0.7	4.7	0.1	1.9	1.1	3.1
Total	15.8	46.2	38.0	100.0	11.8	40.6	47.6	100.0	9.1	24.5	66.4	100.0
Count	6,549	19,175	15,798	41,522	6,628	22,746	26,650	56,024	8,677	23,368	63,456	95,501
Milwaukee												
8 mi. or less	23.4	33.1	2.4	59.0	6.8	27.8	4.1	38.7	2.4	13.0	8.0	23.3
8.01-14 mi.	0.8	8.5	6.9	16.2	0.5	10.1	11.3	21.9	0.2	6.7	22.3	29.2
14.01-20 mi.	0.1	5.9	5.9	12.0	0.0	8.1	10.1	18.3	0.0	8.1	14.9	23.0
20+ mi.	0.1	9.5	3.3	12.9	0.1	14.7	6.3	21.2	0.1	11.5	12.9	24.5
Total	24.4	57.1	18.5	100.0	7.4	60.7	31.9	100.0	2.6	39.3	58.0	100.0
Count	9,328	21,798	7,059	38,185	3,189	26,026	13,662	42,877	1,372	20,425	30,131	51,928
Philadelphia												
8 mi. or less	21.9	16.9	1.4	40.2	4.1	10.7	2.5	17.2	1.2	4.4	4.6	10.1
8.01-14 mi.	2.1	13.2	5.1	20.4	1.1	13.4	9.5	24.0	0.3	6.1	15.4	21.9
14.01-20 mi.	0.7	9.0	7.1	16.8	0.4	11.6	11.5	23.4	0.2	7.4	18.5	26.1
20+ mi.	1.2	13.9	7.5	22.6	1.0	20.4	14.0	35.4	0.5	14.8	26.6	41.9
Total	26.0	53.0	21.1	100.0	6.6	56.0	37.4	100.0	2.2	32.7	65.1	100.0
Count	35,150	71,695	28,503	135,348	7,106	60,615	40,493	108,214	3,616	53,556	106,808	163,980
Phoenix												
8 mi. or less	11.5	8.9	1.7	22.0	3.4	4.5	2.2	10.1	1.5	2.4	4.7	8.5
8.01-14 mi.	4.0	18.1	12.7	34.9	2.3	14.3	18.7	35.3	1.0	7.3	25.6	33.9
14.01-20 mi.	3.9	10.4	9.8	24.1	2.9	11.1	17.2	31.2	1.5	8.3	22.7	32.5
20+ mi.	6.0	10.7	2.3	19.0	4.4	14.9	4.1	23.4	2.1	13.0	9.9	25.1
Total	25.3	48.1	26.6	100.0	13.1	44.8	42.1	100.0	6.1	31.0	62.9	100.0
Count	37,165	70,553	38,979	146,697	15,554	53,231	50,100	118,885	10,380	52,465	106,369	169,214
Portland												
8 mi. or less	19.0	18.4	4.7	42.0	9.9	16.3	6.0	32.2	4.2	11.9	14.2	30.4
8.01-14 mi.	2.6	26.4	7.0	36.0	1.5	30.4	10.9	42.8	0.7	25.4	20.1	46.2
14.01-20 mi.	0.0	9.6	1.8	11.4	0.0	11.7	2.4	14.0	0.0	11.4	2.9	14.3
20+ mi.	2.3	8.0	0.2	10.5	2.1	8.5	0.3	10.9	0.9	7.5	0.8	9.1
Total	23.9	62.4	13.7	100.0	13.5	67.0	19.5	100.0	5.8	56.2	38.0	100.0
Count	12,723	33,232	7,324	53,279	9,245	45,876	13,380	68,501	5,410	52,518	35,538	93,466

Source: Authors' tabulations of 1993-99 HMDA.

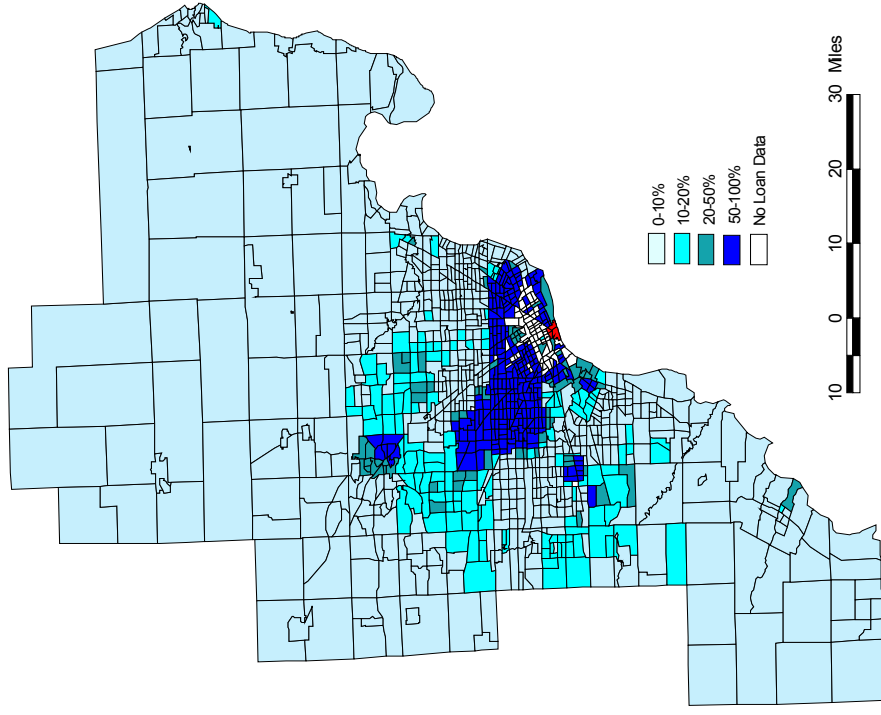
V. Mapping

Collectively, the results of the preceding section indicate that, while all buyers are decentralizing, whites and Asians have done so to a greater extent than blacks and Hispanics. Mapping results from the study cities (see pp. 30-33) can demonstrate whether home buying by low-income people and minorities appears to be resulting in desegregation or resegregation. In this section we attempt to develop an impression of settlement patterns as they have unfolded over the 1990s in four MSAs with a substantial minority presence. We look at two MSAs with relatively large African-American shares, Detroit and Philadelphia, and two with large Hispanic shares, Phoenix and Houston. By and large, we find that while some of both groups are able to select homes in sectors farther out, both low-income and minority buyers are concentrated near the urban core. Comparing results from low-income and minority maps shows that low-income buyers have been more likely to move outward, and that minorities cluster in areas where there are large concentrations of minority borrowers to a greater extent than low-income buyers.

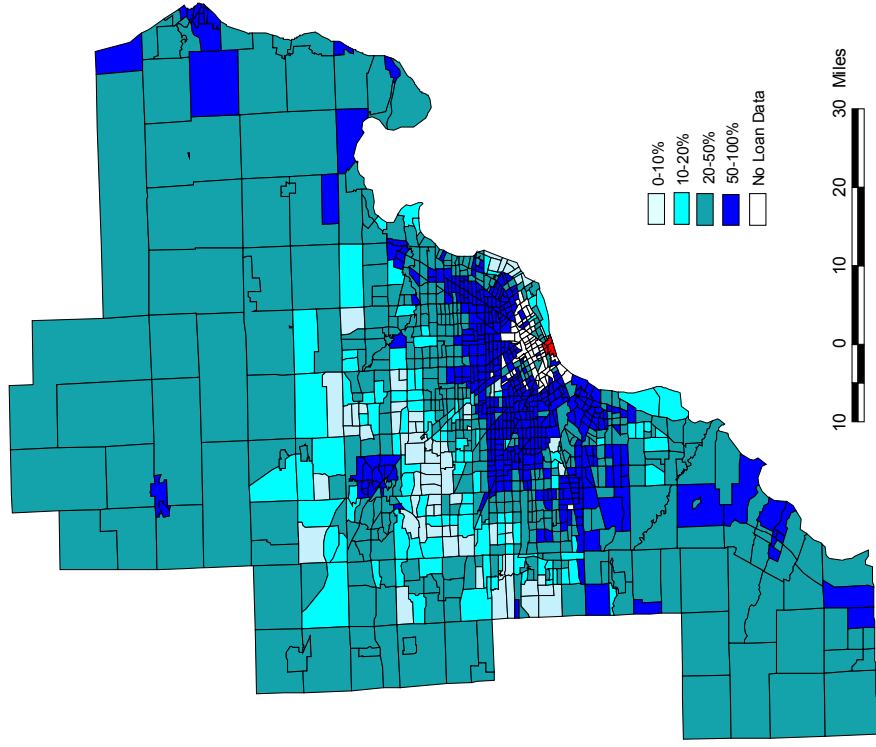
The Detroit maps show distinct clusterings of both low-income and minority buyers around the CBD. Comparing the two maps, however, shows tracts with high shares of minority buyers to be less dispersed and more tightly clustered near the city center. Further, they are more likely to be contiguous to one another. The pattern in Philadelphia is similar, as both minorities and low-income home buying focused on the city center. In both places, there are large areas where minorities made up less than 10 percent of all homebuyers, yet where low-income purchasers comprised 10-20, or 20-50 percent of the total. While both Houston and Phoenix show concentrations of low-income and minority borrowers close to downtown, there are also significant shares of both types of buyers outside the core area.

Contrasting the two sets of cities shows Phoenix and Houston relatively free of places where either low-income or minority borrowers comprise less than 10 percent of the total. Philadelphia and Detroit had many such tracts. While we are reluctant to speculate on an explanation for this discrepancy, it seems likely to be related to the mix of minorities in each place and to the stock of developable land. We suspect that it is generally easier for all groups to move out of the central city in Houston and Phoenix where undeveloped land is common, and that Hispanics in these places have been better able to escape concentration in core urban areas than have blacks in Philadelphia and Detroit.

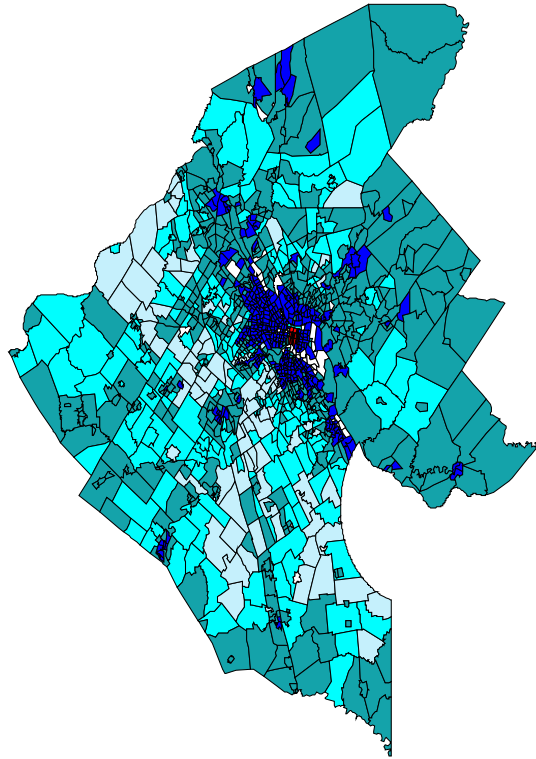
Detroit: Share of All Loans Made to Minorities by Census Tract, 1993-99



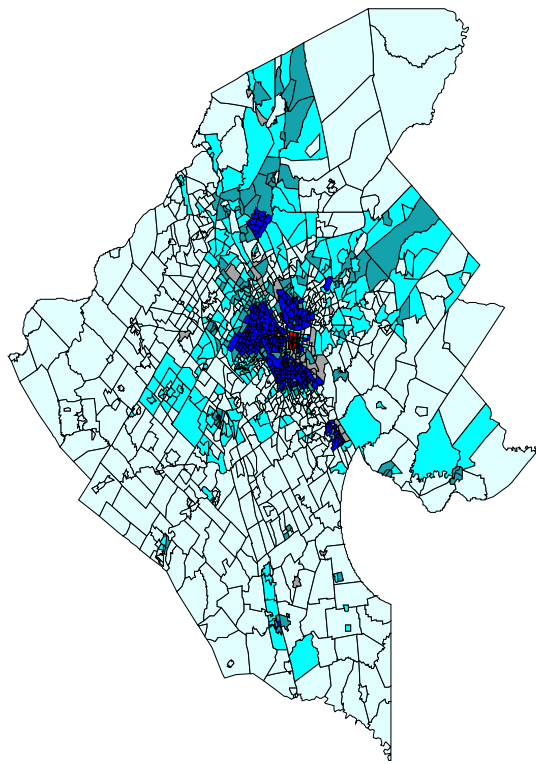
Detroit: Share of All Loans Made to Low-Income Borrowers by Census Tract, 1993-99



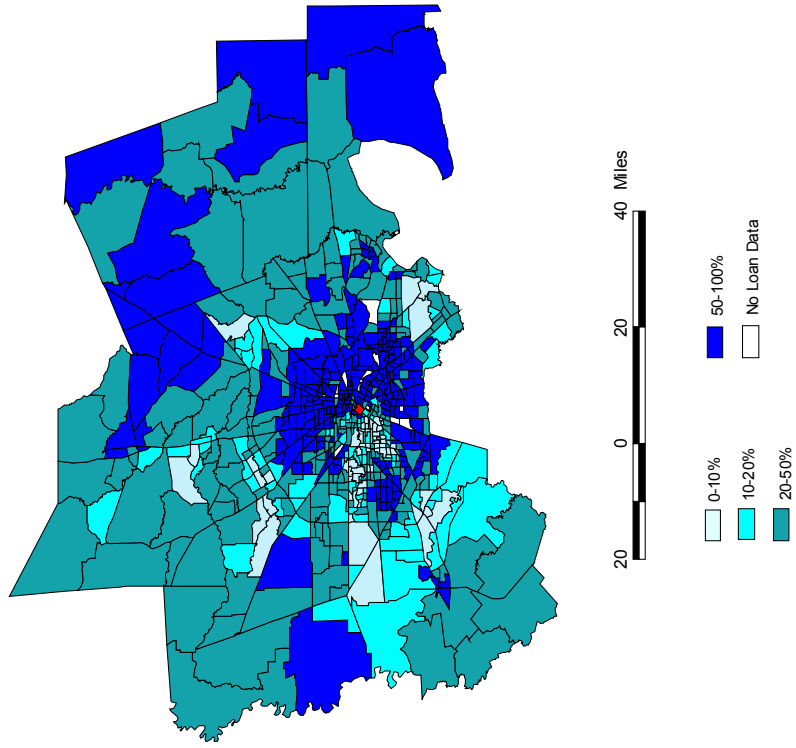
Philadelphia: Share of All Loans Made to Low-Income Borrowers by Census Tract, 1993-99



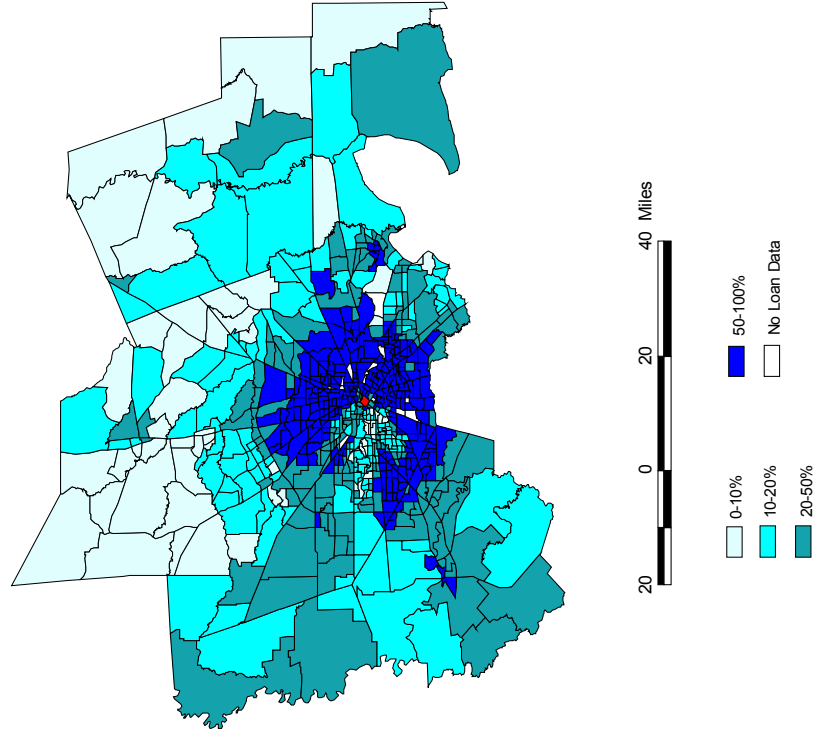
Philadelphia: Share of All Loans Made to Minorities by Census Tract, 1993-99



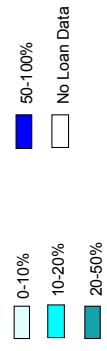
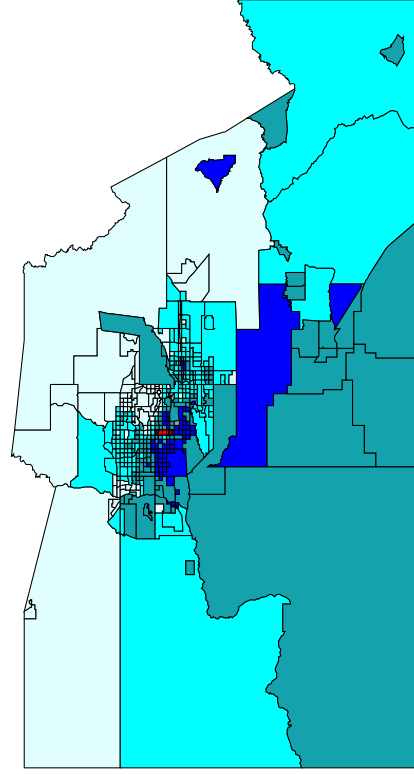
Houston: Share of All Loans Made to Low-Income Borrowers by Census Tract, 1993-99



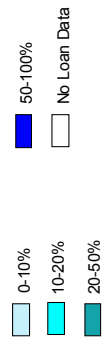
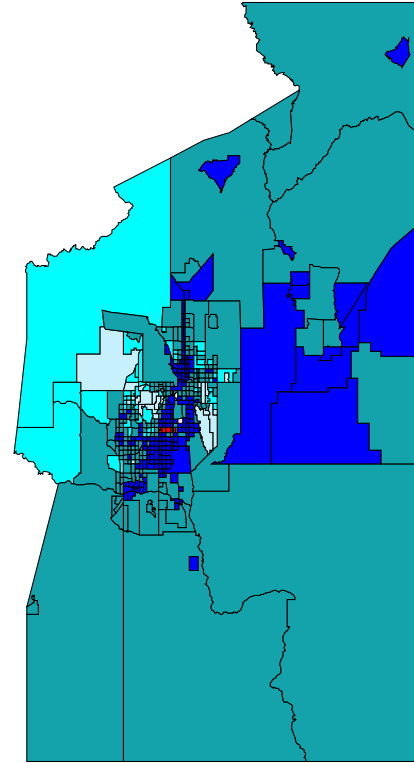
Houston: Share of All Loans Made to Minorities by Census Tract, 1993-99



Phoenix: Share of All Loans Made to Minorities by Census Tract, 1993-99



Phoenix: Share of All Loans Made to Low-Income Borrowers by Census Tract, 1993-99



VI. Conclusion

Rapidly escalating homeownership in the 1990s has been associated with greater progress for low-income and especially minority households than for others. Both income and wealth constraints to obtaining a mortgage have been significantly relaxed and the industry has expanded its outreach at a time of unusually rapid economic growth and modest interest rates. Meanwhile, public policies ranging from the Community Reinvestment Act to affordable housing goals for Fannie Mae and Freddie Mac to fair housing laws and enforcement, have encouraged the private market to better serve low-income and minority markets and reduce gaps in homeownership rates. While progress has been made, significant gaps in the homeownership between whites and minorities remain. Most research has found that these gaps are largely accounted for by the lower average wealth and incomes of minorities and the greater proportions of recent immigrants and of single person and parent households among them. Nonetheless, others argue that some fraction of the gap reflects ongoing discrimination in housing markets or other factors such as more weakly developed credit histories.

In terms of the types of homes that low-income homebuyers have been purchasing, manufactured housing has played a particularly important role in satisfying their demand. More than one-quarter of such buyers purchased manufactured homes nationwide in 1997, and in the South in 1997 fully 40 percent bought them. In the Northeast and in central cities, apartment condos also have played an important role in meeting low-income ownership demand—as much as one-quarter—but for only about 10 percent of that demand nationwide. Compared to continuing low-income renters, low-income recent buyers who previously rented are in more spacious accommodations and report higher levels of satisfaction with their homes.

It is apparent that large shares of low-income and minority borrowers are purchasing in the suburbs and outside of low-income census tracts. It is equally clear that very few high-income borrowers are purchasing homes in low-income inner-city census tracts. The extent to which the move to low-income homeownership has been associated with a move to opportunity remains an open question, but it appears that it has led to at least some income mixing in the suburbs. Indeed, significant portions of low-income borrowers in the suburbs have been purchasing homes in moderate and middle-income census tracts. It also appears, however, that it has not led to materially lower levels of segregation by race in the case of blacks, but it is less clear whether

it has done so for ethnic Hispanics. It is also the case that whites and Asians have largely avoided buying homes in areas where a majority of other buyers over the 1993-99 period have been minorities. In both the cases of the income and the race/ethnicity of home buyers, however, clustering remains more the rule than the exception. Low-income home buyers, although less clustered near the urban core than low-income renters, nevertheless are far more likely to buy near the CBD than are high-income buyers. Minorities also tend to purchase homes closer to the CBD but the degree to which this is the case varies widely in the nine MSAs examined, and is truer for blacks than Hispanics. In most places, there are many census tracts where more than half of buyers are low-income and are minorities, and these are typically contiguously located close to the center of the city.

In considering these results, it is important to remember that they are a preliminary step in moving beyond national level analysis, and past the traditional city-suburb metropolitan dichotomy. While we feel that our distance to CBD measure has value, it obviously has less explanatory power in places with multiple employment centers.

Much work remains to be done to better describe and understand the spatial pattern of low-income home buying and its implications. First, there is a need for more studies of home buyer segregation and patterns at the metropolitan level along the lines done by Stuart (2000) and Immergluck (1998). These are the most promising of the studies done on understanding the spatial expression of increasing homeownership among minorities and those with low incomes. Second, more cross-sectional comparisons of these patterns are needed to shed light on their determinants and on their regularity. Third, econometric models aimed at testing hypotheses about the role that push and pull forces play in explaining intra-metropolitan and intermetropolitan differences in home buying patterns by race, ethnicity, and income are needed. Fourth, and perhaps most importantly, destinations of low-income and minority home buyers need to be correlated with neighborhood and educational quality, as well as economic opportunities, to determine whether the move to homeownership is resulting in benefits beyond the private pecuniary gains that at least some low-income and minority buyers reap.

Appendix A: Central Business District Definitions

We define the center of the MSA as the centroid of the polygon formed by combining all of the tracts comprising the central business district (CBD). Using MSA census tract maps from the Census Bureau in a GIS, and the Census Bureau's CBD tract definitions (Census 1982) we built these polygons and calculated their center points. We then calculated the centroids of each tract in the MSA and measured the distance from these points to the center of the CBD polygon.

Our choice of distance-to-central business district (CBD) as a key characteristic in our analysis of low-income home buying, assumes that it best proxies the location of the highest concentration of economic activity of an MSA.²² According to the Alonso-Muth model of land-rent gradients, buyers radiate out from a core area by trading off commuting time and other amenities against land costs. While this theory of MSA organization has been rendered suspect by studies documenting the migration of jobs to suburban areas such as that of Garreau (1991), it was not possible to locate all of these "edge cities" and make multiple and overlapping distance measures from each tract centroid to different points within each MSA. The fact that housing is priced by quality, which is largely a function of the age of the stock/unit, and newer stock is progressively farther out from the CBD means there is still reason to expect distance-related differences in the quality and hence desirability of the stock.

²² We chose CBD rather than an alternate measure of the MSA's center because it seemed less arbitrary and more likely to be a commuter node, than other options. We considered using the tract where the city hall is located but rejected it for this reason.

Appendix B: Developing Distance Bands

Clearly there is a danger that in selecting a single set of distance bands for all MSAs we are homogenizing differences in settlement patterns of MSAs. While acknowledging this danger, we are forced to make assumptions in order to get beyond the locational concepts embodied in the terms “central city” and “suburbs” which are clearly inadequate for comparisons of the extent to which low-income buyers are purchasing homes outside of the urban core in cities like Hartford and Houston. In general, since most MSAs develop around a core urban area that is surrounded by what are now considered inner and middle-ring suburbs, we expect the greatest differences between MSAs to lie in the outer suburbs. In fact, none of the MSAs examined here had particularly large shares of loans 30 miles or more from the CBD and more than 80 percent of all census tracts are within 20 miles of the CBD.

Figure B1: Share of MSA Home Purchases by Tract Distance from CBD

Distance	All MSA	Atlanta	Detroit	Hartford	Houst.	Miami	Milw.	Phil.	Phoenix	Portland
<= 2 mi.	1.7	2.1	0.6	2.0	1.2	2.1	1.3	2.6	1.1	2.7
2.01-4 mi.	3.6	3.0	0.2	7.8	2.9	6.7	7.8	3.0	2.9	8.8
4.01-6 mi.	5.1	2.7	1.0	11.5	3.9	6.2	16.5	6.9	3.8	10.5
6.01-8 mi.	6.5	3.2	3.2	10.6	4.6	9.4	12.9	9.5	5.8	11.7
8.01-10 mi.	7.8	4.3	7.6	11.3	4.2	11.6	9.3	8.0	8.3	15.8
10.01-12 mi.	9.3	5.3	8.9	12.7	7.2	14.1	9.2	6.5	13.7	14.6
12.01-14 mi.	8.7	5.1	8.7	10.0	7.0	15.1	4.6	7.4	12.6	11.5
14.01-16 mi.	9.5	6.9	8.0	9.6	9.1	15.7	7.4	9.8	14.5	5.4
16.01-18 mi.	7.3	8.8	7.9	9.2	8.7	7.7	5.2	6.6	6.0	3.8
18.01-20 mi.	7.7	8.4	7.4	5.8	11.4	7.1	5.7	5.9	8.8	4.1
20.01-25 mi.	14.5	19.9	18.0	8.6	20.6	2.1	8.3	16.2	11.3	4.7
25.01-30 mi.	9.1	16.0	11.8	0.9	9.2	1.4	6.0	9.9	6.7	1.8
30.01-40 mi.	6.6	11.9	10.1	0.0	6.7	0.3	5.8	6.8	1.7	3.7
> 40 mi.	2.6	2.3	6.6	0.0	3.3	0.6	0.0	1.0	2.8	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Figure B1 shows that one-quarter of all loans in these MSAs were made within 10 miles of the CBD, half within 16 miles and more than four-fifths within 25 miles of the CBD. There is considerable variation in the distribution of lending by distance-to-CBD among the MSAs, with nearly 50 percent of Atlanta's purchases beyond 20 miles, against 10 percent for Hartford and Portland, and just 4.4 percent for Miami. Likewise, while the overall share of purchases within 6

miles was 10 percent, Detroit's share was less than 2 percent while Hartford, Milwaukee, and Portland each exceeded 20 percent.

Figure B2: Share of Tracts in 4 Distance-to-CBD Bands

	All MSAs	Atlanta	Detroit	Hartford	Houston	Miami	Milw.	Phil.	Phoenix	Portland
8 mi. or less	47.4	50.7	35.3	45.2	49.4	71.8	71.1	42.2	40.0	56.0
8.01-14mi.	21.7	13.7	24.4	26.0	21.4	19.7	12.7	20.2	31.8	27.0
14.01-20 mi.	13.4	12.7	17.3	19.9	11.3	5.2	7.8	14.5	17.0	7.3
20+ mi.	17.5	22.8	23.0	9.0	18.0	3.3	8.4	23.1	11.1	9.7

At a finer level, opportunities to buy in a given tract are related to the population in those tracts. If, for example, most tracts near the CBD contain fewer people, then it would be unsurprising to find few borrowers of any incomes and races in these areas.

Appendix C: Home Mortgage Disclosure Act Data Cleaning for 9 MSAs

In building our database, we first eliminated all records that were not in the nine MSAs we chose to study, including only loans approved for the purchase of 1-4 family homes. In all cases where the MSA was part of a CMSA, which we avoided due to complications with our distance-to-CBD measure we use only the PMSA including the city we were interested in. This meant, for example, removing records of Racine from the Milwaukee CMSA to get the Milwaukee PMSA.²³ This left a total of 2,859,650 loans in our study sites during the period 1993.

We follow the conventions established in the annual FFIEC HMDA press releases in classifying applicants into income and race categories. For income this means establishing categories based on the annual metropolitan area median income (AMI) estimates supplied by HUD. These are released annually so borrower incomes reported in the HMDA data are compared to the MSA median income estimate for the year in which the loan was made in order to classify the applicant into low-, middle-, and upper-income categories corresponding to less than 80, 80-119.99, and 120 percent or more of area median income.

The race variable is based on a combination of the applicant and coapplicant races reported in lenders' HMDA filings. If there is no coapplicant or both the applicant and coapplicant are of the same race, then the borrower is considered to be of that race. If either the applicant or coapplicant is white but the other listed party is not, then the application is considered “mixed.” For the purpose of our race/ethnicity analyses we consider only Asian, Black, Hispanic, and White applicants, dropping American Indian, Other, and mixed borrowers.²⁴

Figure C1: Summary Characteristics of Loans in Combined 9 City HMDA Database

Borrower Characteristics		Tract Characteristics	
Income v. MSA Median		Median Income v. MSA	
<80% AMI	916,361	<80% AMI	318,14
80-119.99	804,355	80-119.99	1,301,1
120% or more	1,138,917	120% or more	1,208,4
Race/Ethnicity		Minority Percentage (1990)	
Asian	72,680	<10%	1,616,9
Black	246,069	10-19.99%	476,96
Hispanic	246,239	20-49.99%	434,53
White	2,066,608	50+%	299,21

²³ The following is a list of PMSAs in our study with their removed PMSAs. Detroit: Ann Arbor, Flint. Houston: Galveston, Brazoria. Miami: Ft. Lauderdale. Milwaukee: Racine. Philadelphia: Atlantic/Cape May, Vineland, Wilmington. Portland: Salem.

²⁴ These categories are too small to provide meaningful results once the data are separated into MSAs, and divided into categories based on distance-to-CBD and tract characteristics. All told we lose 94,336 of a total of 2,725,932 observations by omitting these groups from our race tabulations.

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