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Home Financing in Kansas City and Its Contribution to Low- and Moderate-Income Neighborhood Development

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In recent years, many factors have helped make home financing more available in low- and moderate-income neighborhoods. Lower interest rates on mortgage loans have helped to reduce the monthly payments homebuyers face, while high employment rates have enabled more families in lower-income neighborhoods to qualify for home loans and to build up their savings. Affordable housing programs, homebuyer education and counseling classes, community group activities, and new regulatory and legislative incentives have also served to provide a boost to prospective homeowners in low- and moderate-income neighborhoods. Another important factor has been the significant innovations in home financing over the last decade or so that have helped to reduce the down payments on loans, expand the variety of lending instruments, and increase the quality of information available on individual borrowers.

Within the Kansas City metropolitan area, these factors have helped to increase the flow of credit going into low- and moderate-income neighborhoods. In fact, during the 1990s, home purchase lending in low- and moderate-income neighborhoods increased at a faster pace than for the entire metropolitan area.¹ A key question is what has this increased availability of credit meant for the neighborhoods themselves? Has the lending

contributed to stable or rising home values? Have homeownership rates and the prospects for new homebuyers increased over this period? Do other signs point to improving neighborhood conditions and to the type of progress that would encourage banks and other home lenders to expand their low- and moderate-income lending even further?

This article will examine changing conditions in low- and moderate-income neighborhoods in the Kansas City metropolitan area and will relate such changes to the level of home purchase lending in these neighborhoods. Much of this analysis will focus on data from the U.S. Census Bureau and will therefore follow changes between the 1990 and 2000 census years. The first part of the article will provide an overview of some of the factors influencing home lending over this period. A second part will look at low- and moderate-income neighborhoods in 1990 and how they compared to other Kansas City neighborhoods on a number of demographic and housing measures. The following section will review what changes took place in these neighborhoods between 1990 and 2000. The last section will divide low- and moderate-income census tracts into four groups according to how much home lending took place in each tract and then describe how neighborhood and housing conditions changed across these groups. This final part of the analysis is intended to explore the relationship between the availability of credit and changes in the demographic and housing conditions in low- and moderate-income neighborhoods.

OVERVIEW OF HOME LENDING TRENDS

The decade of the 1990s brought a number of dramatic changes in home lending trends and, more specifically, in lending within low- and moderate-income neighborhoods. Among such changes were economic conditions, technological innovation, regulatory and legislative changes, and an increasing role for community organizations and special lending programs.²

U.S. economic conditions since the early 1990s have provided a strong stimulus to housing markets. Two economic trends may be particularly important to homebuyers in low- and moderate-income neighborhoods. The longest period of uninterrupted economic growth in U.S. history took place between 1991 and 2001, which provided many lower-income households with the optimism and stable employment histories to pursue homeownership. A second economic stimulus to homeownership came from a substantial decline in mortgage interest rates. The average interest rate on 30-year, fixed-rate loans was 10.13 percent during 1990, but this rate fell to 6.94 percent in 1998 and further dropped to less than 6 percent for much of the period between 2003 to 2005.³ As a result, a given level of borrowing became associated with much lower mortgage payments, thereby providing an additional incentive for homeownership.

Technological innovation may have made some of the greatest contributions to lower-income home lending and homeownership in recent years. Improvements in data collection and processing have provided lenders with a much richer set of information on prospective borrowers and their neighborhoods, thus enabling lenders to make better assessments of credit risks, while also helping to lower the cost of lending through credit scoring and automated underwriting systems. Improvements in the availability of information have also allowed mortgage lenders to serve borrowers with impaired or limited credit histories and have enabled more loans to be securitized and put in the hands of a larger group of investors, thus increasing the flow of home financing into many neighborhoods. A final aspect of financial innovation—the creation of new mortgage instruments with lower down payments—is especially noteworthy. According to a recent paper published by the Federal Reserve Bank of St. Louis, these lower down payment loans are enabling many young and first-time homebuyers to enter the market and thus may be “the most plausible explanation” for recent increases in homeownership rates.⁴

From a legislative and regulatory perspective, a number of changes in the Community Reinvestment Act (CRA) and the Home Mortgage Disclosure Act (HMDA) may have helped to spur lending to low- and moderate-income homebuyers.⁵ For instance, federal legislation mandated the public disclosure of CRA ratings beginning in 1990, including disclosure of the public section of a bank's CRA performance evaluation. Another important change was the shift to a more "performance-based" CRA system in 1995, which placed greater emphasis on how well an institution performs in meeting low-income credit needs. Congress amended HMDA reporting requirements three times between 1987 and 1991 to increase the types of institutions that had to report on their home lending in urban areas and the amount of information they had to report about loan applications and borrowers. All of these changes have helped to make an institution's lending record in lower-income neighborhoods more visible to the public and have put more pressure on institutions to serve these credit needs.

A final group of factors influencing homeownership in lower-income neighborhoods has been the growth in community development corporations and special lending programs. Community development corporations have instituted a number of programs to help lower-income homebuyers and neighborhoods. Among these are homebuyer education and counseling programs; support for neighborhood restoration and rehab projects; and employment, job training, and educational assistance services. The role of special housing programs is also increasing. These programs range from state revenue bond programs for reduced-rate, low-down-payment, and first-time-homebuyer loans to a variety of federal programs and the affordable housing goals of Fannie Mae and Freddie Mac.

These various factors may have provided a turning point in the 1990s in helping to increase the flow of mortgage credit to low- and moderate-income home

buyers and neighborhoods. A remaining question, though, is what contribution this lending may have made in supporting homeownership and housing values and in addressing the challenges that lower-income neighborhoods face. In the following sections, this article will examine home purchase lending in Kansas City and how it may have influenced demographic trends in low- and moderate-income neighborhoods and housing conditions.

HOW DID LOW- AND MODERATE-INCOME NEIGHBORHOODS COMPARE TO OTHER KANSAS CITY NEIGHBORHOODS IN 1990?

The first step in measuring what progress may have occurred in lower-income neighborhoods in Kansas City during the 1990s is to assess where these neighborhoods stood at the beginning of this period. In particular, we selected a number of demographic and housing variables that might bear a close relationship to the amount of home purchase lending in a neighborhood. For instance, one way that the impact of home lending might be reflected is through the underlying demographics of the neighborhood—are residents of the neighborhood doing better, and is this improvement also reflected in a neighborhood's condition and its overall attractiveness to prospective homeowners? Another measure is through housing conditions—are more residents becoming homeowners and are housing values increasing? A wide variety of information could be used to track neighborhood conditions. However, we largely rely on U.S. Census data because this information is collected consistently over time and tracks closely with the lending data we use from HMDA reports (for more information on the data used in this article, please see Box 1 at the end of this article titled, "Data Sources and Methodology").

In 1990, 147 census tracts, or nearly 35 percent of the 426 tracts in the Kansas City metropolitan area, were low- or moderate-income tracts. To eliminate

tracts that had unusual characteristics or extremely large changes in population, we limited this study to census tracts that had more than 100 residents in both 1990 and 2000 and that had a net gain or loss of households of less than 500 during the 1990s. This left a total of 141 low- and moderate-income census tracts and 359 tracts overall. Most of these low- and moderate-income tracts are inner-city neighborhoods located

near the central business districts of Kansas City, Kansas, and Kansas City, Missouri (Map 1).

By definition, low- and moderate-income neighborhoods are made up of households with less income to meet their housing needs relative to households in other parts of the metropolitan area. As shown in Table 1, the median family income in Kansas City's low- and moderate-income neighborhoods was \$21,514 in 1990, which was just 59 percent of the median income level in middle-income neighborhoods and 38 percent of that in high-income areas. Over one-fourth of the population in these lower-income census tracts was in households living below the 1990 poverty level, and minorities made up more than half of the population (52 percent) compared to the 12 percent and 6 percent minority populations in middle- and higher-income tracts, respectively (Table 1). The 1990 unemployment rate in low- and moderate-income neighborhoods (11.6 percent) was more than twice

Map 1
Income Distribution by Census Tracts—1990
(Kansas City Metropolitan Area)

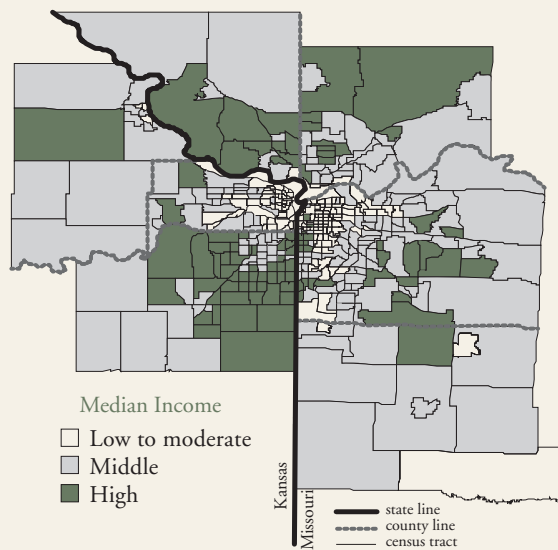


Table 1
Comparison of Low- and Moderate-Income Neighborhoods to Other Neighborhoods in 1990
(Kansas City Metropolitan Area)

	Low and Moderate Income	Middle Income	High Income
1990 Demographic and Household Characteristics:			
Median family income	\$21,514	\$36,575	\$57,321
Percent of population below poverty level	25.9%	7.7%	4.3%
Percent of population minority	52.0%	12.0%	6.0%
Unemployment rate	11.6%	5.0%	3.0%
1990 Housing Characteristics:			
Median value of owner-occupied homes	\$33,885	\$60,470	\$152,240
Homeownership rate	50.3%	68.3%	75.4%
Median age of housing	39.8 years	26.8 years	24.4 years
Percent 1-to-4 family structures	78.4%	85.8%	82.9%
Vacant property rate	15.3%	6.3%	5.6%

the rate in middle-income neighborhoods and nearly four times that of high-income neighborhoods.

The 1990 housing characteristics of Kansas City neighborhoods generally reflected the neighborhood income levels. As indicated in Table 1, the median value of owner-occupied homes in low- and moderate-income neighborhoods was \$33,885 in 1990, which was 56 percent and 22 percent of median housing values in middle- and high-income neighborhoods, respectively. While this figure indicates a notably lower value of housing stock in lower-income areas, it also shows that the typical house could be viewed as affordable for many of those living in this area, provided they could find financing and had the financial resources to meet any down payment requirements and transaction costs. Table 1 shows that 50 percent of households in lower-income areas owned their own homes. This figure, though, falls below the homeownership rates in other areas—68 percent in middle-income tracts and 75 percent in high-income tracts.

The median home was more than a dozen years older in low- and moderate-income neighborhoods, suggesting less new home construction in these areas and possibly greater maintenance costs for existing homeowners (Table 1). The dominant form of housing across all Kansas City neighborhoods is 1-4 family structures, although in Table 1 this category of housing made up a slightly lower portion of the total housing stock in lower-income neighborhoods in 1990 compared to other areas. Vacant property was a much more common problem in low- and moderate-income neighborhoods, making up more than 15 percent of the total housing units in 1990.

Overall, Table 1 shows a number of areas where low- and moderate-income neighborhoods lagged behind other neighborhoods in 1990—income levels, employment, housing values, and homeownership rates. These characteristics thus raise the question of whether such neighborhoods will continue to trail behind the rest of Kansas City or will be able to show noticeable improvement.⁶

CHANGES IN LOW- AND MODERATE-INCOME NEIGHBORHOODS

In this section, we analyze what changes have taken place in low- and moderate-income neighborhoods during the 1990s and what role housing finance may have played in these trends. A common perception of such neighborhoods is of an aging housing stock and of neighborhood conditions that will continue to decline relative to other areas with higher household incomes. In an attempt to reverse such trends, many neighborhood residents and public and private sources made major efforts to improve the condition of lower-income neighborhoods during the 1990s.

Housing finance is a key factor in these efforts to improve neighborhood conditions. Home financing, in particular, provides an avenue for increasing homeownership rates, supporting housing values, enabling households to build wealth, and making neighborhoods more attractive. All of these financing effects, in fact, are likely to be of great importance to households in lower-income neighborhoods, who may have had more difficulty in establishing their creditworthiness and building their financial assets. Home financing trends are also of importance because they provide a sign of how much faith prospective homeowners and lenders have in the future of a neighborhood.

In Kansas City, home purchase lending in low- and moderate-income neighborhoods grew at a faster pace in the 1990s than across the rest of the metropolitan area, although such lending continued to make up a small portion of overall home lending in Kansas City. For instance, Table 2 shows that the average annual number of home purchase loans approved in low- and moderate-income tracts between 1992 and 1994 was 1,733, which was 8.3 percent of all home purchase loans in Kansas City. Over the 1999-2001 period, this average annual lending in low- and moderate-income neighborhoods jumped to 3,988 loans or 10.4 percent of all such lending in Kansas City. In addition, the dollar volume of home purchase lending

Table 2**Home Purchase Lending in the Kansas City Metropolitan Area
by Type of Census Tract****(Average annual amount per period)**

Census Tract Median Income	1992-1994		1995-1998		1999-2001	
	Number of Loans	Amount (Millions\$)	Number of Loans	Amount (Millions\$)	Number of Loans	Amount (Millions\$)
Low-to-Moderate Income	1,733	\$76.2	2,467	\$119.2	3,988	\$225.0
Middle Income	10,046	\$722.9	14,903	\$1,181.1	19,045	\$1,806.2
High Income	9,157	\$999.7	11,929	\$1,506.7	15,430	\$2,319.4
Total	20,936	\$1,798.9	29,298	\$2,806.9	38,462	\$4,350.6

increased by 195 percent between these two periods in low- and moderate-income neighborhoods compared to a 142 percent increase across the entire metropolitan area. Thus, in the rapidly growing real estate market of the 1990s, lower-income neighborhoods more than held their own. This result would indicate some possibility for neighborhood progress.⁷

What effects this lending might have had on neighborhood conditions can be examined through some of the demographic and housing variables presented in the previous section. It should first be noted, though, that lending, while important, is just one of a number of factors that could influence neighborhood demographics and housing. As a result, this section will provide an overview of changes in low- and moderate-income neighborhoods and the possible influence of home lending. The next section will examine this relationship more closely.

As far as median family income levels, low- and moderate-income neighborhoods changed little between 1990 and 2000 relative to that of the rest of the metropolitan area.⁸ In dollar terms, the median income across these census tracts rose from \$21,514 in 1990 to \$31,560 in 2000. Scaled by the median income for the entire metropolitan area, these income

levels translate into 57.4 percent of metropolitan median income in 1990 and 56.6 percent in 2000, thus indicating a very slight relative decline over this period. Consequently, there are no signs that things were getting worse for the typical family in a lower-income neighborhood, but no relative improvement in incomes appeared to have taken place either.

Between 1990 and 2000, low- and moderate-income census tracts experienced a decline of nearly 6 percent in the number of households per census tract, while middle-income and high-income tracts generally gained households.⁹ These trends suggest that some families were moving from lower-income neighborhoods to other portions of the metropolitan area—most likely those families with enough income, resources, and perhaps strong credit histories to look for a broader range of opportunities.

Another trend in many low- and moderate-income neighborhoods is a high and rising minority population. From 1990 to 2000, minorities rose from 52 percent of the population in these lower-income tracts to 62 percent. While the minority population also rose in other Kansas City neighborhoods, minorities made up less than 21 percent of the 2000 population in middle-income census tracts and less than 11 percent in high-

income census tracts. One additional trend in lower-income neighborhoods was a decline in the portion of the population with incomes below the poverty level. Although poverty rates still remained high in low- and moderate-income neighborhoods (just over a 23 percent poverty rate in 2000), the prosperity of the 1990s helped to bring some reduction from the 1990 rate of nearly 26 percent. Consequently, these income and demographic trends show some population movement out of low- and moderate-income census tracts, but otherwise, households in these tracts generally appear to be maintaining their position or, in such areas as poverty rates, showing modest improvement.

In terms of housing conditions, Chart 1A shows a significant increase in the median value of homes in low- and moderate-income neighborhoods between 1990 and 2000. This increase, in percentage terms, was 45.6 percent, which is only slightly less than the 47.3 percent jump metro-wide and exceeded the 44.2 percent increase in middle-income neighborhoods. Overall, these numbers seem to indicate that housing in low- and moderate-income census tracts has been just as good of an investment during the 1990s as housing in other parts of the metropolitan area. This result is perhaps even more notable with the older housing stock in lower-income neighborhoods and the movement of some households into other parts of Kansas City. Rising home

values, in fact, imply that many of these neighborhoods are reversing some previous signs of deterioration.

From the standpoint of lenders, rising home prices also provide a positive sign that lending in lower-income neighborhoods can be undertaken with much the same confidence and collateral protection as in other neighborhoods. Rising home prices further indicate a positive influence from the lending that has taken place and imply that enough lenders are becoming interested in lower-income neighborhoods to support the existing stock of homes there.

Chart 1B shows that homeownership rates in Kansas City neighborhoods experienced only minor changes between 1990 and 2000. A slight decline occurred in low- and moderate-income neighborhoods, and their homeownership rates continued to remain below those of other neighborhoods. Consequently, the increase in lending over this period did not serve to increase the overall number of homeowners in lower-income areas. Little change in the amount of owner-occupied housing, however, does not necessarily mean a dearth of opportunities for new homebuyers in these neighborhoods. To the extent that some households moved from lower-income census tracts into other neighborhoods—mostly likely a portion of the households with improving prospects—the increased lending could have reached families looking for their first homeownership experience. The

Chart 1A
Median Value of Homes, 1990 and 2000,
by 1990 Census Tract Income Level

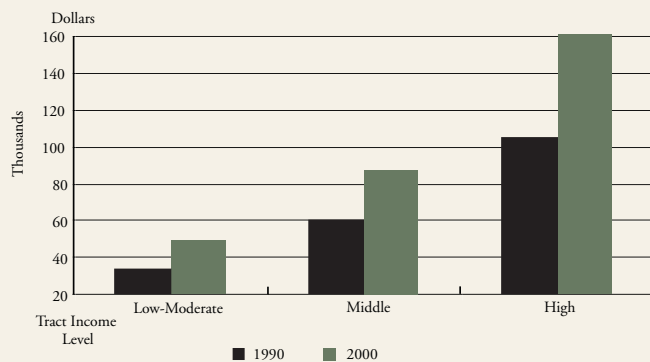
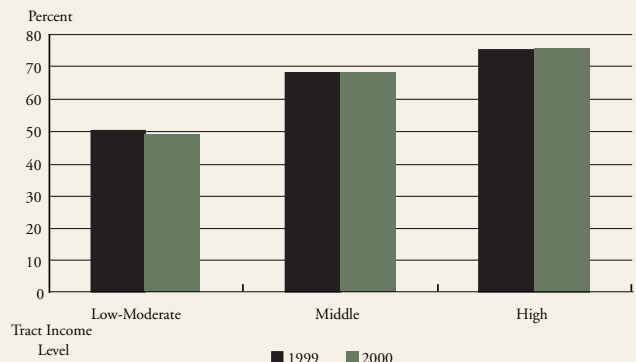


Chart 1B
Homeownership Rate, 1990 and 2000,
by 1990 Census Tract Income Level



increased lending may also be a sign of more active and liquid real estate markets in these neighborhoods.

One other indicator of neighborhood attractiveness and housing conditions is vacant property rates. Although vacant property was more common in low-to-moderate-income neighborhoods than in other Kansas City neighborhoods, the vacant property rate declined in these neighborhoods from 15.3 percent in 1990 to 13.8 percent in 2000. This decline in vacant properties suggests that a successful effort had begun to clean up neighborhoods and restore or tear down deteriorated properties.

Consequently, while some of the trends in lower-income neighborhoods are not easy to discern, the 1990s have brought about several favorable signs. Home financing has become more available in low- and moderate-income neighborhoods, thus indicating that both borrowers and lenders are more optimistic about the direction these neighborhoods are taking. In return, such lending appears to have helped support neighborhood housing values and has undoubtedly enabled first-time buyers to enter the market and replace the households moving to other areas. Additional signs of progress include fewer people with poverty-level incomes and fewer vacant properties.

THE EFFECT OF LENDING DIFFERENCES ACROSS LOW- AND MODERATE-INCOME NEIGHBORHOODS

The previous section showed some signs of progress in lower-income neighborhoods, but the extent to which home lending might have contributed to these trends is not clear. In this section, we will take a closer look at the role of home lending by separating neighborhoods according to the amount of lending that took place in each one and then comparing the demographic and housing changes to these lending differences. We will also present the results of statistical tests conducted to capture these relationships while adjusting for other possible contributing factors.

Chart 2 shows that the amount of home purchase lending varied by neighborhood income levels in Kansas City during the 1990s, with less lending occurring in low- and moderate-income neighborhoods.¹⁰ We scaled these lending figures by the number of owner-occupied homes in order to adjust for housing differences across census tracts, most notably between neighborhoods that are composed largely of owner-occupied homes and those where rental housing may be most common. Chart 2 is thus based on the total number of loans made between 1992 and 1999 per 100 owner-occupied homes and the dollar amount of such lending per each owner-occupied home.¹¹

Chart 3 shows that similar lending differences also exist when low- and moderate-income census tracts are divided into different groups based on the amount of home purchase lending in each tract. In Chart 3, all of the low- and moderate-income census tracts are placed into quartiles, ranging from those tracts with the least amount of lending (first quartile) to those with the most lending (fourth quartile). A substantial difference exists in lending levels from one quartile to the next—a difference similar to or even greater than the differences in Chart 2 when neighborhoods are separated by income levels. For instance, Chart 3 indicates that the lending rate in

Chart 2
Level of Home Purchase Financing, 1992-1999
by 1990 Census Tract Income Level

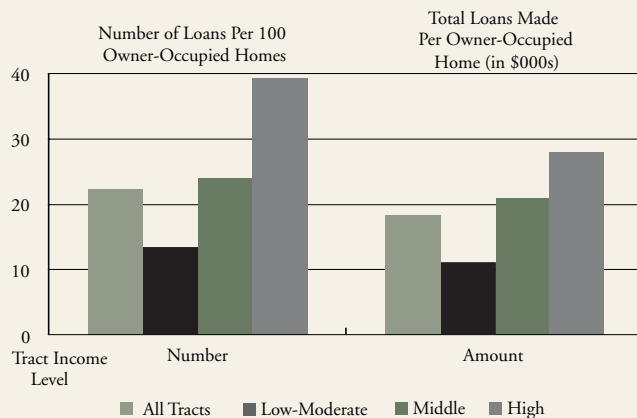


Chart 3
Level of Home Purchase Financing, 1992-1999,
by Loan Level Quantities—Low- and Moderate-
Income Tracts Only

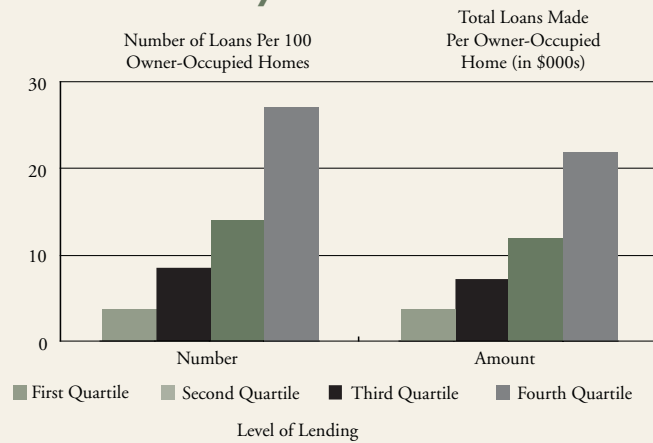
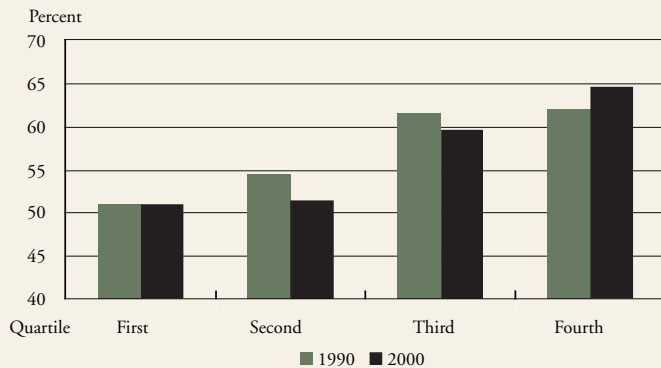


Chart 4A
Tract Median Income Level to MSA Median,
1990 and 2000, by Loan-Level Quartiles—
Low- and Moderate- Income Tracts Only



the fourth quartile of the low- and moderate-income census tracts was greater than the overall lending rate (shown in Chart 2) for middle-income neighborhoods and not that much lower than the lending rate across high-income neighborhoods.

In the following analysis, we look at how the census tracts in one lending quartile differ from those in the other quartiles on the basis of various neighborhood characteristics.¹² We also relate these lending quartiles to changes in

neighborhood conditions to see if lending levels might have contributed to some of the observed changes. However, it may still be difficult in this analysis to assess whether home purchase lending is the leading factor behind any neighborhood changes. In some cases, lenders simply may have been willing to lend more in the low- and moderate-income neighborhoods that were already in the best condition or that had the most favorable characteristics or prospects for improving, thereby making the lending a self-fulfilling proposition.

In terms of demographics and household characteristics, the census tracts with lower lending rates generally had lower median income levels in both 1990 and 2000 compared to the tracts with higher lending rates (Chart 4A). This is not too surprising since income is likely to play a role in one's ability to afford a home and to qualify for financing. The fourth quartile—the one with the highest rate of lending—was the only one where tract incomes showed a noticeable improvement between 1990 and 2000 relative to the metropolitan median income level. This outcome suggests that a higher rate of home purchase lending may have helped to improve neighborhood conditions and attract residents with better incomes. Another possibility is that lenders and borrowers were perceptive enough to identify the most promising neighborhoods in advance, and the higher lending rate was an outcome rather than a leading force behind improving income levels.

A number of other demographic and neighborhood differences were apparent between the census tracts with higher rates of home purchase lending and those with lower lending rates. For instance, although all of the lending quartiles experienced a decline in the average number of households per census tract, the two quartiles with the highest rates of lending began with higher numbers of households and were more successful in maintaining this population.¹³ Minority populations increased between 1990 and 2000 in all lending quartiles. Those tracts that received more lending typically

began and ended the 1990s with lower levels of minority populations, but they also experienced a larger percentage increase in minorities over this period compared to the tracts receiving less lending. More home lending tended to occur in the low- and moderate-income neighborhoods that had lower poverty rates, and poverty rates fell noticeably in the fourth quartile census tracts where home lending was the most common. Poverty also experienced a decline in the tracts with the lowest amount of lending, but these tracts began with the highest poverty rates. These comparisons thus show that the low- and moderate-income tracts that received the most lending typically began with more favorable demographics in terms of income levels, more households, and fewer people in poverty, and that they continued to maintain or extend these advantages.

With regard to housing, Chart 4B provides a picture of the trends in the median value of homes within the different lending quartiles. Median home values were higher in 1990 in those quartiles that were to receive the most lending over the next 10 years, thereby providing some indication that lenders and homebuyers became attracted to those areas with the better initial housing stock. In the fourth quartile, which had the most lending activity, median home prices rose by

nearly 54 percent between 1990 and 2000. The first quartile had the least lending, but also began with the lowest housing prices, and had the next-best rate of housing appreciation—nearly 46 percent. The median value of homes in the middle two quartiles rose by about 40 percent. As a result, the high level of lending in the fourth quartile appears to be consistent with greater increases in home values, but the other quartiles show no consistent pattern for changes in median home values.

According to Chart 4C, the only noticeable increase in homeownership rates between 1990 to 2000 occurred in the census tracts (fourth quartile) that experienced the greatest amount of home purchase lending. This suggests that increased lending is an important element in expanding homeownership. An interesting outcome in Chart 4C is that the census tracts with the least lending began and ended with homeownership rates higher than in the tracts with greater lending. Although this limited lending seems inconsistent with higher homeownership rates, several factors may explain this result. First, the median housing values previously shown in Chart 4B support the idea that the quartiles with lower lending rates may have the most affordable housing stock for lower-income house-

Chart 4B
Median Value of Homes 1990 and 2000
By Loan Level Quartiles—
Low- and Moderate-Income Tracts Only

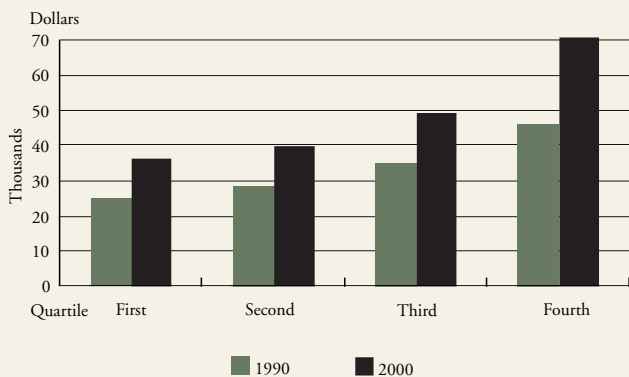
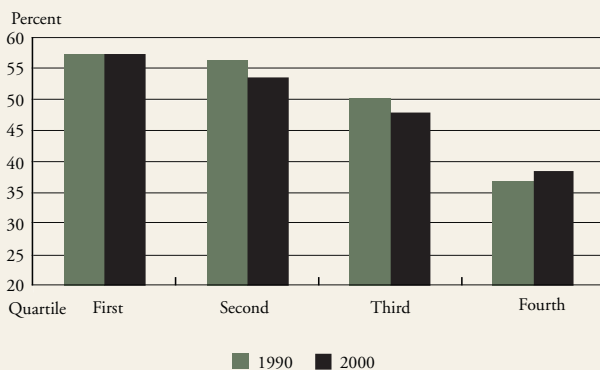


Chart 4C
Home Ownership Rate, 1990 and 2000,
By Loan Level Quartiles—
Low- and Moderate-Income Tracts Only



holds and thus may have provided better opportunities for homebuyers. Census data also indicate that these tracts have had a history of more single-family homes, less rental housing, and higher rental costs as a portion of household income—all factors that would tend to explain higher homeownership rates. As far as explaining why lending rates might be lower in these quartiles, census data show that more households in these tracts have been in their homes for more than five years, thus pointing toward less housing turnover and less demand for new lending. In addition, the number of home purchase loans made in each quartile is scaled by the number of owner-occupied homes, thus providing an adjustment for neighborhoods with more homeowners.

Vacant property rates declined in three of the four lending quartiles between 1990 and 2000. The greatest declines generally occurred in the neighborhoods with the higher rates of home purchase lending. This result thus provides some support for the idea that conditions are improving the most in those neighborhoods with the best access to credit.

As a more comprehensive test of the effect of lending on neighborhood conditions, we conducted a number of statistical tests that use lending levels and neighborhood demographics to explain census tract changes

in median home values and homeownership rates. A description of these tests and their results is included in Box 2, Regression Results. This analysis indicates that lending in the first half of the 1990s had a positive and statistically significant relationship with changes in median home values and homeownership rates between 1990 and 2000. This would suggest that this earlier lending did play an important role in fostering better housing conditions in low- and moderate-income neighborhoods, although some of its effects may have taken a little time to evolve. Some of this earlier lending may also have been in anticipation of the improvement that later occurred in neighborhood and housing conditions. We explore these results further in the accompanying box.

We also looked at a number of other measures of housing and neighborhood conditions that did not come from U.S. Census data. Perhaps the most interesting of these is the number of single-family building permits issued in each census tract. Since building permits are a sign of new and significant investment, they provide an important perspective on the neighborhoods that homebuilders, lenders, and homebuyers regard as being attractive and with favorable prospects. As a result, building permits represent a “vote of confidence” in a neighborhood.

We obtained building permit data for the city of Kansas City, Missouri, from 1992 to 2005. Chart 5 presents the data by lending quartiles for low- and moderate-income census tracts in Kansas City, Missouri. The average annual number of permits issued per census tract experienced a large relative increase from the 1992-1996 period to the two following periods shown in Chart 5. The greatest change came in the fourth quartile—the quartile with the highest rate of lending. In this quartile, building permits rose by nearly sixfold between the first and last periods, increasing from 0.4 to 2.4 permits annually per census tract.

Chart 5
Number of Single-Family Permits Issued—KCMO
By Loan Level Quartiles—
Low and Moderate Tracts Only

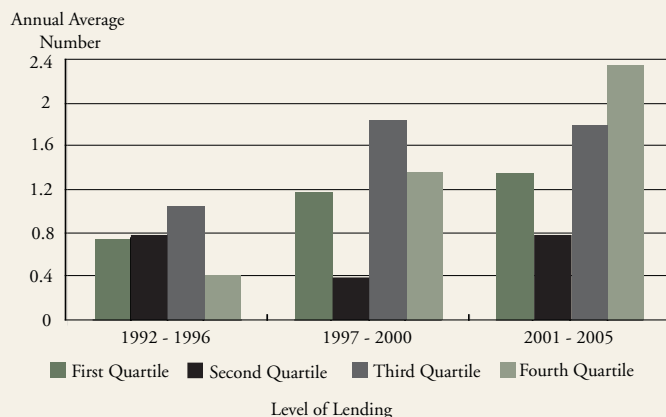
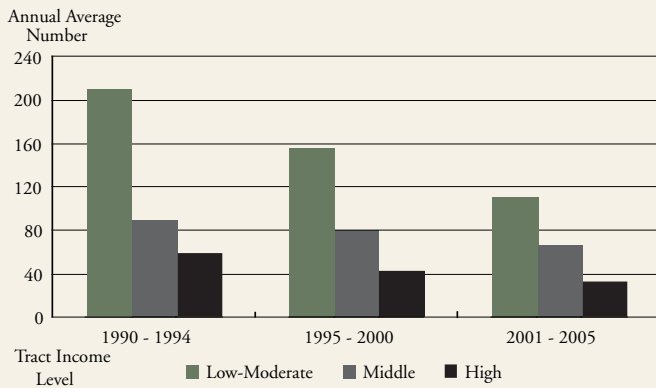


Chart 6
Number of Crimes Against People - KCMO
By 1990 Census Tract Income Level



Although new construction has been far more common in middle-income and higher-income census tracts over these periods, Chart 5 indicates that low- and moderate-income neighborhoods are beginning to see much more new home construction.¹⁴ This new construction thus provides a sign that these neighborhoods are becoming more attractive for housing investment, which was a rare experience in earlier years.

We also looked at several measures of neighborhood crime levels. In the context of this study, we view crime as a possible indicator of neighborhood conditions and attractiveness. As shown in Figure 6, the number of crimes against people in low- and moderate-income neighborhoods in Kansas City, Missouri, dropped by about half from the 1990-1994 period to the 2001-2005 period. Figure 6 also shows that crime rates declined in other neighborhoods in Kansas City, Missouri, thus indicating a fairly widespread improvement in neighborhood conditions.¹⁵

These results suggest that higher lending rates in low- and moderate-income neighborhoods are associated with rising home prices, increasing homeownership rates, and a jump in new home construction. A number of other factors, including demographic measures and crime statistics, also point to stable or improving conditions in many low- and moderate-income neighbor-

hoods where increased lending occurred. To what extent higher lending “caused” or was a primary factor behind these positive changes in neighborhood conditions is difficult to determine. Lending, for instance, may have followed after other factors, such as redevelopment efforts or favorable economic trends, provided the impetus for neighborhood improvement. However, it seems safe to conclude that lending—by supporting homeowners and rising housing values—contributed to or helped enable many of these positive trends to continue.

SUMMARY

During the 1990s, the flow of home financing to low- and moderate-income neighborhoods in Kansas City experienced a notable increase. This increase can be attributed to many different factors. These include a strong economy and falling interest rates, significant innovations in home financing, new regulatory and legislative initiatives, and community group and special lending programs.

A key point of interest is the actual effect of this lending on individual neighborhoods. In this article, we look at a variety of demographic, housing, and other variables to capture possible changes in neighborhood conditions. We find that median housing values rose in much the same fashion in low- and moderate-income neighborhoods as they did in other Kansas City neighborhoods. Despite an outflow of households to other parts of the metropolitan area, low- and moderate-income neighborhoods appear to have been successful in attracting homebuyers and maintaining homeownership rates.

We also find that even greater improvement took place in the low- and moderate-income neighborhoods that received higher levels of lending. Such neighborhoods had the largest jump in homeownership rates of all lower-income neighborhoods and experienced a substantial increase in new home construction. Our statistical analysis further supports these results. Home purchase lending thus appears to

be an important factor behind recent trends in low- and moderate-income neighborhoods, although it is hard to judge whether lending directly led to such improvements or was drawn by the favorable trends.

For homebuyers and lenders, these improvements in lending and neighborhood attractiveness carry a number of messages. Although other Kansas City neighborhoods have continued to have higher homeownership rates and housing values, low- and moderate-income neighborhoods generally maintained or improved their position

during the 1990s. This stability in many lower-income neighborhoods will encourage more households to become homeowners and will provide further support for those that already are. For bankers and other home lenders, increasing home values, motivated homebuyers, and continued innovations in lending should all help to reduce the risk of lending in lower-income neighborhoods and bring greater lending competition and an increased flow of mortgage credit into low- and moderate-income neighborhoods.

Endnotes

¹For more on these lending trends, see James Harvey and Kenneth Spong, “Low- and Moderate-Income Home Financing: What Are the Trends in Kansas City?” *Financial Industry Perspectives* (October 2003), Federal Reserve Bank of Kansas City, pp.1-14.

²A more detailed presentation of these factors can be found in Harvey and Spong (2003), pp. 2-5.

³Federal Home Loan Mortgage Corporation, *Primary Mortgage Market Survey*, Monthly Average Commitment Rate and Points on 30-Year, Fixed-Rate Mortgages.

⁴Carlos Garriga, William T. Gavin, and Don Schlagenhauf, “Recent Trends in Homeownership,” Federal Reserve Bank of St. Louis *Review* (September/October 2006), pp. 397-411.

⁵The Community Reinvestment Act was passed in 1977 with the intent of encouraging depository institutions to help meet the credit and development needs of their own communities, especially those of low- and moderate-income persons and neighborhoods, in a manner consistent with safe and sound operations. Regulatory agencies must consider an institution’s CRA performance when the institution or its parent company applies to open a branch or other deposit facility, acquire or merge with another institution, or form a bank holding company. The objective of the Home Mortgage Disclosure Act of 1975 is to have mortgage lenders disclose information about their lending in urban areas, thus providing a means for the public and regulators to determine which lenders are best at meeting community housing needs. For more on these acts, see Kenneth Spong, *Banking Regulation: Its Purposes, Implementation, and Effects*, Federal Reserve Bank of Kansas City, 2000, pp. 228-35.

⁶For another study that looks at lower income neighborhoods in Kansas City, see Kirk McClure, “The Twin Mandates Given to the GSEs: Which Works Best, Helping Low-Income Homebuyers or Helping Underserved Areas?” *Cityscape: A Journal of Policy Development and Research*, Vol. 5 (2001), U.S. Department of Housing and Urban Development, pp. 107-43.

⁷For more on these trends, see Harvey and Spong (2003), pp. 8-12.

⁸The area that individual census tracts cover can change over time in response to population shifts. To compare median income levels and other demographic and housing variables over time and within the same census tract, we use the 1990

definitions of census tracts and convert the 2000 census data to correspond to these 1990 census tract definitions. For more on this, please see the box at the end of this article on data sources and methodology.

⁹For more information on the trends in the number of households per census tract, see Table A-1 in the Appendix. This table also presents other numbers discussed in this section and is depicted in the charts we present.

¹⁰While the lending differences in Chart 2 could reflect differences in credit availability, they may also reflect many other, mostly demand-related factors. For instance, homeowners in lower-income neighborhoods might stay in their homes longer than those in other neighborhoods. Frequent housing changes involve sales commissions, closing costs, and moving expenses, and a lower-income homeowner may not have or wish to use up financial resources in this manner or may not have an employer willing to cover moving costs. Less new construction and older homeowners holding onto their homes could also lead to fewer housing changes in lower-income neighborhoods. In addition, lower-income homeowners may have benefited from first-time homebuyer or other special lending programs and may want to stay in their homes longer to take advantage of this funding.

¹¹We look at home purchase lending beginning in 1992 because that is the first year that the 1990 census tract definitions were used for the purposes of HMDA reporting. A 1999 ending point was used for this lending data because that represents the last lending data reported before the 2000 Census.

¹²The lending quartiles used in these comparisons are the quartiles in Chart 3 that are based on the number of loans per 100 owner-occupied homes.

¹³The numbers behind the demographic and housing trends reviewed in this section are presented in Table A-2 of the Appendix.

¹⁴Between 1992 and 2005, for example, 3.9 single-family building permits, on average, were issued annually within middle-income and higher-income census tracts compared to 1.2 permits in low- and moderate-income tracts.

¹⁵Crimes against property showed a similar declining trend in Kansas City, Missouri, and more limited statistics for Kansas City, Kansas, also showed a generally declining trend in crime rates.

Box 1

DATA SOURCES AND METHODOLOGY

This study combines information from several separate data sources. These include 1990 and 2000 demographic data at the census tract level of aggregation from the U.S. Census Bureau and Home Mortgage Disclosure Act (HMDA) data on individual mortgage loan applications from 1992 through 2001. Other sources of data we use include crime statistics for the cities of Kansas City, Kansas, and Kansas City, Missouri, and home permit data for Kansas City, Missouri. The Center for Economic Information at the University of Missouri-Kansas City provided this latter data.

To allow a direct comparison of census tracts between 1990 and 2000, this study takes 2000 census data and analyzes it based on the 1990 census tract definitions for the Kansas City metropolitan statistical area (MSA). This was done by aggregating the 2000 data from the block level into census tracts, using the geographic tract definitions that existed in 1990. The number of owner-occupied housing units in each census tract was derived from both the 1990 and 2000 census data and averaged by tract, creating an average value for each tract's owner-occupied units between 1990 and 2000.

Each census tract was defined as either low- and moderate-income, middle-income, or high-income, based on whether the 1990 median household income within the census tract was less than 80 percent of the MSA median income, between 80 and 120 percent of the MSA median income, or more than 120 percent of the MSA median income. The low- and moderate-income criterion is the same as that used in the Community Reinvestment Act (CRA) in evaluating a lender's record in meeting credit needs.

The HMDA data used in this study includes all approved home purchase loan records available for the Kansas City MSA, for the 1992 through 2001 period. The 1992-2001 period was chosen because the same definition of low-to-moderate-income areas, which was based on 1990 census data, applied throughout this period for lending institutions subject to CRA compliance. The study aggregates HMDA data on the number and dollar volume of approved home purchase loans into three periods: 1992 through 1994; 1995 through 1998; and 1999 through 2001. The principal reasons for aggregating the data into periods was to simplify the analysis and smooth any year-to-year fluctuations, thereby providing a clearer picture of the overall trends in home lending. The study also used the HMDA data, which contains information on the income of borrowers, to divide borrowers into low- and moderate-, middle-, and high-income groups, using the same cut-off levels defined for census tracts.

Both the HMDA lending data and the census-derived housing unit data were aggregated by census tract within each of the three census-tract income groups. This allowed the lending data (both number and dollar volume of loans) to be scaled by the average number of owner-occupied units for tracts within each income group. Thus, for instance, in the 1992 through 1994 period, there was an average of 1,733 home purchase loans approved annually in low- and moderate-income tracts. The average number of owner-occupied housing units from the 1990 and 2000 Censuses in low- and moderate-income tracts was 85,549. Thus, the number of loans per 100 owner-occupied units was 2.02 ($100 \times 1,733 / 85,549$). Scaling the number or dollar value of loans by the number of owner-occupied units helps to adjust for differences in basic loan demand characteristics across census tracts with different income and housing characteristics. This may provide a more accurate measure of how much lending is occurring across different income groups and neighborhoods.

To evaluate the influence of home financing on the demographic characteristics of neighborhoods, we separate census tracts into four groups, or quartiles, based on the average annual number of home purchase loans made per 100 owner-occupied dwellings in each tract over the 1992 through 1999 period. Two sets of quartiles were constructed—one based on all census tracts used in the study and another for just low- and moderate-income tracts. For instance, of all 359 tracts used in the study, the first quartile would contain the 89 tracts with the lowest number of loans made (the other three quartiles would have 90 census tracts each). For the 141 low- and moderate-income tracts, the first quartile would contain the 35 tracts with the lowest number of loans made within the population of all low- and moderate-income tracts.

Box 2

REGRESSION RESULTS

In addition to purely descriptive analysis of the relationship between home lending and demographic characteristics, we also conducted a number of statistical tests. These tests attempt to measure the relationship between the amount of lending flowing into each census tract and changes in home values and homeownership rates, while adjusting for the demographic characteristics of each tract. The tests consist of least-squares regression models, where the dependent variable (the variable to be explained) was either the change in tract median home values or the change in homeownership rates between 1990 and 2000. The models were estimated for all tracts and, separately, for only low- and moderate-income tracts.¹

The key explanatory variable to be analyzed is the number of loans made in each tract per 100 owner-occupied units from 1992 through 1999. We estimated two sets of regressions—one that looks at the total amount of lending over the entire period and another set that breaks lending into four separate two-year periods, 1992 and 1993, 1994 and 1995, 1996 and 1997, and 1998 and 1999. In addition to the loan variables, numerous tract-level demographic factors were also included in the regression models to help hold constant other variables that might have influenced changes in home values or homeownership. These factors include the initial values (as of the 1990 Census) of median home values and homeownership rates, household income characteristics, the tract unemployment rate, the percentage of households that had been at their current address for less than five years, measures of rental costs, and the percentage of tract dwellings that were “boarded-up.” The changes in the values of each variable from the 1990 to the 2000 Census are also included as explanatory variables in the regression calculations.²

The intent of using regression methodology is to isolate the relationship between lending and changes in home values or homeownership rates, while holding other possible influences constant.³ Results are reported in the Regression Results Table. The table shows the results for eight separate regressions. We ran regressions for both “All Tracts” and for “Low- to Moderate-Income Tracts Only,” using both the change in median home value and the change in homeownership rate as dependent variables. In addition, we calculated one set of regressions using lending over the entire 1992 through 1999 period as an explanatory variable and calculated another set using each of the four two-year periods as separate explanatory variables.

A “+” in the table shows those regressions for which the lending variables are positive and significant at the 95 percent statistical level. The first column shows the results for the model with the 1992 through 1999 lending as the explanatory variable and indicates that the amount of lending over the entire period has no statistically significant relationship with either changes in median home values or homeownership rates, either across all census tracts or for just low- and moderate-income tracts.⁴

However, when lending is broken down into separate two-year periods, another pattern clearly appears. For either the 1992-1993 or 1994-1995 lending periods, there is a statistically significant relationship in every instance between lending and changes in either median home values or homeownership, both for all tracts and just for low- and moderate-income tracts.

Regression Results Table (+ indicates statistical significance at the 95% probability level)

All Tracts	All Years	Separate Two-Year Periods			
	92-99	92-93	94-95	96-97	98-99
<u>Change in Medium Home Value, 1990 -2000</u>					
Number of loans per 100 owner-occupied homes			+		
<u>Change in Homeownership Rate, 1990 -2000</u>					
Number of loans per 100 owner-occupied homes		+			
Low- and Moderate-Income Tracts Only					
<u>Change in Medium Home Value, 1990 -2000</u>					
Number of loans per 100 owner-occupied homes			+		
<u>Change in Homeownership Rate, 1990 -2000</u>					
Number of loans per 100 owner-occupied homes		+			

These results are amenable to several different interpretations. One possibility is that borrowers and/or lenders are aware in the earlier years of the decade where property values are most likely to rise and homeownership rates will increase by 2000. In turn, this makes lenders more willing to lend and households more eager to purchase homes in those tracts with anticipated improvements in demographics. The result would then be an observed relationship between lending in the earlier years and improved demographics. In this case, causality would go from anticipated improvement (that was subsequently realized) to increases in both the demand and supply of lending.

Another interpretation would suggest a different direction of causality—that the availability of credit in the earlier part of the decade fostered subsequent improvements in home values and ownership. In this case, the causality would run from credit availability to improvements in tract conditions. The observed results are strongly consistent with this interpretation. The fact that there is no observed relationship in the later periods between lending and improvements in home values or homeownership would suggest that credit availability is the catalyst to housing improvements, but that this improvement takes time to evolve.

The statistical results that break lending down into shorter periods appear to give a clearer picture of the relationship between lending and housing conditions. Nevertheless, these results do not definitively explain which comes first, the availability of credit or the anticipation of neighborhood conditions more receptive to homeownership. In other words, do we observe increases in credit in up-and-coming neighborhoods or do we observe improved neighborhoods, as the result of increased credit? In truth, the explanation likely lies somewhere in between.

Box 2 Endnotes

¹Certain tracts are excluded from this analysis. These include tracts with populations of less than 100 people in either 1990 or 2000, and tracts that experienced either very high growth in number of households or very large losses in the number of households from 1990 to 2000.

²The “boarded-up” variable is only available for the 1990 period. Therefore, its change from 1990 to 2000 is not included. The changes in homeownership rates and home values are not included as explanatory variables, since they are the dependent variables in the regressions.

³The actual methodology employed is a “step-wise” regression process. With a step-wise process, only those variables that are statistically significant are included in the final regression results. Therefore, not all of the explanatory variables remain in the actual results, although all of them have the possibility of being included, if they add to the explanatory power of the model.

⁴Using different specifications for the lending variable produces similar results.

Appendix

Table A-1
Tract-Level Demographic Factors,
1990 and 2000

All Tracts by Tract Income Level

	Year	Income		
		Low-Moderate	Middle	High
Number of Households	1990 2000	1047 985	1515 1599	1532 1622
Percent of Population Minority	1990 2000	51.95 62.04	12.01 20.9	5.96 10.76
Percent of Population Below Poverty Line	1990 2000	25.94 23.19	7.72 7.25	4.25 4.07
Median Value of Homes (\$)	1990 2000	33,885 49,340	60,470 87,179	104,995 161,246
Percent Homeownership Rate	1990 2000	50.3 49.5	68.3 68.4	75.4 75.9
Percent Vacant Property Rate	1990 2000	15.3 13.8	6.3 5.3	5.6 4

Table A-2
Tract-Level Demographic Factors
1990 and 2000

Low- and Moderate-Income Tracts Only
by Level of Home Purchase Financing

	Year	Quartile			
		First	Second	Third	Fourth
Tract Median Income as a Percentage of MSA Median	1990 2000	50.8 50.9	54.3 51.4	61.5 59.5	61.9 64.4
Number of Households	1990 2000	798 727	972 870	1,214 1,171	1,200 1,166
Percent of Population Minority	1990 2000	80 81.4	59.8 72.7	38.1 52.7	30.2 41.6
Percent of Population Below Poverty Line	1990 2000	30.5 25.1	28.9 27.8	21.4 21.4	23 18.5
Median Value of Homes (\$)	1990 2000	25,114 36,656	28,737 40,210	35,322 49,316	46,326 71,184
Percent Homeownership Rate	1990 2000	57.4 57.6	56.5 53.8	50.4 48.1	37 38.6
Percent Vacant Property Rate	1990 2000	18 15.9	13.9 14.5	14 12.3	15.3 12.5