

METROPOLITAN PROFILES: ATLANTA, CHICAGO, WASHINGTON D.C.

Leah Hendey, G. Thomas Kingsley and Kathryn L.S. Pettit
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1. INTRODUCTION AND BACKGROUND

In September 2008, Fannie Mae provided a grant to the Urban Institute and local partner organizations in Atlanta, Chicago and Washington D.C. to conduct projects that could offer a new way of addressing the foreclosure crisis.¹ The local organizations are all a part of the National Neighborhood Indicators Partnership (NNIP), a network of civic groups and university institutes in 31 cities that operate neighborhood-level data systems and conduct action-oriented research.

In these projects, the three partners will use their data to help drive more coherent local responses to the foreclosure crisis in their areas. They will: (1) analyze comparative risk across neighborhoods; (2) analyze possible impacts of foreclosures on different neighborhoods, families and cities; and (3) apply results from the above analyses to help local stakeholders spatially target assistance, design appropriate mixes of program interventions for different types of neighborhoods, and monitor results.

It was recognized, however, that the impacts of the crisis in each area will be strongly affected by overall conditions and trends in their metropolitan economies and housing markets. Accordingly, the project begins with this review of pertinent data to characterize the three metropolitan areas.

- Section 2 compares demographic, social and income characteristics of the metros and how they have changed in this decade. We also comment on how central city/suburbs relationships have changed by these measures.

¹ The three local partners organizations are: Atlanta's *Neighborhood Nexus*, the *Metropolitan Chicago Information Center*, and *NeighborhoodInfo DC* in Washington. The data cover metropolitan statistical areas as currently defined by the U.S. Office of Management and Budget, encompassing 28 counties for Atlanta, 14 counties for Chicago and 22 counties for Washington DC.

- The focus of Section 3 is on the regional economies. It examines patterns of change for two key measures (the employment growth rate and the unemployment rate) for the three metros in comparison to the 100 largest metros for contrasting economic periods since the mid-1990s.
- Section 4 compares descriptive characteristics for the three housing markets to those for the nation as a whole.
- Section 5 deals with the mortgage market and, in particular, patterns of subprime lending. It first looks at key indicators for the three metros in comparison to averages for the 100 largest metros. It then compares densities of subprime lending across census tracts within each metro based on the predominant race of the tract, the poverty rate of the tract, and tract location (rings based on distance from the primary city's central business district).

We stress at the outset, that the numbers available to us generally run through 2007, so that we are describing a period that saw reasonably strong economic growth in America overall and a remarkable surge in the housing market. We have very few measures to depict the onslaught of decline that we know has encompassed most of the country over the past year. The trends and comparative positions we note for the 2000-07 period, therefore, would clearly be a very bad basis for predicting the future. Still, we believe understanding them is important when considering strategies for moving forward.

2. DEMOGRAPHICS, SOCIAL CONDITIONS AND INCOME

Metropolitan Chicago (2007 population of 9.52 million), Washington (5.31 million), and Atlanta (5.27 million) are, respectively, America's 3rd, 5th and 9th largest metropolitan areas. Atlanta's population has grown most rapidly in this decade – 2000-07 rate of 3.1 percent per year compared to the average national rate of 1.0 percent. Metro Washington's rate was 1.5 percent but Chicago's, at 0.7 percent, was below the national average. (See Table 1)

In all three, about one quarter of their total populations were under 18 years of age in 2007, little different from their shares in 2000 or for the nation over the period. Typical of large metropolitan areas, however, smaller shares of their populations were 65 years or older (8 percent in Atlanta, 11 percent in Chicago, and 10 percent in Washington) than the nation as a whole (13 percent). These latter shares are certain to grow more rapidly as much larger portions of the baby-boom generation hit retirement age over the coming decade.

In contrast, racial/ethnic minorities make up much higher shares of total population in these metros (44 to 49 percent) than they do in the nation (34 percent). All three have seen sizeable increases in their minority shares since 2000: +6 percentage points for Atlanta, +4 for Washington, and +3 for Chicago.

Table 1
Social Conditions and Income, Metropolitan Areas

		Average U.S.	Atlanta	Chicago	Washing- ton DC
Demography					
Total population (000)	2000	281,422	4,248	9,098	4,796
	2007	301,621	5,272	9,523	5,306
% change/yr.	2000-07	1.0	3.1	0.7	1.5
% pop. under 18	2000	26	27	27	25
	2007	25	27	26	25
% pop. 65+	2000	12	8	11	9
	2007	13	8	11	10
% pop. minority, total	2000	31	40	41	45
	2007	34	46	44	49
% pop. Hispanic	2000	13	6	16	9
	2007	15	9	20	12
% pop. non-Hispanic black	2000	12	28	18	26
	2007	12	31	18	26
% pop. foreign born	2000	11	10	16	17
	2007	13	13	18	21
Income and Poverty					
Average household income (2007 \$000)	2000	70.5	83.2	83.9	100.3
	2007	69.2	77.4	80.0	107.5
% population below poverty	2000	12	10	10	7
	2007	13	11	11	7
Social Conditions					
% hseholds married couple w/children	2000	24	27	26	25
	2007	21	24	24	23
% hseholds single parent w/children	2000	9	10	9	9
	2007	10	11	10	9
% 25 or over without high school degree	2000	20	16	19	13
	2007	16	14	15	10
% 25 or over with college degree	2000	24	31	29	42
	2007	27	34	32	47

Source: U.S. Census and American Community Survey

Compositions of their minority populations differ, however. African American shares of the total vary from 31 percent in Atlanta down to 26 percent in Washington and 18 percent in Chicago (still all higher than the 12 percent national average). These shares have remained relatively stable over the decade in strong contrast to those for Hispanics which, while much smaller have grown more rapidly everywhere between 2000 and 2007: from 16 to 20 percent in Chicago, 9 to 12 percent in Washington and 6 to 9 percent in Atlanta.

As might be expected, the foreign born shares of total population in 2007 are generally similar to those for Hispanics (21 percent in Washington, 18 percent in Chicago and 13 percent in Atlanta) and have also been growing rapidly.

Average household income, of course, may be of greater interest since it is a central measure of societal wellbeing. In 2007 that measure was highest for metropolitan Washington at \$107,500 and considerably lower for the other two metros (\$80,000 in Chicago and \$77,400 in Atlanta), but the national average was much lower still, \$69,200, 22 percent below the average for our three metros. Not surprisingly given these numbers, the average poverty rate in 2007 was much lower in Washington (7 percent) than the other two metros (11 percent) or the nation on average (13 percent).

The direction of change in average household income was generally not positive even in this period. Nationally, that average (in constant dollars) dropped by -0.3 percent per year from 2000 to 2007. Declines were even steeper in metropolitan Chicago (-0.7 percent) and Atlanta (-1.0 percent). Only metropolitan Washington saw a gain (+1.0 percent per year), buoyed by increased government investment in defense, national security, and other high-tech industries in the region.

Consistent with the focus of its economy on government and high level service sectors, Washington also had the highest share of its adult population with college degrees (47 percent compared to 34 and 32 percent in Atlanta and Chicago respectively) and the smallest share lacking a high school education (10 percent, compared to 14 percent in Atlanta and 15 percent in Chicago).

Household composition was more similar across these metros. In all three, married couples with children represented about the same share of all households in 2007 (23-24 percent, down from 25-27 percent at the start of the decade). Single parent families with children represented 11 percent of all households in metro Atlanta in 2007; 10 percent in Chicago and 9 percent in Washington.

Table 2
Social Conditions and Income, Primary Cities Versus Suburbs

		Metro Atlanta		Metro Chicago		Metro Washington	
		City	Suburbs	City	Suburbs	City	Suburbs
Demography							
Total population (000)	2000	417	3,831	2,896	6,202	572	4,224
	2007	433	4,839	2,738	6,785	588	4,718
% change/yr.	2000-07	0.5	3.4	(0.8)	1.3	0.3	1.1
% pop. under 18	2000	22	27	26	27	20	26
	2007	21	28	25	26	19	25
% pop. 65+	2000	10	7	10	11	12	8
	2007	9	8	10	11	12	9
% pop. minority, total	2000	69	36	69	28	72	41
	2007	64	45	69	33	68	46
% pop. Hispanic	2000	4	6	26	12	8	9
	2007	3	10	28	16	8	12
% pop. non-Hispanic black	2000	61	25	36	10	59	22
	2007	57	29	35	11	54	22
% pop. foreign born	2000	7	10	22	13	13	18
	2007	6	13	22	16	13	22
Income and Poverty							
Average household income (2007 \$000)	2000	77.1	84.0	67.4	91.8	80.1	103.6
	2007	83.5	76.8	67.2	85.5	88.3	110.3
% population below poverty	2000	24	8	20	6	20	6
	2007	21	10	20	8	16	6
Social Conditions							
% hsehlds married couple w/children	2000	10	29	18	30	9	28
	2007	10	26	15	27	7	25
% hsehlds single parent w/children	2000	13	9	12	7	12	8
	2007	11	11	12	8	10	9
% 25 or over without high school degree	2000	23	16	28	15	22	12
	2007	13	14	21	12	14	10
% 25 or over with college degree	2000	35	31	25	31	39	43
	2007	44	33	30	33	47	47

Source: U.S. Census and American Community Survey

Table 2 presents data on the same indicators as Table 1, but compares the values for the three primary cities to the suburbs in their metropolitan areas. There are important differences. The City of Atlanta housed only 8 percent the population of its metro in 2007, whereas Washington DC accounted for 11 percent of its metro total. The City of Chicago accounted for by far the highest share: 29 percent. As would be expected given fixed central city boundaries and growing metro populations, these shares had all declined since the turn of the century, although the changes were more gradual than dramatic.

In all cases in 2007, children (under 18) account for a larger share of the population in the suburbs than the primary cities (for example, 28 versus 21 percent in Atlanta), but differences in shares of the elderly are small. Also as would be expected, minority concentrations are much higher in the primary cities. In metro Atlanta, minorities account for 64 percent of total population the primary city compared to 45 percent in the suburbs. In Washington, the figures are 68 percent versus 46 percent. In Chicago, the difference is even greater (69 versus 33 percent).

It is interesting that in the Atlanta and Washington metros, the foreign born account for higher population shares in the suburbs than the primary cities: 13 versus 6 percent in the former, 22 versus 13 percent in the latter. But in Chicago, the foreign born share is higher in the city (22 percent) than the suburbs (16 percent).

While racial segregation still represents a serious problem in all of these areas, it is significant that diversity does appear to be on the rise. From 2000 to 2007, minority population shares increased from 36 to 45 percent in suburban Atlanta, from 28 to 33 percent in suburban Chicago and from 41 to 46 percent in suburban Washington. In all three areas, foreign born shares have been going up in the suburbs while remaining constant or declining in the primary cities.

Another piece of good news relates to a major policy concern in the United States in the last half of the 20th century: widening income disparities between central cities and their suburbs. In our three metros in the recent past, trends seem to be moving in the right direction. In metro Washington, for example, there was still a major gap in 2007 as household income in the city averaged \$88,300 compared to \$110,300 in the suburbs. But the gap was decreasing: suburban income was 25 percent higher in 2007, down from 29 percent in 2000. In metropolitan Chicago, the suburban edge had decreased from 36 percent in 2000 to 27 percent in 2007. Average income in the city of Atlanta in 2007 actually exceeded that in its suburbs \$83,500 versus \$76,800 (in 2000, the suburban average had been 9 percent higher).

In terms of household characteristics, however, there does not appear to be much change. In all three metros, married couples with children make up a much higher share of all households in the suburbs than the city (for example, 27 versus 15 percent in metro Atlanta), and the gaps do not seem to be diminishing.

In terms of higher education, patterns are mixed. The share of adults with a college degree was higher in the central city than the suburbs in metro Atlanta (44 percent versus 33 percent) but reverse was true in Chicago (30 versus 33 percent). In Washington, this indicator was at the same level in both parts of the region: 47 percent.

3. THE METROPOLITAN ECONOMY

The wellbeing of any region depends most fundamentally on the strength of its economy. Disparities are much harder, if not impossible, to eradicate in an area beset by economic decline. How well are the three metro's that are the focus of this profile doing economically? The question is more complicated than it might seem. The American economy has gone through three major phases since the mid-1990s and different metros have done better in some phases than others. The old stereotype of growth in the sunbelt and decline in the rustbelt is much too oversimplified to serve as a guide.

In this section, we look at two indicators which measure different aspects of economic strength: the overall employment growth rate and the unemployment rate. As to the former, the left hand column on Table 3 tells what is now a familiar story. The last half of the 1990s represented one of America's historic economic booms, as employment in the nation's 100 largest metros grew at a rate of 1.85 percent annually. Over the next two years employment declined (-0.05 percent per year), and then picked up again through 2007 but at a 1.31 percent annual rate, well below that of the late 1990s.

Metropolitan Atlanta outperformed the 100 metros in all three phases, with employment growing at 2.2 times the 100 metro average in the late 1990s, continuing to grow in the 2000-02 period as the national economy declined, and then growing at 1.8 times the large metro rate after that. Among the largest 100 metros, its performance had been the 4th best in the nation in the first phase. Its rank dropped to 33rd during the second phase and picked up again in the third to 18th (an improvement but still well below its pre-2000 position).

The Washington metropolitan area also did well over this cycle, especially in the last two phases. Its employment growth was below that of the 100 metros in the late 1990s, but it did expand in the first two years of this decade, and then grew at 1.4 times the large metro rate after that. Its rank went from 49th in the first phase to 27th in the second and 31st in the third.

Chicago's economic performance has exceeded that of many metros in the Midwest of late, but it has not been as strong as that of the other two metros noted above. Its employment growth rate was one third lower than the 100 metro average in the late 1990s; it lost employment significantly in the first two years of this decade and since then experienced a growth rate 11

Table 3
Economic Conditions and Trends

		Ave. 100 Largest Metros	Metropolitan Atlanta		Metropolitan Chicago		Metropolitan Washington DC	
			Number	Rank	Number	Rank	Number	Rank
Number of employees (000)	1995	816	1,896	12	4,275	3	2,395	5
	2000	895	2,305	9	4,554	3	2,597	6
	2002	894	2,330	10	4,401	3	2,639	5
	2007	954	2,614	9	4,664	3	2,891	5
% change. per year	1995-00	1.85	3.98	4	1.27	64	1.64	49
	2000-02	(0.05)	0.56	33	(1.69)	92	0.80	27
	2002-07	1.31	2.32	18	1.17	53	1.84	31
	2000-07	0.92	1.81	17	0.34	74	1.54	29
Unemploy- ment (%)	1995	5.3	4.3	36	5.2	64	4.1	33
	2000	3.8	3.1	25	4.3	75	2.7	13
	2002	5.6	4.9	29	6.7	90	4.0	7
	2007	4.6	4.3	41	4.9	69	3.0	4

Source: Bureau of Labor Statistics, Local Area Unemployment Statistics Series

percent below the large metro average. Its rank went from 64th in the first phase and down to 92nd in the second, but back up to 53rd in the third.

The unemployment rates of metropolitan areas do not correlate well with their employment growth rates. Some areas have high employment growth but, for a variety of reasons, attract immigrants more rapidly than their economies can absorb and thus have high unemployment for prolonged periods of time (California's Central Valley is a good example). Other metros with comparatively low employment growth have a tighter labor market and low unemployment.

Following the phases discussed above, the average unemployment rate for the 100 largest metros dropped from 5.3 percent in 1995 to a low of 3.8 percent in 2000. It then shot up again to 5.6 percent in 2002 and the subsequent recovery had reduced it to 4.6 percent in 2007.

Among our three metros, Washington has performed the best by this measure with unemployment rates falling considerably below the 100 metro averages at each point. It started with a rate of 4.1 percent in 1995 and reached a level of only 3.0 percent in 2007. Its rank among the top 100 by this measure was 13th best in 2000, but its comparative position then continued to improve, reaching 7th in 2002 and 4th in 2007.

Metropolitan Atlanta, has also performed well. Its unemployment rates have also fallen below the 100 metro averages at each point, although not by as much as Washington's. Its direction of change in comparative position, however, has not been positive. Its rank among the top 100 dropped from 25th in 2000, down to 29th in 2002 and then to 41st in 2007. Chicago's unemployment rates, in contrast, have been consistently worse than the average for the 100 metros over this period. It ranked 75th in 2000, 90th in 2002 and 69th in 2007.

4. HOUSING MARKETS COMPARED

Consistent with the data on growth in population and employment, Atlanta's housing stock grew fastest from 2000 through 2007 among the three metros that are highlighted in this profile: growth rate of 3.6 percent per year compared with 1.7 percent for Washington, 1.4 percent for the U.S. on average and 1.2 percent for Chicago (Table 4).

With the enormous national boom in housing production earlier in this decade and the housing market doldrums of the past year or so, vacancy rates have risen significantly over this period. Nationally, the vacancy rate for units made available for owner occupancy climbed from 2.0 to 2.5 percent. Atlanta, which has grown fastest among our three metros, also has the slackest market. Its owner vacancy rate reached 4.3 percent in 2007, notably above the national average. The rate for Chicago is just slightly above the nation's (2.7 percent) and, for Washington, just below it (2.3 percent).

Rental vacancy rates have also increased; nationally on average from 7.0 percent in 2000 to 8.0 percent in 2007. Again, Atlanta is the comparatively loose market with rental vacancies at 11.5 percent, up from 6.7 percent in 2000. In 2007, Chicago came next at 8.1 percent, and Washington's rate fell below the national average at 7.4 percent, but both had experienced notable increases since the decade's start.

One of our most important national goals during the first part of this decade was the expansion of homeownership. It is now well known that much progress was made on that goal overall. The fact that interest rates remained low during this period no doubt helped explain the expansion. Another explanation, however, was that the housing finance industry clearly began to serve a broader class of borrowers. In the mid-1990s, new federal policies were designed to increase homeownership in general, and among low-income and minority populations and neighborhoods in particular. The mortgage industry began to pay attention to the new policy incentives but also began to recognize these directions as real market opportunities it had been undervaluing before. Whatever the mix of causation, the period was one of marked change bringing national homeownership rates to historic levels. From 2000 to 2007, America's homeownership rate went up from 60 to 67 percent overall, from 47 to 50 percent for minorities.

Table 4
Metropolitan Housing Conditions and Trends

		Average U.S.	Atlanta	Chicago	Washing- ton DC
Housing Stock					
No. of housing units (000)	2000	115,905	1,645	3,462	1,890
	2007	127,895	2,113	3,752	2,133
	% chg./ yr 2000-07	1.4	3.6	1.2	1.7
Vacancy rate (%)					
Renters	2000	7.0	6.7	5.8	4.3
Renters	2007	8.0	11.5	8.1	7.4
Owners	2000	2.0	2.1	1.6	1.6
Owners	2007	2.5	4.3	2.7	2.3
Homeownership					
Homeownership rate (%)	2000	60	67	65	64
	2007	67	70	69	68
Minority homeowner- ship rate (%)	2000	47	48	46	50
	2007	50	55	53	57
Housing Values/Prices					
Ave. value owner- occ.housing (\$000)	2007	278	260	325	521
Average gross rent	2007	878	909	920	1,282
OFHEO Index	00Q1-06Q4	5.5	2.5	5.3	11.5
% chg. / yr.	06Q4-08Q2	(5.9)	(4.4)	(5.5)	(11.7)
Housing Affordability					
Pay >30% income for housing					
Renters	2007	49	50	50	47
Owners	2007	49	50	50	47
Average Home Value/ HH income (owners)	2007	4.0	3.4	4.1	4.8

Source: U.S. Census and American Community Survey

How well did our three metros fare by these measures? They also gained, resulting in 2007 homeownership rates at least somewhat above the national average in all cases: 70 percent in Atlanta, 69 percent in Chicago and 68 percent in Washington. Their minority ownership rates

also consistently exceeded the national norm: 55 percent, 53 percent and 57 percent respectively.

These gains, of course, are now threatened by the subprime/foreclosure crisis, the risks of which will be explored in more depth later in this paper. To set the stage for that, we look at other housing market characteristics on Table 4. It is first important to recognize that two of our metros are indeed high-cost markets. In 2007 the average value of owner occupied housing was \$521,000 in Washington and \$325,000 in Chicago, substantially exceeding the national average of \$278,000. With an average of \$260,000, Atlanta is the only one of the three in the lower cost category. Similar relationships are reflected in 2007 average gross rents, ranging from \$1,282 in Washington to \$920 in Chicago and \$909 in Atlanta (\$878 national average).

Prices had increased dramatically over the decade almost everywhere and housing affordability problems were indeed severe by 2007. Variations in these problems are not as dramatic as in the prices themselves because there were also variations in income; i.e., households in Washington and Chicago were, on average, better able to afford higher prices. Still, these problems were serious everywhere.

The average home value in metropolitan Washington in 2007 represented 4.8 times the average income of the region's homeowners. The corresponding ratio was 4.1 in Chicago and 4.0 in the nation on average. Only the Atlanta ratio remained notably lower, at 3.4. Renters were also affected. The federal standard for affordability is that tenants should not have to pay more than 30 percent of their income for rent. The table shows that in all three metros and the nation as a whole, around half of all renters were paying in excess of that standard in 2007.

One data source available to us to tell the story of what has happened to metropolitan housing markets since 2007 is the OFHEO housing price index.² Figure 1 presents data for all metropolitan divisions of the 100 largest metropolitan areas. It compares price changes for the period from the 1st quarter of 2000 to the 4th quarter of 2006 (a good approximation of the boom) to those for the period since (1st quarter of 2007 through 2nd quarter of 2008).

The changes have indeed been abrupt and dramatic. House prices in these areas on average increased by an unprecedented 5.5 percent annually in the former period, and then declined at an even faster 5.9 percent annual rate in the latter period. All of the metros experienced increases in the former period, and all but five of them have witnessed declines since then.

Most interesting is that those metros that had experienced the fastest house price appreciation in the early part of the decade (annual rates of increase between 12 and 16 percent – all in California and Florida) have consistently suffered the worst losses ever since (lower right hand

² The OFHEO index is based on conforming conventional home purchase mortgages provided by Fannie Mae and Freddy Mac. For a complete explanation see www.ofheo.gov/Media/Archive/house/hpi_tech.pdf.

5. MORTGAGE MARKET TURBULENCE

It is possible to examine mortgage market trends in these areas in some depth using information provided in the Home Mortgage Disclosure Act (HMDA) data files.³ Consistent with our description of the housing market above, these data show that the decade from 1997 to 2007 was a period of unprecedented change in America's mortgage markets. As shown in Table 5, in the 100 largest metropolitan areas:

- The mortgage origination rate (the number of home purchase loans originated per 1,000 existing housing units in 1-4 unit structures) grew from 44 in 1997 to 55 in 2000 and then yet more rapidly to reach 80 in 2006, before dropping back to 54 in 2007. (Throughout this analysis, we use the number of housing units in one-to-four family structures as of the 2000 Decennial Census as the denominator for standardized indicators, consistent with HMDA recording).⁴
- The median inflation-adjusted amount (2007 \$) of such loans grew from \$139,000 in 1997 to \$151,000 in 2000 and again to \$182,000 in 2006.

All three metros that are the subject of this paper also experienced extraordinary increases in mortgage origination over this period. Chicago's rates were closer to the experience of the 100 largest metros, but levels in both Atlanta and Washington climbed to over 100 in 2006, before dropping somewhat in 2007.

Consistent with the push to expand homeownership among low-income and minority groups, the denial rate for the 100 metros declined over this period, with 19 percent of mortgage applications denied in 2007, down from 22 a decade earlier. Surprisingly, that did not occur in our three metros. In fact, the denial rate for Chicago had increased markedly from 11 percent in 1997 to 21 percent in 2007. Further research will be required to explain this outcome.

The next block of numbers on Table 5 relate to the most noteworthy aspect of the recent expansion in mortgage lending: subprime loans. The subprime mortgage market, offered loans to people with impaired or limited credit histories in return for higher rates and fees. It has

³Under HMDA, lenders are required to file reports on virtually all mortgage applications they receive in metropolitan areas. The reports include data on the location (census tract) of the property, race and income of the borrower, and whether the mortgage was denied or originated. While the Act's purpose was to provide a basis for assessing discrimination in mortgage lending, the reports also provided for the first time a basis for monitoring housing market activity year-by-year at the neighborhood level. A comprehensive review of HMDA data and its possible uses is provided in Kathryn L.S. Pettit Pettit and Droesch, Pettit, Kathryn L.S., and Audrey E. Droesch. 2007. *A Guide to Home Mortgage Disclosure Act Data*. Washington, DC: *DataPlace*, KnowledgePlex Inc. December. 2007.

⁴ This includes single-family homes, condominiums, manufactured homes, and owner occupied and rental housing units in buildings with two-to-four units. Nationally comparable data on this denominator are not available at the neighborhood level since 2000, but using the constant 2000 number should not distort the indicators by much in most cases since the size of the housing stock in a neighborhood typically changes very slowly. There would be distortion, however, where the size of the stock has changed markedly since 2000.

Table 5
Mortgage Market Conditions and Trends

		Ave. 100 Largest Metros	Atlanta	Chicago	Washing- ton DC
Mortgages originated/ 1,000 units 1-4 unit structures in 2000	1997	44	65	48	57
	2000	55	81	62	89
	2006	80	144	84	117
	2007	54	87	53	75
Mortgage denial rate (%)	1997	22	19	11	12
	2000	22	20	14	11
	2006	18	20	21	15
	2007	19	21	21	16
Subprime % of purchase mortgages	1997	4	5	3	2
	2000	8	9	6	5
	2006	12	13	15	12
Subprime % of refinancing loans	1997	21	23	21	16
	2000	26	29	22	19
	2006	17	16	20	16
Investors as % of all borrowers	1997	8	5	7	3
	2000	7	7	5	3
	2006	14	17	11	7
	2007	13	14	11	6

Source: Analysis of *DataPlace* Home Mortgage Disclosure Act data files.

allowed many low- and moderate-income families to become homeowners that never could have qualified for loans in the market of the early 1990s. However, the downside is now also well-known. Predatory or irresponsible lending terms set up borrowers for financial difficulties from the start, and even loans with reasonable terms imposed less stringent standards for credit histories and down payment amounts. Thus, subprime loans bear a much higher risk of foreclosure than is typical in the prime market.⁵

⁵ In this paper, we define subprime loans as conventional loans (i.e., not government-insured) originated by lenders identified by the U.S. Department of Housing and Urban Development as specializing in subprime lending. Specifically, subprime lenders are defined as those with subprime loans accounting for at least half of their conventional lending in that year. Since 2004, the HMDA files also present data on “high cost” loans, which may be a better definition in some respects. However, we rely on the standard definition because it is the only one that permits comparative analysis of changes in rates over the 1997-2006 period as a whole.

The table shows that the subprime share of all home purchase mortgages in the top 100 metros climbed from only 4 percent in 1997 to 8 percent in 2000 and then again to 12 percent in 2006. All three of our focal metro areas experienced similar increases in subprime shares, reaching about the same levels in 2006 (Chicago was then highest with 15 percent). Note that the subprime share of refinance mortgages was much higher to begin with in this period – dropping modestly in the 100 metros and Atlanta but remaining constant in Chicago and Washington.

The bottom panel on Table 5 relates to a sometimes overlooked shift in the market over this period; the rising share of mortgagors who were investors rather than owner occupants. In the 100 metros, investors had accounted for only 8 percent of all home purchase mortgages in 1997, but their share had increased to 14 percent by 2006. The Atlanta, Chicago and Washington areas all experienced major increases in this indicator as well, but there were important differences. The phenomenon was most pronounced in Atlanta where the investor share reached 17 percent in 2006; least so in Washington where the 2006 level was only 7 percent.

Table 6 shows how characteristics of borrowers changed in these areas over the past decade. In terms of income, as home prices accelerated over the first half of this decade, it did become harder for low income to be able to afford to buy a home.⁶ In the 100 metros on average, low-income families dropped as a share of all borrowers from 30 percent in 1997 to 26 percent in 2007; the high income share increased from 41 to 48 percent over this period.

Metro Atlanta stands out in that low income borrowers retained a higher share, accounting for around a third of home purchase mortgages throughout the decade. In both Chicago and Washington, the low income share had dropped to 24 percent in 2007.

In terms of race and ethnicity, minority groups clearly, if modestly, expanded their share of the mortgage market over the decade. The share of all home purchase loans in the top 100 metros that went to non-Hispanic white borrowers dropped from 80 percent in 1997 to 72 percent 10 years later; i.e., the minority share had increased from 20 to 28 percent. The African American share went up only slightly (from 7 to 8 percent). Greater gains were made by Hispanics (from 7 to 11 percent) and Asians and other minorities (from 7 to 9 percent).

African American participation increased much more extensively in Atlanta where the decade saw a share increase from 18 to 28 percent. In our other two metros the shares for blacks were higher (11 percent in Chicago and 20 percent in Washington in 2007) but had increased by only

⁶ We define income groups according to the system used by the U.S. Department of Housing and Urban Development (HUD) where, because individual incomes are related to local median incomes, price differences are implicitly taken into account and it is possible to compare shares across sites meaningfully. Calculations are done by household size, which also avoids distortion. Low income includes households with incomes below 80 percent of the local median, middle income includes those between 80 and 120 percent of median, and high income includes those above 120 percent of median.

Table 6
**Mortgage Market Conditions and Trends,
 Characteristics of Borrowers**

		Ave. 100 Largest Metros	Atlanta	Chicago	Washing- ton DC
Low-income hsehlds % of borrowers	1997	30	32	31	37
	2000	32	36	36	41
	2006	26	34	25	20
	2007	26	33	24	24
Mod-income hsehlds % of borrowers	1997	29	28	31	29
	2000	28	28	30	27
	2006	27	28	33	36
	2007	26	27	29	31
High-income hsehlds % of borrowers	1997	41	39	39	34
	2000	40	36	34	31
	2006	48	38	41	45
	2007	48	40	47	45
Non-Hisp. whites as % of borrowers	1997	80	74	72	67
	2000	76	67	70	63
	2006	69	52	60	41
	2007	72	57	67	54
Non-Hisp. blacks as % of borrowers	1997	7	18	10	18
	2000	7	21	9	18
	2006	9	33	13	23
	2007	8	28	11	20
Non-Hisp. Other as % of borrowers	1997	7	6	7	10
	2000	8	7	9	13
	2006	8	7	9	12
	2007	9	8	9	14
Hispanics as % of borrowers	1997	7	2	11	4
	2000	8	5	12	6
	2006	14	7	18	24
	2007	11	7	13	11

Source: Analysis of *DataPlace* Home Mortgage Disclosure Act data files.

one to two percentage points since 1997. In the latter two, growth was more pronounced from 1997 to 2006 (from 11 to 18 percent in Chicago and from 4 to 24 percent in Washington) but their shares dropped notably in 2007 as the market turned down.

The remainder of this paper examines how the incidence of subprime lending varies across neighborhoods (census tracts) in our metropolitan areas. Our real interest is in the likely pattern of foreclosures and the negative spillover effects they imply, but consistent data on foreclosures are not available and subprime lending densities should serve as a reasonably good proxy. Some who have studied the current crises have looked at data on subprime shares of total lending in an area, but that is not a good indicator of probable impact. An area could have a very high subprime share but a very low volume of total lending so that the number of risky loans was very small in relation to the size of the housing stock. A much better measure for this purpose is the number of subprime loans per 1,000 existing housing units (in 1-4 unit structures). This can be thought of as the “density” of subprime lending and it is the density that generally heightens the risk of foreclosure and negative spillover effects from foreclosures like declines in property values and increasing crime rates.⁷

This measure varies dramatically for different types of neighborhoods. First, there are major differences by the predominant race of the neighborhood. For the United States 100 largest metros, the rate is 6 on average across all tracts and 5 where whites are the predominant race (more than 60 percent of the population), but 9 where blacks predominate, 11 where Hispanics are the predominant group, and 10 when another race is predominant or there is no predominant race. But there are major variations depending on the poverty rate of the tract as well. For the top 100 metros, across all races, the density is highest at 8 in the groups with poverty rates in the 10-20 percent and 20-30 percent. It stands at 5 for tracts with poverty rates below 10 percent and 6 for those with poverty in excess of 30 percent.

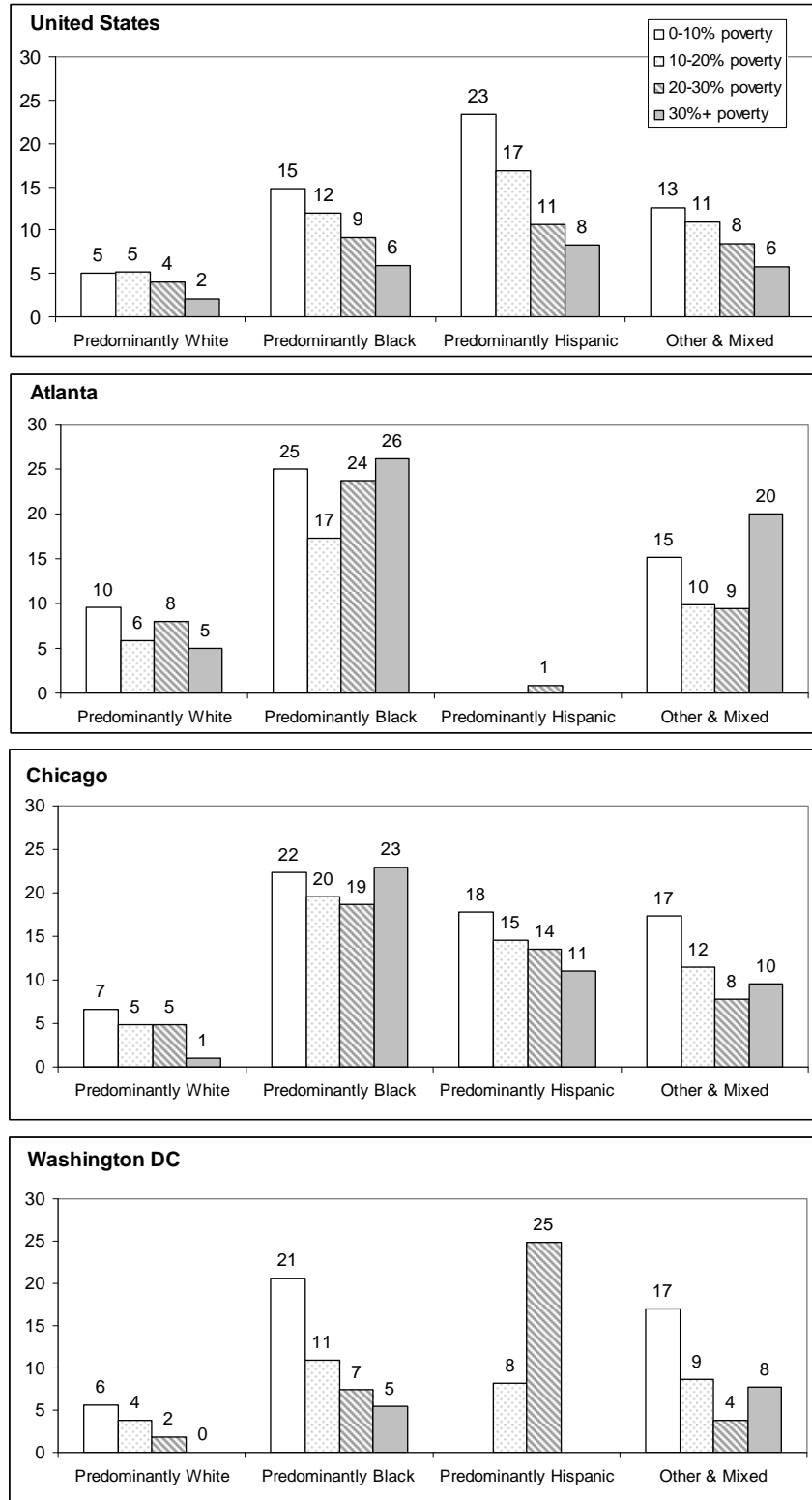
Putting both variables together for the 100 largest metros, Figure 2 shows that within race categories, subprime densities are always highest in the lowest poverty category and drop down consistently as poverty rates increase. The highest densities occur where Hispanics are predominant; ranging from 23 per 1,000 units in low poverty tracts down to 8 in the highest poverty group. Predominantly African American tracts come next with 15 in the lowest poverty group and 6 in the highest.

These relationships do not hold up consistently across our three metropolitan areas, however. Atlanta has by far the highest subprime density overall (12 per 1,000 units compared to 6 for the top 100 metros on average) and subprime lending there is clearly concentrated in African American neighborhoods. In low poverty neighborhoods where blacks are predominant, the Atlanta average is 25, but unlike the general rule for the top 100 metro, the rate goes up again (to 26) in the highest poverty (most distressed) neighborhoods. In metropolitan Atlanta, there

⁷ In much of the rest of this paper, we use the annual average of the subprime origination rate from 2002 through 2006 (the peak period of subprime lending activity) to represent the level of subprime activity in our analysis. This is because the rates vary from year to year, and choosing the value for any one year might not reliably represent the level for the period as a whole. This can be important that the tract level where mortgage origination rates can differ notably from one year to the next. While this may not be as much of an issue at the metropolitan level, we use the same five year average to be consistent with tract comparisons.

Figure 2: DENSITY OF SUBPRIME LOANS BY PREDOMINANT RACE AND POVERTY RATE OF CENSUS TRACT

(Median subprime loans per 1,000 units in 1-4 unit structures, averaged for 2002-2006)



are hardly any predominantly Hispanic neighborhoods, but fairly high subprime densities are also reached in the Other and Mixed category and, here too, the highest (20) occurs in the neighborhoods with the highest poverty rates.

Chicago has the second highest overall subprime density of the three (9 per 1,000 units) and the pattern for predominantly black tracts there is very similar to Atlanta's: higher subprime densities than for other racial groups and the highest densities for tracts with the lowest poverty rates (22) and the highest (23). Unlike Atlanta, however, Chicago has a sizeable number of predominantly Hispanic neighborhoods and subprime densities for these are second highest overall, but their pattern is more like the general one for the top 100 metros: highest density for low poverty tracts (18), ranging down to the lowest in the most distressed tracts in the group (11). In Chicago, densities in the Other and Mixed category are also substantial and follow a pattern generally similar to that for Hispanics.

In metropolitan Washington, the overall subprime density was 8 per 1,000 units, just slightly below the average for Chicago. The highest density on the Washington chart (25) is for predominantly Hispanic neighborhoods in the 20-30 percent poverty range. There are comparatively few Hispanic tracts in the region, however, so the most serious problems again are in the predominantly black neighborhoods. In metropolitan Washington, the pattern for them is similar to that for the top 100 with the highest density (21) in low poverty neighborhoods and the lowest in those with poverty rates of 30 percent or more (5).

Figure 3 tells the story of subprime densities in these metros in a different way. We divided all the tracts in the 100 largest metros into six geographical divisions based on the distances of their centroids from the central business district (CBD) of the primary city.⁸ We first ranked all tracts in the primary city by the distance and divided them into three equal groups thereby establishing, in effect, three rings. We then followed the same procedure for the suburbs, establishing three additional rings, again ranging from the nearest to the farthest from the primary city CBD.

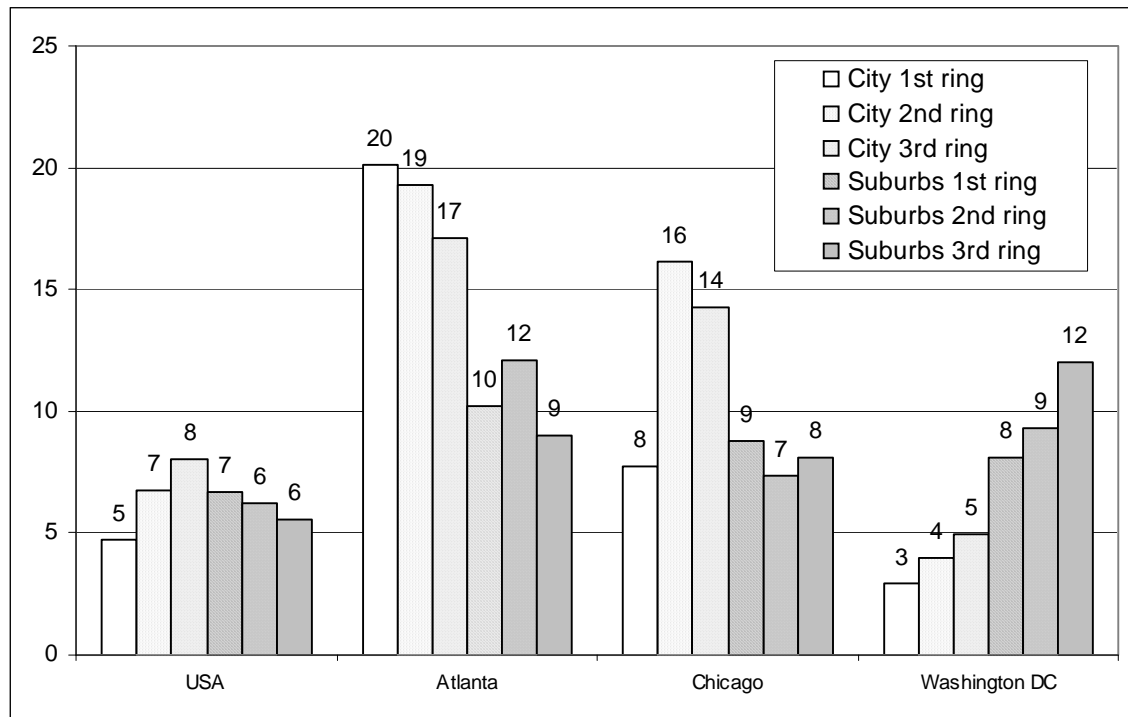
The chart shows subprime densities (again, loans per 1,000 units) in these six rings. For the USA overall (the 100 metros) the density is lowest in the innermost ring of the primary city (at 5 per 1,000 units) and then increases to peak in the city's outer ring (at 8). The densities in the suburbs do not vary much (7 in the innermost suburban ring and 6 in the other two rings).

The pattern in metropolitan Atlanta is, again, quite different from the general experience. The highest densities by far are in the inner city, ranging from 20 in Atlanta city's inner ring down to

⁸ Following an approach developed by Alan Berube and Benjamin Forman in *Living on the Edge: Decentralization Within Cities in the 1990s*. Washington, D.C.: Center on Urban and Metropolitan Policy, The Brookings Institution. October 2002.

Figure 3: DENSITY OF SUBPRIME LOANS BY DISTANCE FROM CENTRAL BUSINESS DISTRICT

(Median Subprime Loans per 1,000 units in 1-4 unit structures, averaged for 2002-2006)



17 in its outer ring. The Atlanta suburbs have much lower densities: 10 in the inner ring, 12 in the middle ring, and 9 in the outer ring.

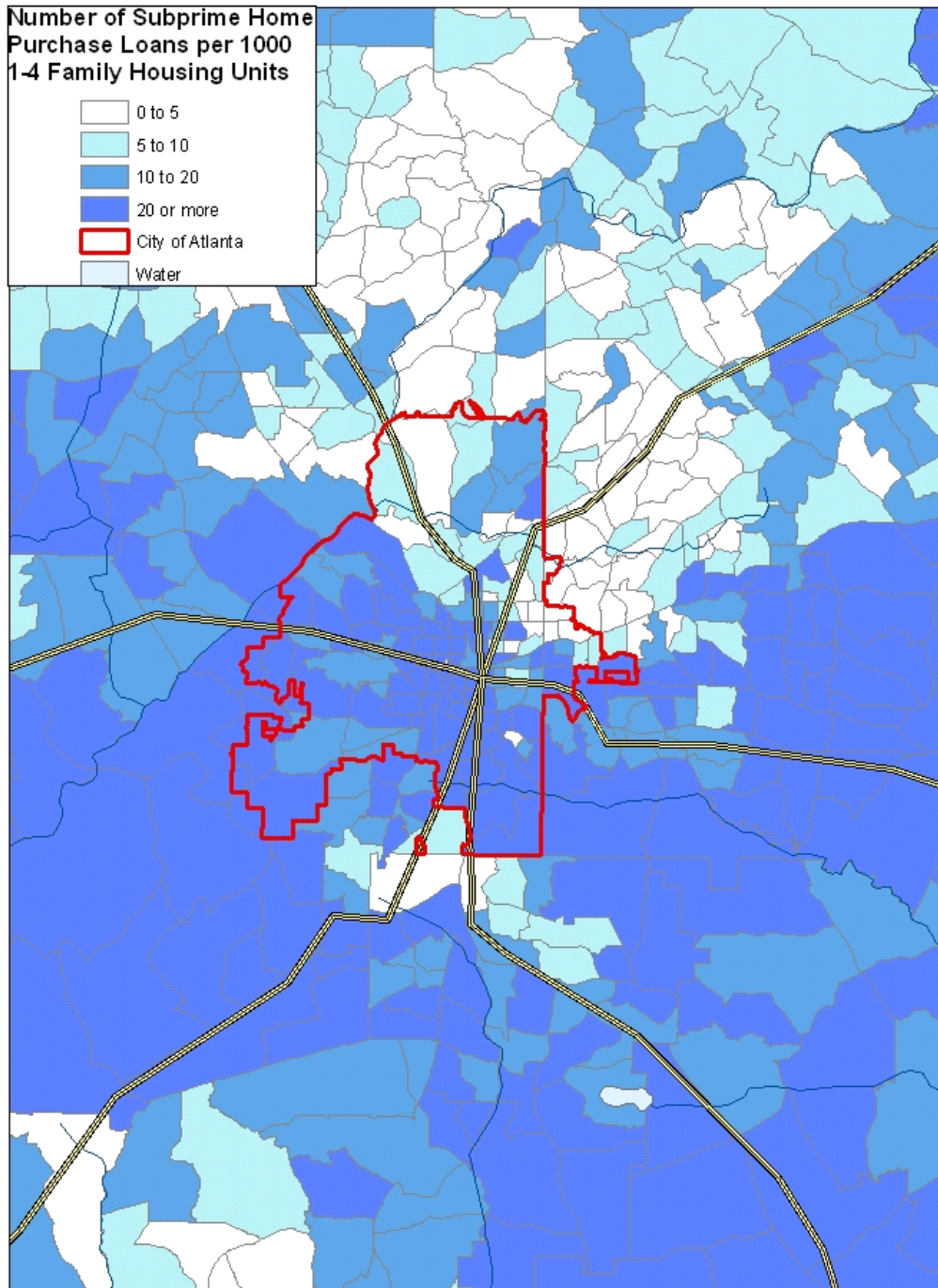
Metropolitan Chicago also does not follow the 100 metro mold. There, most intense subprime lending activity occurred in the middle ring of the city of Chicago itself (16 loans per 1,000 units compared with 14 in the city's outer ring and only 8 in its inner ring). Chicago suburbs too have comparatively low subprime densities: 7-9 range.

Interestingly, metropolitan Washington's pattern is almost the opposite of that of Atlanta. Subprime densities are lowest in the innermost ring of the Washington DC itself (3 per 1,000 units) and increase regularly as distance from Washington's CBD increases; reaching 5 in the city's outer ring, 8 in the inner ring of the suburbs and, the highest level (12) in the outermost ring of the suburbs.

Another perspective on the pattern is gained by viewing tract level maps of subprime densities (Figures 4-6). These maps show only the central portions of the three metropolitan areas at a uniform scale (1 in = 5 miles)

Figure 4 shows that the intensity of subprime lending in metropolitan Atlanta has clearly focused in the southern two thirds of the central city and in the suburban areas in the southern half of the metropolis overall. The map for metropolitan Chicago (Figure 5) is much more splotchy. There are patches of high subprime densities south, west and, to a more limited extent, north of the Chicago's central business district. For metropolitan Washington, the pattern is similar to the pattern for minority residence in the region, all dominantly in the eastern half of the region.

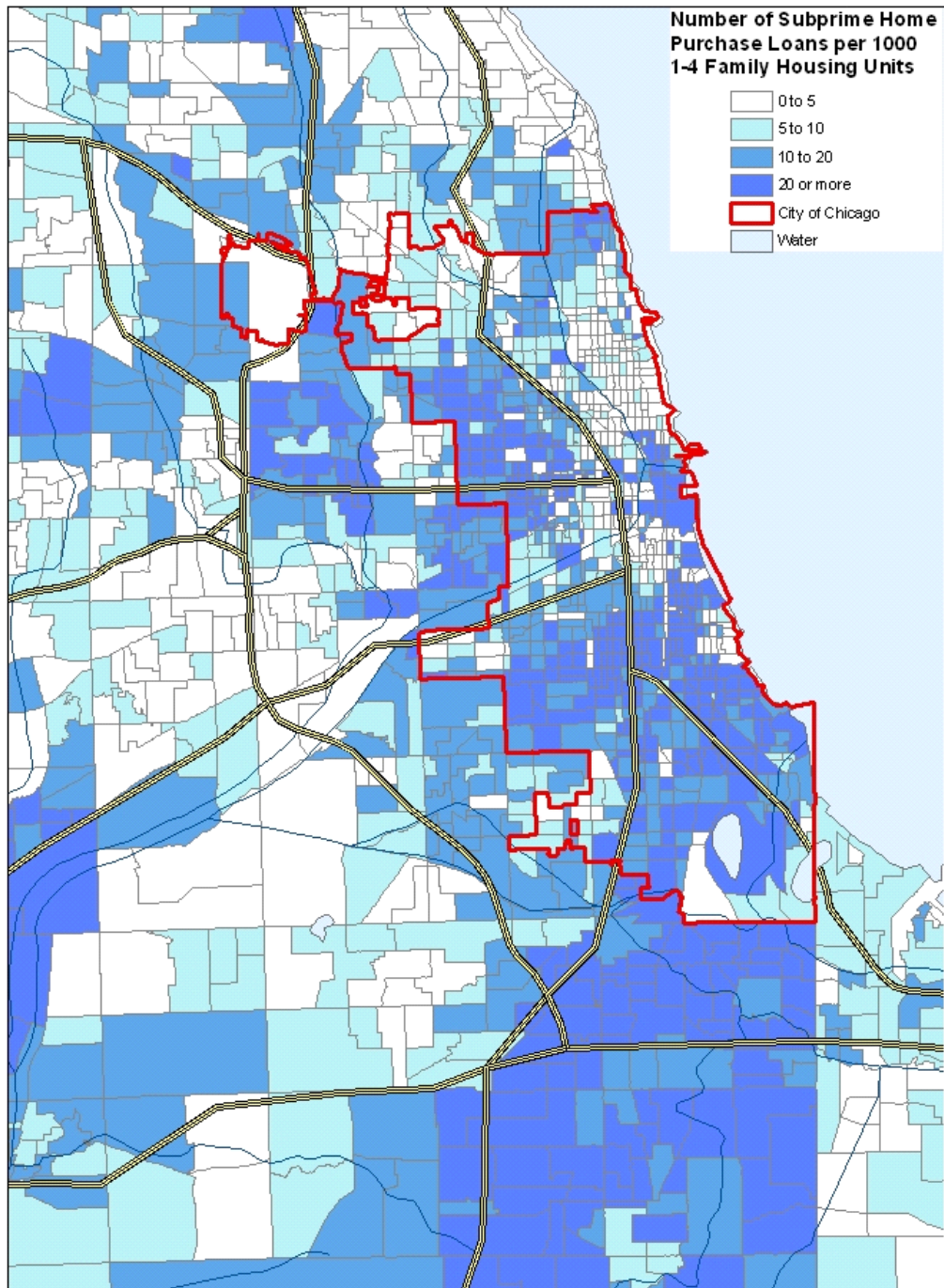
Figure 4: SUBPRIME DENSITY IN THE ATLANTA METROPOLITAN AREA



Source: 2006 *DataPlace* HMDA Disclosure Act data file.

1 inch equals 5 miles

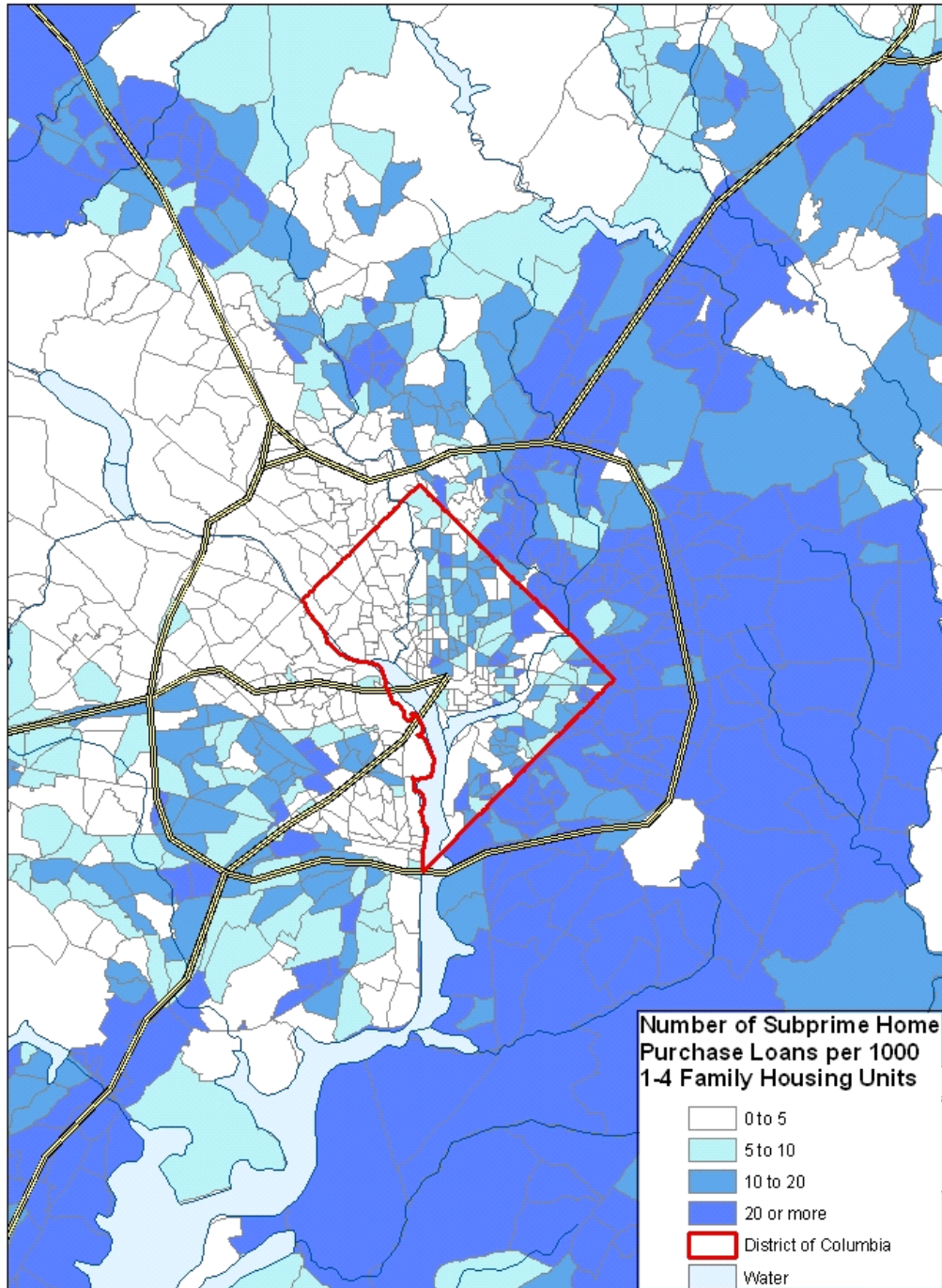
Figure 5: SUBPRIME DENSITY IN THE CHICAGO METROPOLITAN AREA



Source: 2006 *DataPlace* HMDA Disclosure Act data file.

1 inch equals 5 miles

Figure 6: SUBPRIME DENSITY IN THE WASHINGTON DC METROPOLITAN AREA



Source: 2006 *DataPlace* HMDA Disclosure Act data file.

1 inch equals 5 miles