

This article presents information on the location of subprime and Alt-A mortgages ("nonprime" loans) in the five states within the Federal Reserve Bank of Chicago's district (Illinois, Indiana, Iowa, Michigan, and Wisconsin). The purpose is to identify the zip codes and communities most affected, or at risk of being affected, by foreclosures. We present a series of maps that show the zip codes with the highest numbers and highest concentrations of subprime and Alt-A loans, as well as the past-due and foreclosure rates in these neighborhoods. For illustration purposes in the print version of this article, we present maps representing the Chicago and Detroit metropolitan areas. The full array of maps is available at the Chicago Fed's Web site, www.chicagofed.org. These maps are designed to inform policymakers, lenders, and nonprofit organizations about where to target outreach, counseling, and other resources for remediation.

The data used for this analysis comes from First American LoanPerformance, a subsidiary of First American CoreLogic, Inc. It includes first-lien subprime and Alt-A loans in securities portfolios (i.e., the segment of the subprime market that is securitized), representing about 70 percent of all subprime loans and 95 percent of Alt-A loans.² For this analysis, we assume that these loans are geographically representative of the total. Loans held on banks' books or portfolios

What are Subprime and Alt-A Loans?

"Subprime" is a lender-given designation for borrowers with low credit scores, little credit history, or other types of observable credit impairment. From the borrower's perspective, the primary distinguishing feature between prime and subprime loans is that the upfront and continuing costs are higher for subprime loans. Alt-A loans fall between prime and subprime loans on the risk spectrum. These loans allow some combination of low documentation, slightly subpar credit scores, and features such as interest-only or payment options. Alt-A loans carry lower interest rates than subprime loans.¹

Table 1: Zip Codes with Nonprime Loans % Total Zip Codes in LP Dataset with **Total Number of** % Total Zip Codes >3 Subprime Zip Codes in Loans and/or >3 in LP Dataset with State Alt-A Loans >=50 Loans 1584 66 97 Illinois Michigan 1170 78 44 Indiana 987 71 31 Wisconsin 897 76 24 1058 9 56 lowa

Source: First American CoreLogic, LoanPerformance data, December 2008, and www.zip-codes.com, accessed June 2008.

sold to hedge funds or other investors without first being registered with the SEC are not included. Of note, the number of nonprime, first-lien, active loans in the five states dropped by about 25 percent between the start of 2007 and the end of 2008. The number of these loans in foreclosure rose by 33 percent during this period.

The Location of Nonprime Loans

Subprime and Alt-A loans are not distributed evenly throughout each of the states in the Chicago Fed's district. As of December 2008, Illinois and Michigan had more than 150,000 subprime and Alt-A loans each, while Indiana had less than 100,000, Wisconsin fewer than

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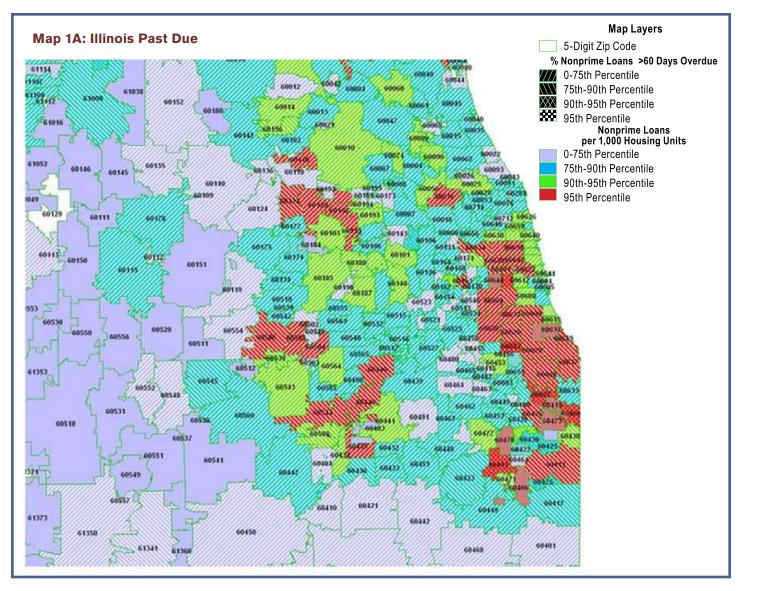


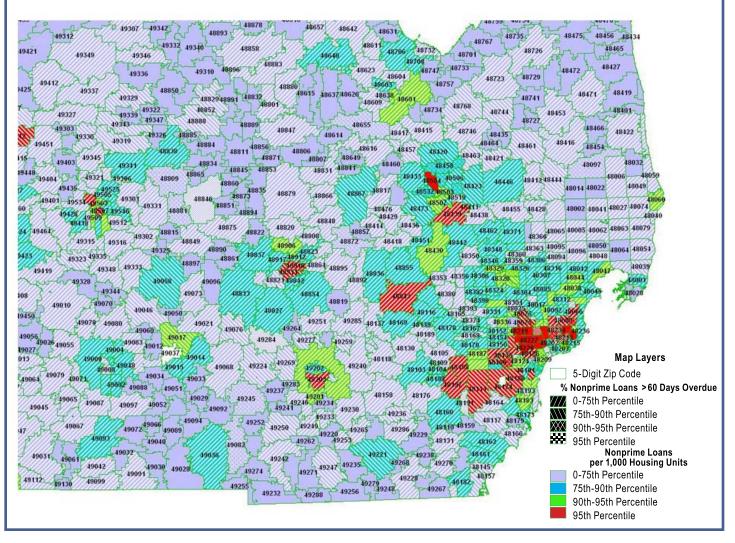
Table 2: Number of Nonprime Loans per Percentile				
	95th Percentile	90-95th Percentile	75-90th Percentile	
Illinois	917	545	218	
Michigan	782	36	227	
Indiana	579	406	182	
Wisconsin	282	187	73	
Iowa	201	75	27	
Note: These are the minimum number of loans in each percentile, based on zip codes in the dataset. Source: First American CoreLogic, LoanPerformance data, December 2008.				

60,000, and Iowa about 22,000.³ On a per-capita basis, Michigan had about 17 Ioans per 1,000 people, and Iowa about seven Ioans per 1,000 people. There was also a disparity in the proportion of zip codes with high numbers of nonprime Ioans between states. While more than

half of the zip codes in each state contained at least four nonprime mortgages, far fewer zip codes were the site of at least 50 such loans. In Michigan, for example, about 45 percent of all zip codes had more than 50 nonprime loans, whereas the rate was 9 percent of all zip codes in Iowa (see Table 1). Our analysis of nonprime Ioan performance (past-due and foreclosure rates) examines only those places with a minimum of 50 nonprime Ioans.

The maps and accompanying analysis focus on loan performance in the communities in which these loans are the most prevalent. Maps 1A–5A (not all shown) categorize zip codes (by percentile) according to the number of subprime and Alt-A loans in each. Maps 1A and 2A, representing the Chicago and Detroit metro areas, respectively, are included here. Maps of other District 7 states can be viewed at www.chicagofed. org/community_development/ foreclosure_maps.cfm. The zip codes colored in red represent those at the 95th percentile among zip codes (in the

Map 2A: Michigan Past Due



dataset) with at least four nonprime loans. For example, the top five percent of zip codes in the dataset for Illinois have a minimum of 917 nonprime loans (Table 2). The zip codes colored in green represent zip codes between the 90th and 95th percentile in terms of their number of loans, and those in blue are between the 75th and 90th percentile. Zip codes colored in purple represent the 0-75th percentile of the distribution.

Maps 1B–5B (1B and 2B shown) employ an alternative method to calculate the "highest-loan" zip codes. These maps identify zip codes with high concentrations of nonprime loans; i.e., the number of nonprime loans per 1,000 units of housing units in the zip code. For example, the Michigan zip codes with a minimum of 68 nonprime loans per 1,000 units of housing

Table 3: Nonprime Loans per 1,000 Housing Units

	95th Percentile	90-95th Percentile	75-90th Percentile
Illinois	88	60	34
Michigan	68	57	41
Indiana	65	55	39
Wisconsin	45	31	28
lowa	35	29	21

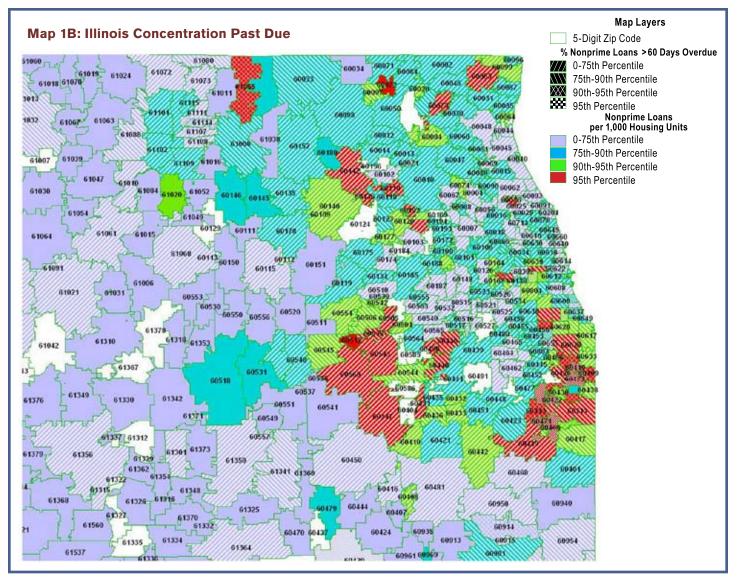
Note: These are the minimum number of loans per thousand housing units in each percentile, based on zip codes in the dataset. **Source:** First American CoreLogic, LoanPerformance data, December 2008, and Census 2000.

fall within the top 5 percent of the distribution in that state (Table 3).

According to the first method, the neighborhoods with the most nonprime

loans tend to be those located in and around the largest cities: in Michigan, Detroit; in Illinois, Chicago; in Wisconsin, Milwaukee and cities to the south; in Indiana, Indianapolis and Gary; and in Iowa,

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Des Moines, Cedar Rapids, and the Quad Cities. In Chicago, high numbers of nonprime loans are found in both the northern and southern parts of the city. In Detroit, high numbers of nonprime loans cover all but the eastern most zip codes, as well as zip codes in Dearborn and farther south of the city limits in Ypsilanti and Belleville. In Indianapolis, the affected zip codes form a ring around the center of the city (Indianapolis central, north, east, northeast, south, and southwest). In the northwestern part of the state, highnonprime zip codes extend from East Chicago to Elkhart. In Milwaukee, the footprint of the city shows high numbers of nonprime loans, as do the cities of Racine and Kenosha to the south. In Des Moines, the most affected neighborhoods form an arc around the north and east sides of the city.

The second method produces a slight shift in geographic pattern. In Illinois, the zip codes in the 95th percentile (with 88 or more nonprime loans per 1,000 housing units) tend to be located on the south side of Chicago and in the south and southwest suburbs, and to a lesser degree on the north side. In Michigan, Detroit still shows a high concentration of loans, though in somewhat fewer regions. In Indiana, the most affected zip codes are located around the perimeter of Indianapolis and in cities in the northwest of the state. In Wisconsin, the 95th percentile includes fewer Milwaukee neighborhoods in the south of the city, and captures more towns in St. Croix and Polk counties on the western side of the state. Iowa shows fewer places overall affected by high concentrations of nonprime loans: these include a cluster of

zip codes on the east side of Des Moines, zip codes to the north and south of the city, and smaller towns, such as Oakland and Pacific Junction near the western border.

As Table 4 shows, the places identified as "high-loan" zip codes share some common features regardless of the method that is used to identify them. The median income in these zip codes is around 80 percent or less of the county median, signifying that a large share represents low- or moderate-income households. The largest group of residents in most zip codes tends to describe themselves (demographically) as "White only," although more than 40 percent of the nonprime high-loan zip codes in Illinois and Michigan have Black majority populations.

The two methods of identifying highloan zip codes result in some demographic differences as well. For example, in Illinois, the zip codes with the highest numbers of nonprime loans tend to have a higher percentage of Hispanics and foreign-born residents than the zip codes with the highest concentrations of nonprime loans. In Wisconsin, the zip codes with the highest numbers of nonprime loans tend to have a greater percentage of Blacks than zip codes with the highest concentrations of these loans. In Iowa, the zip codes with the highest numbers of nonprime loans are located in predominately urban areas, whereas the zip codes with the highest

concentration of nonprime loans are likely to be in rural areas.

Past-due Rates

Maps of past-due loans, 6A–10A and 6B–10B, depict the percentage of pastdue loans in a given zip code for a principal metropolitan area.⁴ Once again, for illustration purposes, we include here the relevant maps for Chicago and Detroit metro areas, 6A, 6B, 7A, and 7B. Identifying the neighborhoods with high rates of past-due loans is useful for anticipating the areas at risk for foreclosures. It is also a way to identify the places where residents might benefit from financial counseling or modification of loan terms, since interventions are more successful the earlier they take place. The zip codes with the highest percentile of past-due loans are illustrated with a checkered pattern (see Table 5); the zip codes in the 90th percentile are illustrated with a diamond lattice pattern; and the zip codes in the 75th percentile are illustrated with diagonal lines going from top left to bottom right.⁵

Maps of past-due loans 6A–10A, based on the count of subprime and Alt-A loans, show some overlap between places with very high numbers of loans and very high delinquency rates. Maps 6B–10B,

Table 4: Characteristics of High-nonprime-loan Zip Codes						
	% Black (Median Zip Code)	% White (Median Zip Code)	% Hispanic (Median Zip Code)	% Foreign- Born (Median Zip Code)	% Urban (Median Zip Code)	Zip Code Median Income/ County Median Income
Illinois – High Count	35.8	44.8	15.4	11.2	100.0	63.6
Illinois – High Concentration	23.5	59.6	5.2	5.9	100.0	87.6
Illinois – All Zip Codes	0.2	97.7	1.0	0.9	0.0	n.a.
Michigan – High Count	35.1	55.7	1.8	3.9	100.0	67.2
Michigan – High Concentration	27.8	57.3	1.7	3.6	100.0	67.9
Michigan – All Zip Codes	0.3	96.1	1.5	1.6	0.0	n.a.
Indiana – High Count	10.9	84.1	3.4	2.8	99.3	73.4
Indiana – High Concentration	2.0	93.1	1.0	2.1	85.5	86.6
Indiana – All Zip Codes	0.1	98.0	0.8	0.8	0.0	n.a.
Wisconsin – High Count	7.1	84.8	4.8	4.2	100.0	71.2
Wisconsin – High Concentration	0.6	96.1	2.1	2.0	76.7	77.5
Wisconsin – All Zip Codes	0.1	97.9	0.9	1.2	0.0	n.a.
Iowa – High Count	2.5	93.2	2.6	3.0	95.8	82.1
Iowa – High Concentration	0.1	97.0	1.9	1.4	26.0	90.9
Iowa – All Zip Codes	0.0	98.8	0.5	0.7	0.0	n.a.

Note: This table includes only zip codes in the 95th percentile of nonprime loan counts and concentrations, based on zip codes in the dataset. The percent median income across zip codes represents the median of the median incomes. **Source:** First American CoreLogic LoanPerformance data, December 2008, and Census 2000.

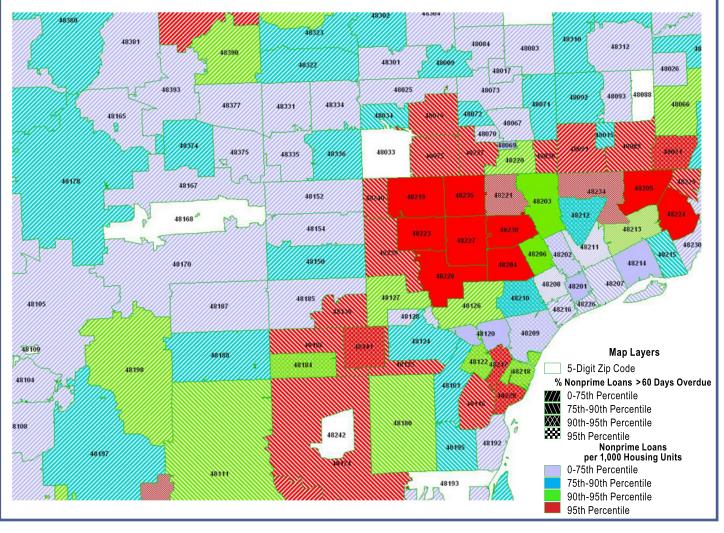


Table 5: Percent Nonprime Loans at least 60 Days Past Due				
	95th Percentile	90-95th Percentile	75-90th Percentile	
Illinois	24.7	22.9	19.3	
Michigan	28.8	25.0	21.2	
Indiana	23.2	21.8	18.8	
Wisconsin	26.6	22.4	19.1	
lowa	20.8	18.3	16.3	

Map 2B: Michigan Concentration Past Due

Note: These numbers represent the minimum percent of delinquencies in each percentile, based on zip codes with a minimum of 50 loans. **Source:** First American CoreLogic LoanPerformance data, December 2008.

based on the concentration of nonprime loans, show more overlap.

 In Illinois, the places with high numbers of loans and high past-due rates are found in south-side

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neighborhoods of Chicago and the southern suburbs. In Chicago, these include Englewood (60621); East Garfield Park, Humboldt Park, and Lawndale (60624); Austin (60644); Ashburn (60652); and Woodlawn (60637). In the suburbs, they include South Holland, Country Club Hills, Park Forest, Calumet City, and Riverdale.

The places with high past-due rates and high concentration of loans are the south suburban towns of South Holland, Dolton, Hazel Crest, Matteson, Richton Park, Country Club Hills, Flossmoor, Glenwood, and Olympia Fields. The town of Poplar Grove (Boone County) has a high concentration of loans and high pastdue rates as well.

In Michigan, several areas of Detroit have both high numbers of nonprime loans and high past-due rates. These include: Hamtramck (48212); Conner, the Airport, and Chandler Park (48213); Bagley (48221); and Grant

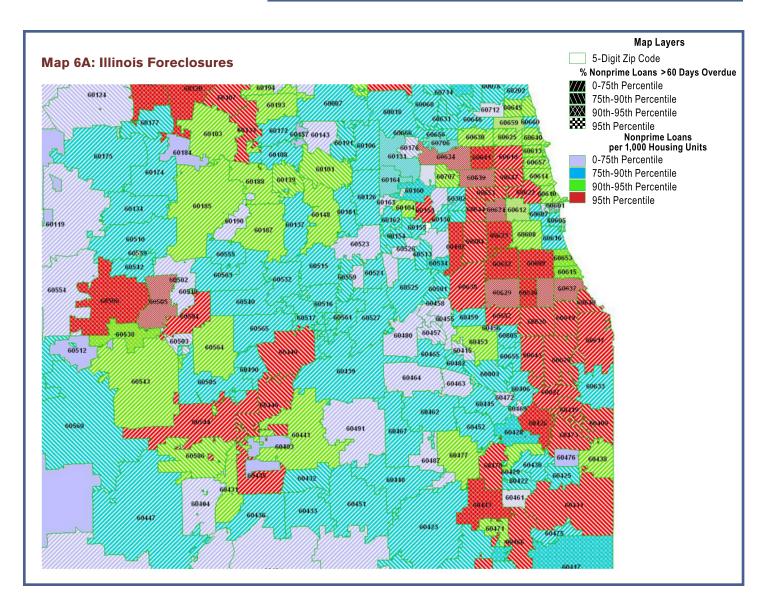
(48234). These neighborhoods are more than 85 percent Black and have median incomes of around 60 percent of the county median. Eastpointe, to the north of Detroit, also has a high number of loans and high past-due rates, as does Inkster, to the south.

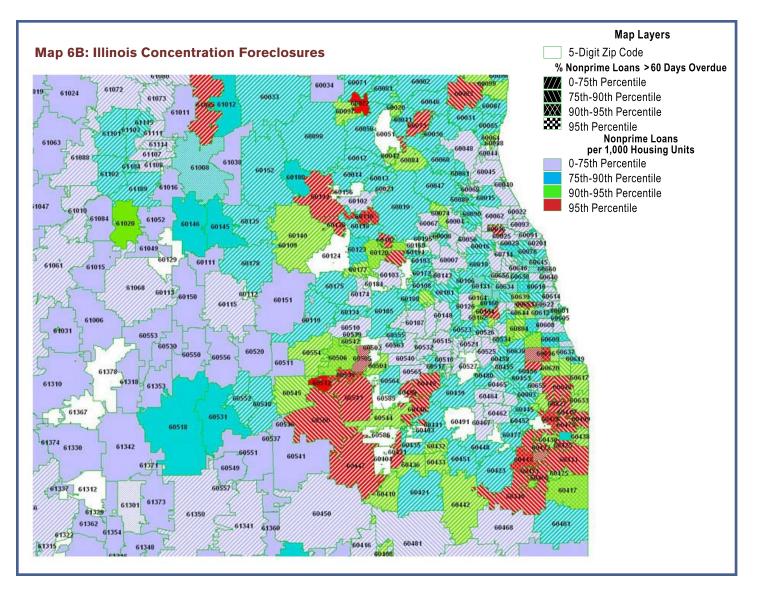
The places with the highest rates of past-due loans and the highest concentration of nonprime loans include some of the Detroit neighborhoods listed above. These include Bagley (48221), Boynton (48217), and Grant (48234). They also include areas around Detroit like Eastpointe and New Haven to the north, and Wills and Inkster to the south. Pontiac (48340) has a high loan delinquency and loan concentration as well. In Indiana, Merrillville and South Bend both show very high numbers of loans and high percentages of past-due rates. In Indianapolis, Indy Central (46218) has a particularly high rate of past-due loans and a high number of nonprime loans.

The places with the highest concentrations of nonprime loans and

Table 6: Percent of Nonprime Loans in Foreclosure 95th Percentile 90-95th Percentile 75-90th Percentile Illinois 17.5 15.9 13.5 Michigan 8.2 7.3 5.9 Indiana 15.7 14.0 11.4 Wisconsin 15.9 14.8 13.3 15.0 14.2 11.8 lowa

Note: These numbers represent the minimum percent of delinquencies in each percentile, based on zip codes with a minimum of 50 loans. **Source:** First American CoreLogic LoanPerformance data, December 2008.





the highest rates of past-due loans are in the northwest part of the state, including Gary, Merrillville, and South Bend. They are also in southeast and central Indianapolis (46239 and 46218).

In Wisconsin, the highest numbers of loans and the highest rates of past-due loans are found in the Milwaukee neighborhoods of Silver Spring, Havenwoods, McGovern Park, Hampton Heights, and Wahl Park (53218); Grasslyn Manor, Sunset Heights, and Dineen Park (53216); Florist Highlands, Little Menomonee Parkway, Parkway Hills, Silver Swan, and Timmerman Airport (53225); Lenox Heights, Saint Joseph, Uptown, and Metcalfe Park (53210); Brown Deer Park, Tripoli Park, Fairfield, and Thurston Woods (53209); and Cold Spring Park, West Side, Far West Side, and Near South Side (53208).

The places with both the highest concentration of nonprime loans and the highest rates of past-due loans are in northern Milwaukee (53216, 53225, 53218, 53209), as well as in Racine to the south.

In Iowa, the Des Moines neighborhoods (50316 and 50320) show the highest rates of past-due nonprime loans. Cedar Rapids (52405) has both a high rate of nonprime loans and high delinquency rates. In addition, Bondurant, which is east of Des Moines, Adel, which is west of Des Moines, and Missouri Valley, in the western part of the state, are towns with high delinquency rates and fall within the 75th to 90th percentile in terms of the number of nonprime loans.

The places with the highest rates of past-due loans and the highest concentration of nonprime loans are clustered near Des Moines (50314, 503316, 50320). Towns with high rates of past-due loans but fewer loans (75th to 90th percentile) are Missouri Valley (Harrison County) and Cedar Rapids (52405).

Foreclosure Rates⁶

Maps 11A,B - 15A,B (not shown) follow a similar design, but substitute past-due rates with foreclosure rates. High foreclosure rates impact property values, crime rates, and the overall economic well-being of community.⁷ In four of the five states, the average foreclosure rate on nonprime loans (across all zip codes in a state in the dataset) was about 10 percent as of December 2008. In Michigan, it was lower at about 5 percent. Table 6 presents foreclosure rates across zip codes at the top end of the distribution in each state, based on zip codes with a minimum of 50 subprime loans.⁸

The zip codes with the highest rates of foreclosures are not necessarily the places with the highest numbers or concentrations of nonprime loans. A few places stand out for having both high numbers of nonprime loans and high rates of foreclosures.

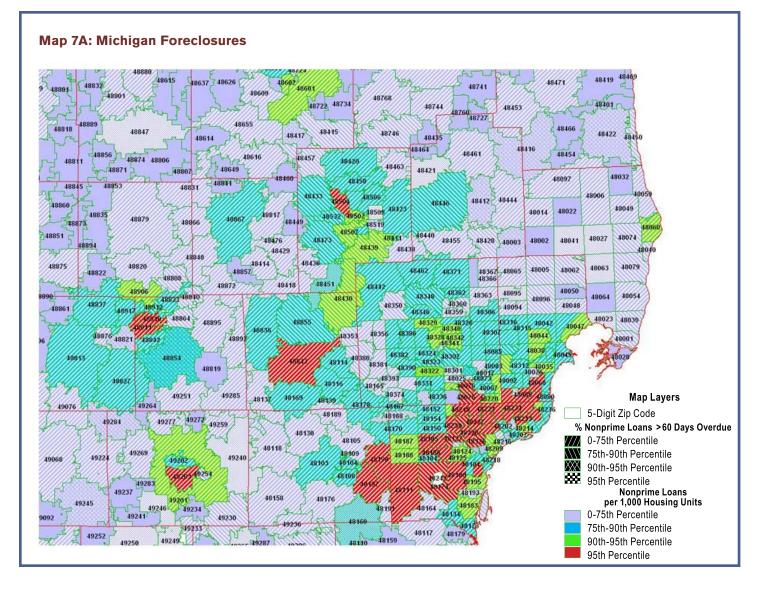
In Illinois, the high number, high foreclosure zip codes are located in the south side Chicago neighborhoods of Englewood, West Elsdon, Gage Park, Lawndale, South Austin, and Bridgeport. They are also in the north side neighborhoods of Belmont Cragin and Logan Square. In addition, high loan and high foreclosure rates are in the south suburbs of Matteson and Harvey, and the west suburbs of Aurora, Elgin, and Carpentersville.

The places with the highest concentration of nonprime loans and the highest foreclosure rates include south and southwest suburbs, such as Matteson, Olympia Fields, and Harvey. They are in the western suburbs of Carpentersville and Aurora. In the city, high foreclosure rates characterize the neighborhoods of Englewood, West Lawn, Gage Park, and Garfield Ridge.

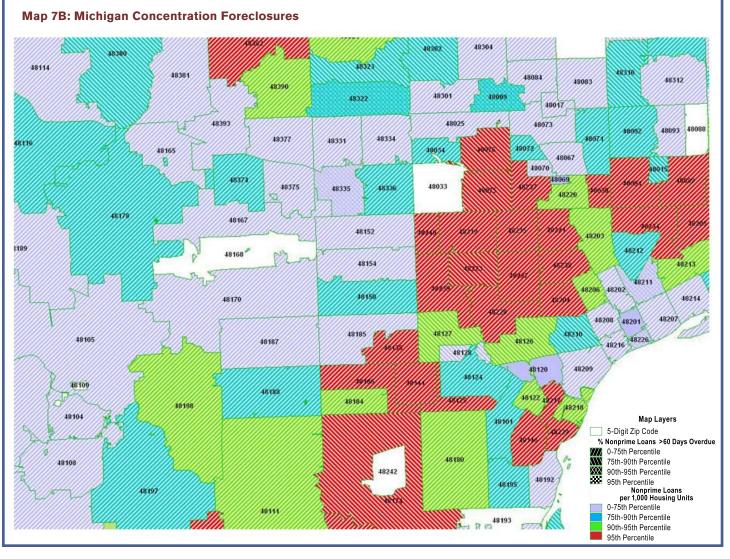
RESEARCH REVIEW

In Michigan, the highest foreclosure rates are not found in the zip codes with the most nonprime loans. They are outside of Detroit, in West Bloomfield (48322), Mason (Ingham County), and Linden (Genesee County). The neighborhoods with the most number of nonprime loans and foreclosure rates in the 75th to 90th percentile are Romulus (48174), Dearborn (48126), and Southfield (48075 and 48076).

The places with the highest foreclosure rates are in zip codes in the 90th to 95th percentile in terms of the concentration of nonprime loans. These are in towns such as Milan (Monroe County), Columbiaville (Lapeer County), and Linden and Burton (Genesee County).



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In Indiana, the zip codes that show both high rates of nonprime loans and high foreclosure rates are mainly in the northeast part of the state, in Gary (46408, 46404) and South Bend (46628).

The highest nonprime-loan foreclosure rates are found around Gary (46404, 46409, 46408) and South Bend (46613). High foreclosure rates are also found in Indianapolis central (46201).

In Wisconsin, they are found mainly in the city of Milwaukee, in the Washington Heights, Washington Park, Walnut Hill, and Hawthorne Glen neighborhoods (53208); in the Williamsburg, Harambee, River West, and Brewer's Hill neighborhoods (53212); in Metcalfe Park, Saint Joseph, Sherman Park, Uptown, and West Side (53210); and in Arlington Heights, Borchert Field, and North Division neighborhoods (53206). High foreclosure rates are also found in smaller cities in the north of the state, including Somerset (Saint Croix County) and Green Bay (Brown), where each fall within the 75th percentile in terms of numbers of loans.

The highest rates of foreclosures are found in Milwaukee, as well as in the western part of the state, in Houlton and Somerset (St. Croix County), and Osceola (Polk County). Several zip codes in the 75th percentile in terms of loan concentration also have high rates of foreclosure, including Kewaskum (Washington County), Watertown (Dodge County), and Columbus (Columbus County). In Iowa, the zip codes with both high numbers of nonprime loans and high rates of foreclosure are in Des Moines (50317, 50310, 50313, 50315 [90th percentile in loans and foreclosures]), Cedar Rapids (52403), and Dubuque (52001). They are also in smaller towns like Altoona (Polk), Newton (Jasper), and Bouton (Dallas).

The places with the highest concentration of nonprime loans and the highest foreclosure rates are found in Bondurant and Altoona (Polk County); Des Moines, in the Douglas Acres, Gray's Woods, and Laurel Hill neighborhoods (50317); and in the Chautauqua Park, Cheatom Park, King Irving, and Sherman Hill neighborhoods.

Conclusion

This article identifies the zip codes (and communities) where nonprime loans are the most prevalent, and focuses attention on the places with the most delinquencies and foreclosures. We find that a handful of zip codes have the most nonprime loans and large percentages of poorly performing loans. In Illinois, these tend to be in the south suburbs and a few south-side Chicago neighborhoods. In Michigan, they include neighborhoods of Detroit and the suburb of Eastpointe. In Indiana, they cover the cities in the northwestern region of the state and neighborhoods in Indianapolis. In Wisconsin, they are mainly in north Milwaukee. In Iowa, they are in Des Moines and Bondurant. The places with the most nonprime loans as of December 2008 are roughly the same places where high numbers of nonprime loans were prevalent at least six months earlier.

In general, however, the results of this exercise show that pinpointing the most at-risk zip codes (and communities) is largely a matter of judgment. A range of criteria dictates where interventions should take place, and prioritizing these

criteria can be a matter of personal perspective. At a regional level, an argument can be made to focus on home owners in Michigan, Illinois, and Indiana, since these states have the higher per capita rates of nonprime loans. On the other hand, the proportion of nonprime loans in foreclosure is currently highest in Illinois, Wisconsin, and Indiana, arguing for greater attention in these states. Similarly, within a given state, the case can be made (as it is in this article) that the zip codes with the most nonprime loans should receive attention. Focusing on the 95th percentile is admittedly a narrow range, however, and zip codes at lower percentiles may deserve more attention. In addition, the argument can be made to focus on places with high delinquency rates, since these may be places where loan work-outs and other interventions have the greatest chance of succeeding. At the opposite extreme, it can be argued that the most economically challenged neighborhoods, the places that face many other stresses, including high unemployment and high poverty rates, in addition to foreclosures, are the most deserving of attention and resources.

Loan Resets

Interest rate resets and conversions from an interest-only payment (IO) to a fully amortizing one can affect loan performance as well. However, it appears unlikely that either of these two potential sources of payment shock will account for widespread delinquencies in the near term. One reason is that many of the loans undergoing their first reset this year may actually result in payment decreases due to this year's low LIBOR rates. Of the 52.4 percent of nonprime loans which are ARMs, 10.3 percent will change from fixed rate to a floating rate this year. Further, assuming the LIBOR remains at about 1.75 percent through the remainder of the year, over 75 percent of these mortgagors will experience a decrease in their monthly payment. (We estimate that LIBOR could rise to about 3 percent before the number of ARM borrowers whose payments would increase will exceed the number of borrowers whose payments would decrease). With respect to the payment shock from interest-only loans to fully-amortizing mortgages, these types of loans are relatively rare in the dataset. Only 9.5 percent of loans with a fixed interest rate and 17.9 percent of ARMs that are currently active are structured to include an IO period. The expirations of interestonly periods among these loans are spread out over the next eight years, with only 5.1 percent of IO loans switching to fully amortizing payments in 2009. Overall, this accounts for less than 1 percent of the total loan population.

RESEARCH REVIEW

While the accompanying maps do not definitively identify the subprime "hot spots," they give a clearer appreciation of the extent to which the impact of nonprime lending differs within a metropolitan area, a county, and even a city. The data presented here shows that many neighborhoods in central cities face high rates of delinquencies and foreclosures, but many suburban and rural areas are affected as well. This granular examination of nonprime loan location may be a necessary component of designing effective remediation for home owners and neighborhoods.

Notes

- 1 See www.frbsf.org/publications/ federalreserve/annual/2007/subprime.pdf and www.chicagofed.org/community_ development/files/12_2006_pnv_ nontraditional_mortgages.pdf, accessed April 16, 2009.
- 2 Loans include owner- and nonowneroccupied nonprime loans made for purchases, refinances, and "loans for other purposes."
- 3 These counts underestimate the total number of active, first-lien, nonprime loans, counting only those in the First American CoreLogic LoanPerformance dataset.
- 4 The past-due rates represent nonprime loans at least 60 days past due as of December 2008. LoanPerformance also collects data on loans 30 to 59 days past due.
- 5 The calculation of percentiles for past-due loans is based on zip codes with a minimum of 50 loans so as not to include zip codes that have high percentages of nonprime foreclosures, but relatively few nonprime loans overall.
- 6 Foreclosure rates are defined as the share of nonprime loans in foreclosure. This rate does not include Real Estate Owned (REO) properties.
- 7 See Woodstock Institute, "There Goes the Neighborhood: The Effect of Single-Family Mortgage Foreclosures on Property Values," June 2005.
- 8 The data reflects the subprime and Alt-A loans in foreclosure as of December 2008, and therefore may differ from sources that calculate state foreclosure rates based on a cumulative tally over a number of months.