

*Children and Foreclosures: Baltimore City
The Foreclosure Crisis and Student Mobility*

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The Baltimore Neighborhood Indicators Alliance - Jacob France Institute (BNIA-JFI) is a research program within the University of Baltimore's Jacob France Institute. BNIA-JFI builds on and coordinates the related work of citywide nonprofit organizations, city and state government agencies, neighborhoods, foundations, businesses, and universities to support and strengthen the principle and practice of well informed decision making for change toward strong neighborhoods, improved quality of life, and a thriving city.

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INTRODUCTION

Since 2007, the foreclosure crisis in the United States has continued to affect families and children across the United States. While most of the research on foreclosures has focused on the impact on the housing market, the loss of the home, the decline in property values and a loss of wealth, little research has examined the impact of foreclosures on children. Research conducted in Baltimore City found that in the 2008-09 school year, 2.7 percent of public school children are affected by foreclosure while research in New York City found two percent of public school children are affected by foreclosure and research in Washington, D.C. found 2.2 percent of public school children are affected by foreclosure (Been et al., 2010; Comey and Grosz, 2010; Kachura, 2011).

The Open Society Foundations funded three research organizations that are members of the Urban Institute's National Neighborhood Indicators Partnership (NNIP) to explore how children have been affected by foreclosures.¹ These organizations are the Baltimore Neighborhood Indicators Alliance – Jacob France Institute of the University of Baltimore (BNIA-JFI), the Furman Center for Real Estate and Urban Policy at New York University's School of Law and NeighborhoodInfo D.C. at the Urban Institute. The resulting research would not have been possible without the financial support provided by Open Society Foundations as well as the support, assistance and data offered by the Baltimore City Public School System, other data providers and the numerous stakeholders who reviewed the findings and provided technical assistance.

The first phase of this research identified the number of students affected by foreclosure, provided information on their demographic characteristics, neighborhoods, schools, and housing characteristics (see Kachura, 2011). This brief, the second in a series about Baltimore City, focuses on whether foreclosures result in public school students moving homes, switching schools and the conditions in both the neighborhoods and schools before and after the move. There is significant literature and research that suggests residential mobility and changing schools has a negative impact on children and this brief relates these disruptive forces to the foreclosure crisis in Baltimore City.

BACKGROUND AND METHODOLOGY

Residential and School Mobility Research

The primary impacts of foreclosures on children are the potential necessity to change residence, the resulting enrollment in a different school and emotional stress to the household; considerable literature exists on the effects of residential mobility and switching schools on children. This

¹ The word child is used interchangeably with students for purposes of this report. The identification of children affected by foreclosure could only be made on students who attend Baltimore City Public Schools. The appendix of this report discusses data limitations including being unable to capture other populations of children that might be affected by foreclosure in Baltimore City.

section briefly describes how residential mobility, school mobility, and household stress can have a negative impact on a child's academic and social behavior.

Involuntary residential moves can negatively impact a child's academic and social development. Students who move frequently encounter academic problems such as sporadic attendance, poor test performance, and lack of school completion or grade retention (Braconi, 2001; Aaronson, 1999; Boyle, 2002; Scanlon and Devine, 2001). Research has also shown that moves disrupt the relationship that children and parents have with schools, teachers, and classmates (Pribesh and Downey, 1999). Socially, children who move lose connections to their peer networks and other caring adults, and disruptive moves can also lead to underdeveloped interpersonal skills and depression (Pribesh and Downey, 1999; Haurin, Parcel, and Haurin, 2001; Boyle, 2002; Gruman et al., 2008; Pettit and McLanahan, 2003). Finally, research has shown that moving to neighborhoods with high levels of negative behaviors (illegal drug use, crime, unemployment, and children not engaged in school) can increase the probability that other children will fall into that same pattern (Case and Katz, 1991).

Switching schools for reasons other than grade matriculation can also have a negative impact on a child's development. These impacts can include increased absences, decreasing academic performance, and behavioral issues (Schwartz et al., 2007; Swanson and Schneider, 1999). While students can be negatively impacted by switching schools, schools that have high student turnover can also experience lower performance (Hanushek et al., 2004).

A foreclosure on a property does not always lead to the family needing to move from the property. Even in cases where there is no changing of residences or schools, a child can still suffer negative impacts associated with stress from the foreclosure. This stress can lead to behavioral problems, lower academic performance, and other detrimental effects (Kingsley et al., 2009; Moore, Vandivere, and Ehrle, 2000). Anecdotal evidence has begun to suggest a link between the stresses related to foreclosures to an increase in domestic violence.²

Identifying Students Affected by Foreclosure

To identify students affected by foreclosures in Baltimore City, BNIA-JFI matched three data sources: student-level public school data, foreclosure filings data and property characteristics data.³ Combining these datasets allowed BNIA-JFI to identify the students who lived in properties that had received foreclosure notices. These datasets and the matching process are described in more detail below.

² <http://www.foreclosureconnections.com/blog/article/197/foreclosure-crisis-causing-domestic-violence>

³ The study period is from the 2003-04 to 2008-09 school years because the earliest available student-level data for this research project was the 2003-04 school year.

Baltimore City Public Schools Data: The Baltimore City Public School System provided the student data used for this analysis.⁴ The data file includes the following information: student identification number, student home address, school, grade level, gender, special education designation, race, school meal-eligibility qualification, days absent, and standardized test scores.

The student addresses for each school year are recorded during the registration period (typically in August, at the start of the school year). Any submitted address changes are updated throughout the school year. However, based on information provided by BCPSS, the majority of recorded student addresses are those submitted in August and that few addresses are actually updated in the database through the school year. Since the student number is a unique identifier, BNIA-JFI linked all of the school years by student number, creating a longitudinal data set that includes all information needed for this analysis.

Property Characteristics: To describe the property characteristics of the addresses that received foreclosure notices, BNIA-JFI used Maryland Property View data from the State of Maryland Department of Planning that contains parcel information for every county in Maryland.⁵ The database contains tax assessment information such as zoning type (residential, commercial, industrial, etc.), dwelling type and owner-occupied status.

Baltimore City Foreclosure Data: BNIA-JFI obtained and geocoded foreclosure filing data from two sources: the Circuit Court of Baltimore City and the Maryland Judiciary Case search system. From these two sources, BNIA-JFI created a single dataset of every residential address in Baltimore City with a foreclosure filing, or *lis pendens*, listed for the period of 2000 to 2010.⁶

BNIA-JFI used street addresses to match the foreclosure and property characteristic data to the student-level address data. To identify the students affected by foreclosures in a given school year, student address records were matched by BNIA-JFI staff to the addresses of foreclosure starts. A student was flagged as “affected by foreclosure” if the student address for a given school year matched a property that received a foreclosure notice between Aug. 1 of the previous year and July 31 of the following year (the window in which the student was assumed to have lived at that address).

SUMMARY OF PAST RESEARCH AND FINDINGS

The Baltimore City housing market experienced both a boom and a decline in the 2000’s. The median sale price of homes sold in Baltimore City more than doubled from 2000 to 2009, increasing by 131 percent from \$65,000 to \$150,000. From 2000 to 2005, the number of homes sold in Baltimore City increased by nearly 61 percent. When the economy and housing market

⁴ BNIA-JFI received permission from the Baltimore City Public School System to use student-level data for this analysis.

⁵ <http://planning.maryland.gov-OurProducts-PropertyMapProducts-MDPropertyViewProducts.shtml>

⁶ BNIA-JFI cannot be certain that every *lis pendens* for Baltimore City is included in our foreclosure activity dataset; however combining both sources provides as comprehensive and complete a database of foreclosure activity in Baltimore City for the study time period.

experienced a downturn, the number of units sold in Baltimore City declined by 60 percent from 2006 to 2009 with housing prices continuing to increase slightly (8%) from 2006 to 2009.

In the early part of the decade, Baltimore City experienced a large number of property foreclosures.⁷ From 2000 to 2003, there were more than 5,000 foreclosure filings⁸ per year. This number decreased from 2003 to 2006 but has risen dramatically since then. The housing boom meant that families unable pay their mortgages were more likely to be able to sell the home for at least the amount owed. From 2005 until the end of 2009, the number of foreclosure filings nearly doubled, increasing by 96 percent. In 2009, a total of 6,263 properties had received a foreclosure filing.

In the first phase of our analysis (Kachura, 2011), a detailed description of the Baltimore City children attending public school living in properties in foreclosure from the 2003-04 to 2008-09 school years is provided. A brief summary of the findings of this analysis is included below.

- The number of foreclosure filings in Baltimore City more than doubled from 2005 to 2009 (see Figure 1).
- Roughly one out of every 37 children in Baltimore City in the 2008-09 school year is living in a property in foreclosure (see Figure 2).
- The majority of Baltimore City children living in properties that received foreclosure notices are concentrated in a handful of neighborhoods.
- The number or share of properties that were home to at least one student and that also received a foreclosure filing has increased. Over the study period, the number of properties that were home to one or more students and that received a foreclosure filing increased by 24 percent, from 1,114 properties in 2003-04 to 1,384 properties in 2008-09.
- The overwhelming majority of students who attend the City's public schools are African American and the largest percentages of students affected by foreclosure in Baltimore City are African American. In the 2008-09 school year, 90 percent of the students (2,169) affected by foreclosure were African American. The next largest group of students affected by foreclosure (163) was white.
- While the percentage of African-American students affected by foreclosure has remained fairly steady, the percentage of other racial groups has increased. The percentages of both white and Hispanic students have increased from 2003-04 to 2008-09.
- While the percentages of all students who live in owner-occupied properties has remained steady from the 2003-04 school year to the 2008-09 school year, the share of students in rental properties affected by foreclosure has been growing over time and they are

⁷ The number of foreclosures is measured by the total number of foreclosure filings or *lis pendens* per a property that can be geocoded. It is important to note that not every foreclosure filing results in an actual foreclosure, but that filings were used for a variety of reasons, including availability of the data, and that filings are an indicator of financial distress for a property.

⁸ For purposes of this report, *foreclosure* is used interchangeably with *foreclosure filings*.

disproportionately affected. In the 2008-09 school year, the percentage of affected students living in rental properties was greater than the percentage of those living in owner-occupied properties.

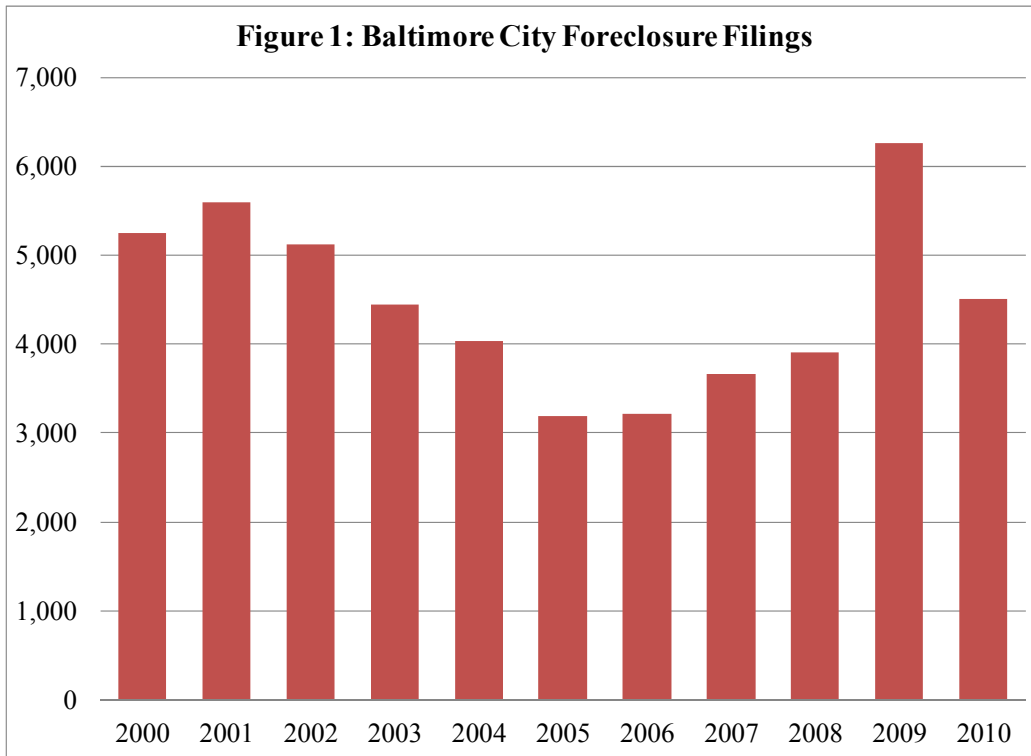


Table 1: Baltimore City Public School Children Affected by Foreclosure

	School Year					
	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Number of Children	1,951	2,128	1,886	1,929	1,702	2,409
Percent of Children	3.7%	2.2%	2.0%	2.1%	1.9%	2.7%

Source: Baltimore City Public School System data analyzed by BNIA-JFI

HOW FORECLOSURE AFFECTS EXITING THE SCHOOL SYSTEM AND MOBILITY

A majority of the analysis presented below uses a two-year panel dataset of students that lived in properties identified as receiving a foreclosure filing. We used the 2007-08 and 2008-09 school years to examine the residential mobility, school switching, characteristics of the origin and destination schools and neighborhoods, and student behavior in regards to suspensions/expulsions and attendance.

Students Leaving the Baltimore City Public School System

Using our two-year panel dataset we were able to identify students who changed address between years. A move may have been from one unit within an apartment building or multi-

family dwelling to another unit or to entirely different parts of the city. We found that almost 11 percent of the students in the 2007-08 school year could not be matched to the students in the 2008-09 school year. There are multiple reasons why these student “exiters” cannot be found in the following year.⁹ These students could have moved outside of Baltimore City and started attending another school district. They could have also dropped out of school in Baltimore City but still live within the city. They might have also switched from attending public school to a private school and students attending private schools are not included in this analysis. Finally, a possibility exists that they cannot be matched due to data error. While Baltimore City assigns unique student identifiers to each student allowing them to be tracked longitudinally, it is possible that their identification number was entered incorrectly or they were assigned a new number. Since we cannot know the next school or the next address for students who leave the system altogether, they were not included in the remainder of the analysis.

Students that lived in a property receiving a foreclosure filing exited the school system at a higher rate than students who were not affected by foreclosures. Almost 16 percent (15.6%) of students living in a foreclosed property exited the school system from 2007-08 to 2008-09, compared to 10.6 percent of all non-foreclosed students. Even though there is a difference between the rates of students exiting the school system that were affected by foreclosure and students who were not affected by foreclosure, there is even greater difference when compared by grade level. These rates differ by as little as 2 percent (for students in grades 9-11) and by as much as 6 percent (for students in grades 1-7).

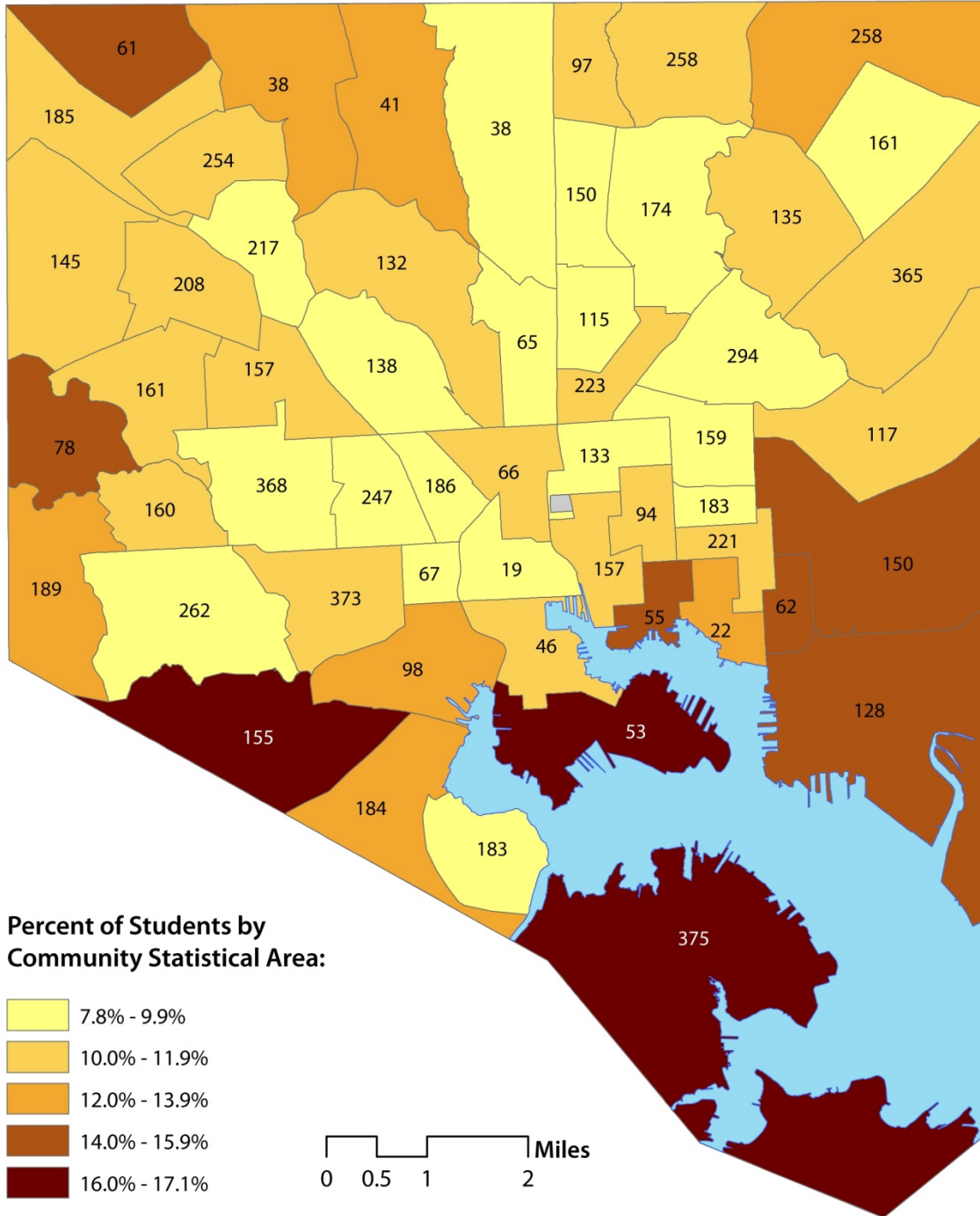
Table 2: Share of Baltimore City Students not in Public School Records the Following Year, 2007-08 to 2008-09

	All Grades	Grades 1-7	Grade 8	Grade 9-11
All Students	11%	9%	10%	16%
Students in Foreclosed Homes	16%	15%	15%	18%

The rate of students leaving the Baltimore City Public School System is attributable to several reasons. First, the City’s population has continued to decline. The number of persons living in Baltimore City declined by 4.6 percent and the number of persons under 17 declined by 3.3 percent from 2000 to 2010. Second, similar analyses found large numbers of students leaving urban school systems. Analyses conducted in Washington, D.C. and New York City found students exiting the school system of 20 percent and 3 percent respectively (Comey and Grosz, 2011)(Been et al., 2011). Map 1 shows where all student exiters lived in the 2007-08 school year and shows that many of the Community Statistical Areas with the largest percentages of exiters live in neighborhoods that border the suburban jurisdictions.

⁹ We excluded students enrolled in the 2008-09 school year but did not attend in 2007-08 school year and students who were 12th graders in 2007-08 because it is assumed that these students would graduate and not be enrolled in the 2008-09 school year.

Map 1: Percentage of Students Exiting the Baltimore City Public School System



Impact of Foreclosure on Student Residential Mobility

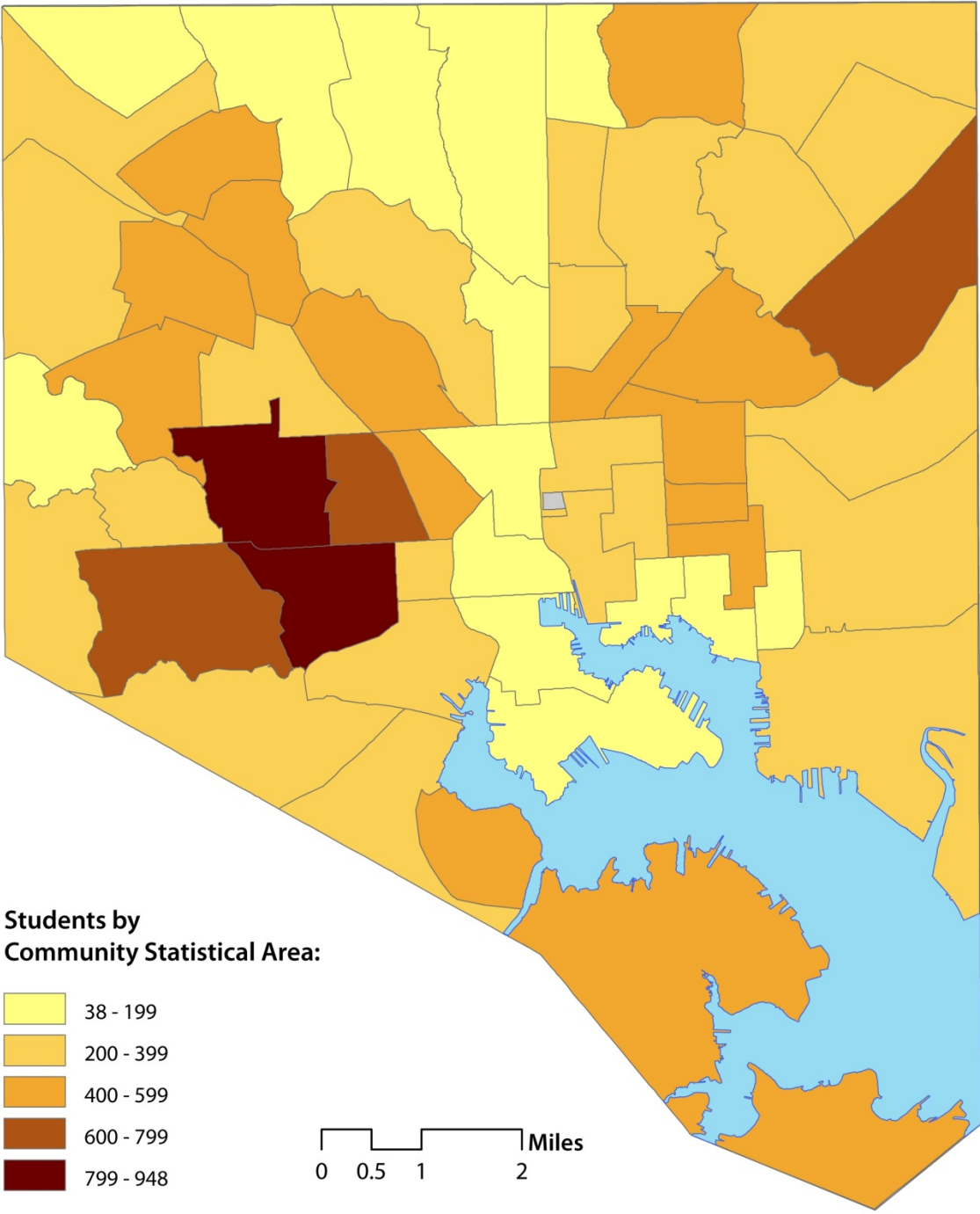
Other research has shown that students that live in urban areas and low-income public school students have higher rates of residential mobility compared to their peers (Swanson and Schneider, 1999), so we expect Baltimore children to already have a high rate of mobility and foreclosure to increase the rates even further. This is due to the fact that the foreclosure would most likely result in their need to move out of their current housing and find alternative housing. Table 2 shows the mobility rates for all students and the mobility rates for students living in properties in foreclosure. From the 2007-08 to 2008-09 school years, one-third (33 percent) of the students identified as living in properties in foreclosure moved while nearly 23 percent of all students did the same.

Table 3: Residential Mobility, 2007-08 to 2008-09 School Years (percent)

	All Students	Students in Properties with a Foreclosure Filing
Total	22.7%	33.4%
Pre-School to Kindergarten	10.7%	9.8%
Grades 1 - 8	59.3%	62.0%
Grades 9 - 11	30.0%	28.1%
Renter	11.5%	14.9%
Owner	7.3%	18.2%

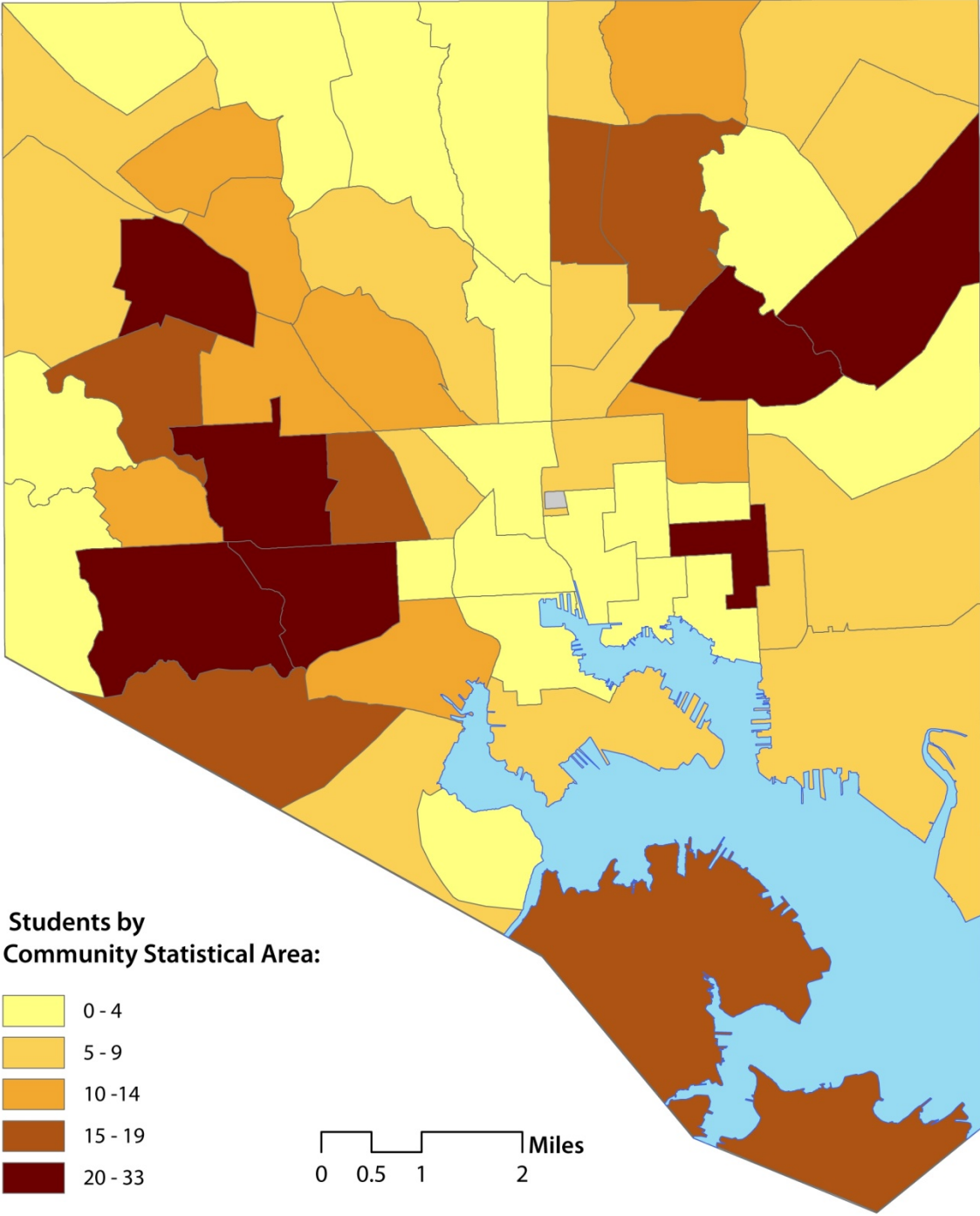
When we mapped the addresses of students changing residences from the 2007-08 to 2008-09 school years, we were able to make two observations. First, the largest numbers of mobile students, both all students and students living in foreclosed properties, tended to live in a handful of CSAs. Second, the CSAs with the largest number of students affected by foreclosures that changed residences were concentrated in the western central part of the City and the north eastern part of the City.

Map 2: Number of All Students Changing Residences



Source: BNIA-JFI analysis of Baltimore Public School System data

Map 3: Number of Students Affected by Foreclosure Changing Residences



Source: BNIA-JFI analysis of Baltimore Public School System data

Students living in owner-occupied housing in foreclosure move slightly more frequently than students living in rental housing (18 percent versus 15 percent respectively) (see Table 3). But, students living in rental housing affected by foreclosure also move more frequently than all students who live in rental housing.

We used multivariate regression analysis to further explore residential mobility and determine whether students living in properties receiving foreclosure filings were more likely to move, controlling for a range of both student and neighborhood characteristics. Tables with the regression results can be found in the Appendix. The results of the regression indicate that students who live in properties that received a foreclosure filing were in fact more likely to move than other students controlling for other characteristics. Beyond receiving a foreclosure notice, we also found that students who live in rental properties were more likely to change residences than students living in owner-occupied properties.

Impact of Foreclosure on Quality of Destination Neighborhoods

We also analyzed whether those students affected by foreclosure moved to neighborhoods substantially different than where they lived before they moved. For this analysis, we defined a student's neighborhood as their CSA and used five measures of neighborhood quality: the Part 1 crime rate (per 1,000 persons), the juvenile arrest rate (per 1,000 juveniles), the percentage of vacant and abandoned housing, the percentage of public school students receiving free and reduced school meals, and the median home sales price.

Table 4 compares both the origin and destination neighborhoods of foreclosed students who moved that live in properties in foreclosure to all students who moved from the 2007-08 school year to the 2008-09 school year. We found that students who live in properties in foreclosure and move started off in slightly better neighborhoods compared to all students who move.

When we compared the origin neighborhoods to the destination neighborhoods, we begin to see some differences. For all students who move, they tended to move to neighborhoods with a lower Part 1 crime rate, a lower juvenile arrest rate, a slightly lower percentage of vacant and abandoned homes, a lower percentage of students who receive free and reduced school meals, and a slightly higher median home sales price. Students who live in properties with a foreclosure filing and move tended to move to neighborhoods with a slightly lower Part 1 crime rate, a higher juvenile arrest rate, a slightly higher percentage of vacant and abandoned homes, a lower percentage of students receiving free and reduced school meals, and a lower median homes sales price. This could imply that families of students who move looked to move to better neighborhoods, while families of students living in foreclosed properties had fewer positive moves, and often on average to areas slightly worse from where they started on most measures.

Table 4: Average Neighborhood Characteristics of Originating and Destination Neighborhoods for Students Changing Residences

	Originating Neighborhoods		Destination Neighborhoods	
	All Students	In Properties in Foreclosure	All Students	In Properties in Foreclosure
Part 1 Crime Rate	64.0	61.0	61.0	60.0
Juvenile Arrest Rate	134.0	122.0	127.0	131.0
Percent Vacant and Abandoned Properties	12.0%	10.0%	11.0%	11.0%
Percent FARMS	67.0%	66.0%	59.0%	60.0%
Median Home Sales Price	\$124,743	\$125,258	\$125,756	\$123,055

Again we used multivariate regression to determine if there was a relationship between foreclosure and neighborhood change, controlling for other factors. Using ordinary least squared (OLS) regression, we used a series of five models to test whether those students living in properties receiving a foreclosure notice were more likely to move to higher crime neighborhoods or neighborhoods with more vacant and abandoned properties. While the table suggests that students living in foreclosed properties moved to worse-off neighborhoods, with respect to the juvenile arrest rate and median home sales price, in none of the models did receiving a foreclosure filing result in a student moving to a neighborhood that was statistically significantly different from their origination neighborhood.

Impact of Foreclosure on School Switching

In addition to examining whether students change their residence, we examined whether they also changed schools. Baltimore City already has a large amount of school choices where middle and high school students can participate in a school choice program.¹⁰ This program allows students to select and attend a variety of city schools without their changing residences. Select schools that participate in this program require students to meet certain requirements and criteria before they are allowed to enroll in that school. In the 2010-11 school year, a total of 65 middle and high schools in Baltimore City participated in the school choice program.

There are numerous reasons as to why students might change schools. Some students reach the highest grade at their current school and matriculate to a new middle or high school. Other times, students move and switch their school to a location closer to their new residence. In a few cases, due to school closures, students might switch schools. Some switches may be a result of behavioral problems, such as suspension or truancy. Finally, a share of public students may leave the public schools altogether either due to leaving the school system, switching to a non-public school, or dropping out of school.

¹⁰ <http://www.baltimorecityschools.org/cms/lib/MD01001351/Centricity/Domain/43/pdf/Choose-Your-School-Guide.pdf>

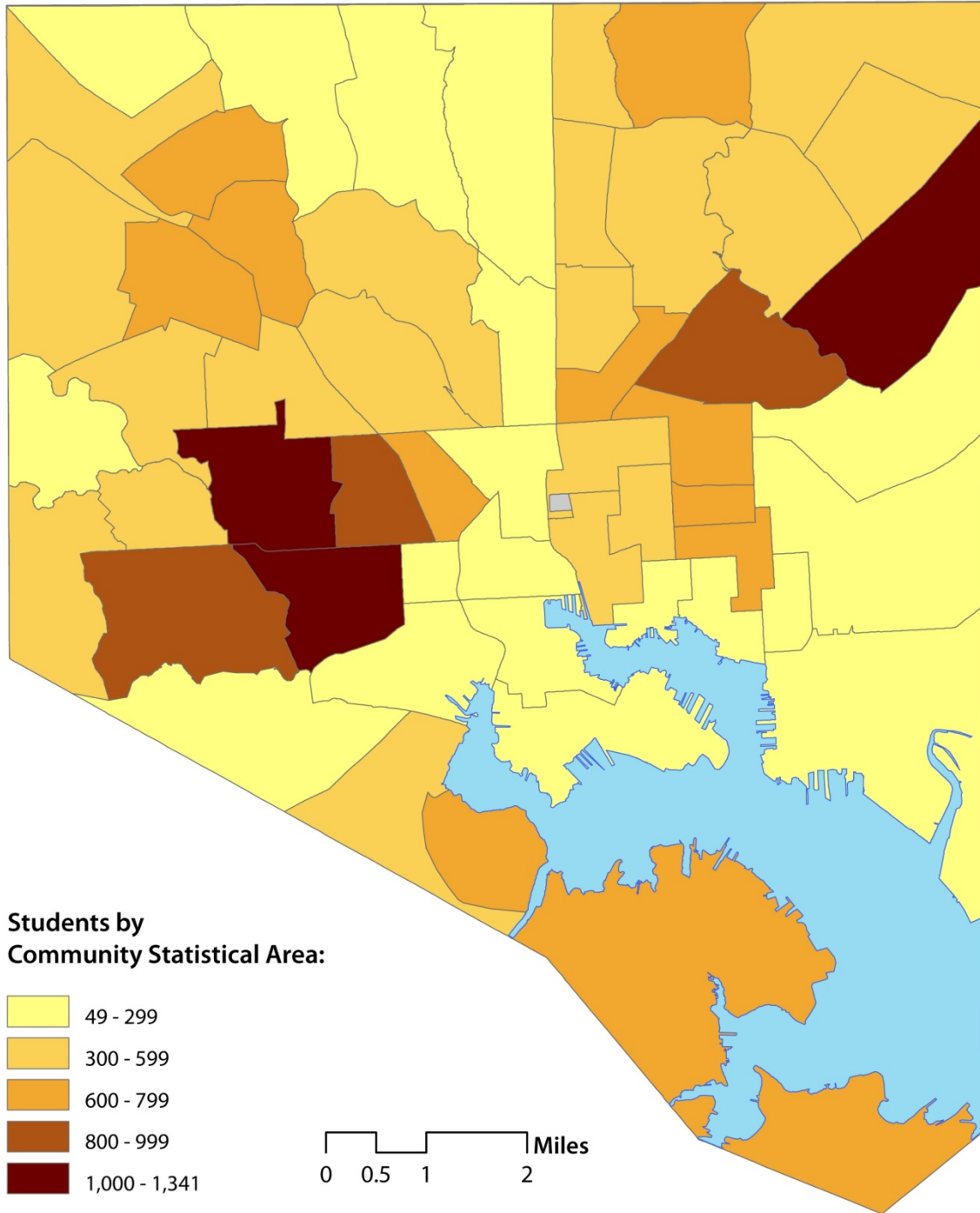
We explored whether students affected by foreclosure were more likely to switch schools compared to all students. Table 5 shows the results of our school switching analysis. We found that students affected by foreclosure switch schools at almost the same rate as all students. Twenty-three percent of students affected by foreclosure switched schools and 22 percent of all students changed schools from 2007-08 to 2008-09. When we examined school switching by grade, the only differences we found were that a greater percentage of students affected by foreclosure in grades 1-7 switch schools compared to all students in grades 1-7.

Table 5: Percent of Students Switching Schools

	All Students	Students in Properties with a Foreclosure Filing
Total	22.1%	23.1%
Grades 1 - 7	21.0%	24.0%
Grade 8	96.5%	96.3%
Grades 9 - 11	10.0%	10.2%

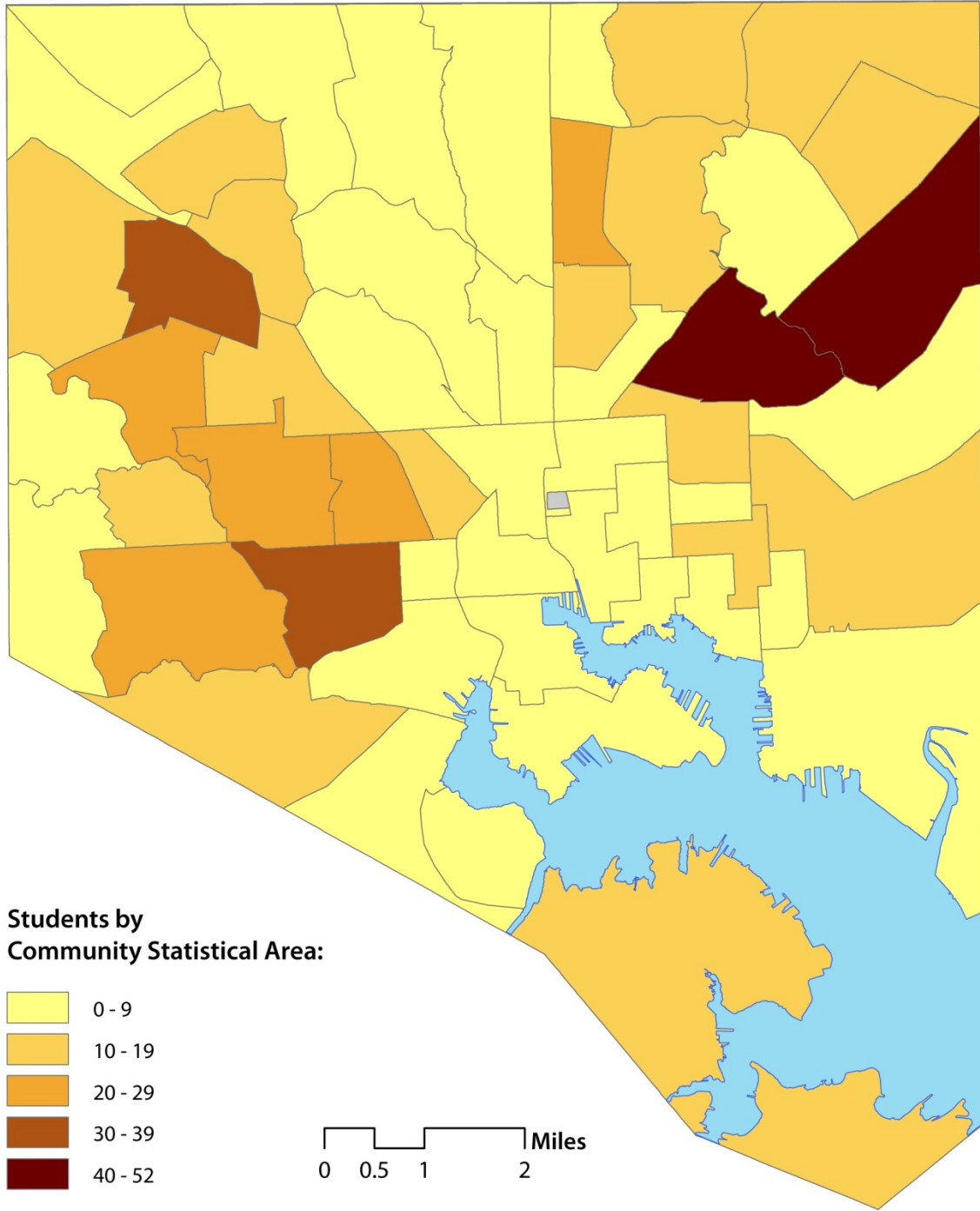
We also mapped the residential addresses of public school students who changed schools from the 2007-08 to 2008-09 school years. Students who switched schools lived in many of the same CSAs as students who changed residential addresses and were heavily concentrated in parts the City. While a smaller number of students affected by foreclosure switched schools, they were most heavily concentrated in two CSAs (Belair-Edison and Cedonia/Frankford).

Map 4: Number of All Students Switching Schools



Source: BNIA-JFI analysis of Baltimore Public School System data

Map 5: Number of Students Affected by Foreclosure Switching Schools



Source: BNIA-JFI analysis of Baltimore Public School System data

We also used multivariate regression to test whether students affected by foreclosure were more likely to change schools compared to all students. While foreclosure was not found to be a significant indicator to switching schools, we found that residential mobility has the greatest relationship with switching schools. We also found that students living in rental properties were more likely to switch schools, controlling for other student and neighborhood characteristics. This finding is important in that students who live in rental properties can be identified and provided additional supports that might mitigate their switching schools and missing days of school.

Quality of Destination Schools for Students in Foreclosure

While we found that over twenty percent of all students and students affected by foreclosure switch schools, we tested to see if they switched to lower quality schools. There are numerous ways to measure school quality, but due the data available for our analysis; we were restricted to using school wide proficiency data used to meet No Child Left Behind standards.

The originating schools for all students who switch schools and students affected by foreclosure who switch schools were very similar. Relatively the same share of students tested proficient or advanced in both reading and math. A nearly identical share of students at the originating schools received free or reduced school meals or had limited English proficiency. The only slight difference was that foreclosed students affected by foreclosure attended schools with a higher percentage of African American students (see Table 6).

In order to compare whether school switchers affected by foreclosure switched to schools with lower test scores, we compared the originating school and new school's overall share of students testing proficient or advanced on the state's math and reading tests. In general, school switchers and school switchers affected by foreclosure attended roughly the same quality schools the following year, with schools having slightly higher math and reading test scores. These schools also had a lower percentage of African American students and a lower percentage of students receiving free and reduced meals.

Table 6: Average School Characteristics of Originating and Destination Schools for Students Switching Schools (percent)

	Originating Schools		Destination Schools	
	All Students	In Properties in Foreclosure	All Students	In Properties in Foreclosure
African American	91.5%	93.0%	90.9%	91.9%
White	5.6%	4.6%	6.3%	6.2%
Hispanic	2.0%	1.7%	1.9%	1.8%
Reduced Meals	70.3%	69.8%	63.0%	63.1%
Special Education	17.4%	17.5%	16.7%	16.2%
Limited English Proficiency	1.3%	1.2%	1.1%	1.2%
Proficient or Advanced in Reading	64.1%	64.1%	65.5%	66.8%
Proficient or Advanced in Math	52.2%	52.5%	54.2%	56.4%

To test whether these differences in schools were significant, we used multivariate regression to determine if foreclosure had any relationship with switching to a lower quality school. We found that students affected by foreclosure did not switch to schools with significantly different test scores and thus a residential move was not associated with a move to a lower quality school by this measure.

Impact of Foreclosure on Student Performance and Attendance

The data used in both the Phase 1 analysis and in these analyses allowed us to examine the characteristics of all students and students affected by foreclosed in a variety of measures including if they were chronically absent, if they were suspended or expelled, and if they progressed to the next grade level.

When we examined a number of individual student characteristics, we found similarities between all students and students who lived in properties with a foreclosure filing. Table 7 shows the results of this analysis. We found that both groups of students had increased levels of participation in free and reduced meal programs in the second year. We also found that students affected by foreclosure were slightly more likely to be chronically absent (missing 20 or more school days) and suspended or expelled in the second year. Additionally, we found that students affected by foreclosure were slightly less likely to progress to their next grade level compared to all students. Finally, we found that students affected by foreclosure and tested as advanced or proficient in the 2007-08 school year were less likely to test as advanced/proficient in the 2008-09 school year as compared to all students.

To test whether these student achievement differences were significant, we used multiple multivariate regression models for students in third through eighth grade to determine if

foreclosure had any relationship with changes in reading and math scores.¹¹ We did not find any strong correlations in the models we developed, but did find that switching schools actually had the greatest impact on both reading and math scores. It is important to note that while differences were found, this analysis used a two-year panel study and greater changes might be observed if a longer study period was used in the analysis.

Table 7: Student Characteristics in the 2007-08 and 2008-09 School Years for All Students and Students Affected by Foreclosure (percent)

	2007-08		2008-09	
	All Students	In Properties in Foreclosure	All Students	In Properties in Foreclosure
Reduced Meals	73.8%	74.4%	84.7%	83.0%
Chronic Absence (missing more than 20 days)	21.3%	25.9%	20.4%	22.0%
Chronically Absent in Both Years			55.9%	49.7%
Suspension/Expulsion	10.9%	11.0%	9.5%	9.7%
Suspended/Expelled in Both Years			33.0%	34.5%
Grade Progression			92.0%	91.0%
Advanced/Proficient in Reading	68.1%	69.3%	71.9%	71.3%
Advanced/Proficient in Reading in Both Years			68.7%	67.1%
Advanced/Proficient in Math	56.1%	57.4%	61.4%	63.8%
Advanced/Proficient in Math in Both Years			69.6%	66.7%

SUMMARY OF FINDINGS AND RECOMMENDATIONS

The purpose of this study was to not only identify the number of students in Baltimore City’s public schools who were affected by foreclosure, but to identify the residential and school instability caused by foreclosure. We found that in Baltimore, the foreclosure crisis may be introducing a level of instability into a segment of the school population that was previously more stable than their peers. Students who were slightly more affluent, attended slightly better schools, and lived in slightly better neighborhoods were being affected by the foreclosure crisis more than their peers.

¹¹ 12th graders in the 2007-08 school year were not included in this analysis since it is presumed that they would exit the school system in the 2008-09 school year.

Summary of Findings

From our work of analyzing how foreclosures affect Baltimore City's public school students we found that:

- Eleven percent of public school students “exited” the public school system between 2007 and 2008. Foreclosed students exited the system at a higher rate of sixteen percent.
- Foreclosure contributes to residential instability in Baltimore City. Thirty three percent of students affected by foreclosure change residences compared to twenty three percent of all students.
- Students who change residential addresses without an accompanying foreclosure filing tended to move to better neighborhoods, while students affected by foreclosure and changed addresses moved to slightly worse neighborhoods. In particular, these destination neighborhoods had a higher juvenile arrest rate and a lower median home sales price.
- Students affected by foreclosure switch schools at almost the same rate as all students. Twenty-three percent of students affected by foreclosure switched schools and 22 percent of all students changed schools from 2007-08 to 2008-09. Our regression analysis found that living in a property in foreclosure increased the chance of switching schools.
- School switchers and school switchers affected by foreclosure attended roughly the same quality schools the following year after their school change.
- Students affected by foreclosure who tested as advanced/proficient in reading or math were less likely to test as advanced/proficient in reading or math in the year after the foreclosure as compared to all students.

Recommendations

As a result of these analyses, we have found that foreclosure leads to both increased residential mobility and to changing schools in Baltimore City. Research has shown that as a result of increased mobility, the academic and social development off school aged children may suffer. While foreclosures have decreased from the levels seen in 2009 and 2010, in the first three quarters of 2012, there are more filings in Baltimore City than in all of 2011. A 2011 report from the Center for Responsible Lending suggested that the national housing market is not even halfway through the foreclosure crisis and that it is far from being over (Bocian et al., 2011).

While housing counselors and counseling programs can assist in helping to prevent foreclosures and to keep families in their homes, there are additional ways in which other groups, such as local governments and school officials, can help to reduce the negative impacts associated with school switching and moving homes. The recommendations below are the result of not only the research conducted in Baltimore City, but build on the studies conducted in Washington, D.C.

and New York City. While some progress has been made to particular groups, such as renters¹², additional policies and procedures can be established to protect children living in properties in foreclosure.

Recommendations for School Officials

- School officials in neighborhoods that have large numbers of students should be made more aware of foreclosure trends in the neighborhoods where their students live. This will help them to: (1) create targeted outreach to students and their families; (2) provide counseling services; and (3) potentially refer families to housing counseling services.
- Students affected by foreclosure should be allowed to remain enrolled in their original school for the remainder of the school year. This should be allowed even if the move is midyear and/or the student moves outside the school boundary area.
- In cases where students and their families become homeless or double up in residences with other persons, school officials should work to identify these students to provide those benefits and services under the McKinney-Vento Homeless Assistance Act. These benefits and services may include the right to stay in their origin school for the duration of the school year and to receive transportation subsidies to get to and from school.

Recommendations for Housing Counselors

- Housing counselors can work to inform families that have received a foreclosure filing about the potential negative effects of school and residence switching and to provide information about available school support services and policies.
- Housing counselors can work to connect families affected by foreclosure with services to find a new residence in an effort to minimize the time that a child may be out of school.
- Housing counselors can work to partner with school officials to provide financial education outreach to schools with large numbers of students affected by foreclosure.

Recommendations to Local Governments

- Local governments can work to create a “real-time” data sharing system that provides the location of buildings receiving a foreclosure filing to school officials and to housing counseling agencies. This would allow these groups to provide information to the residents (either homeowner or renter) on their rights and options that are available to them.

¹² Changes to federal and state laws made in 2009 and 2010 require the lender to give tenants additional written notices that the property is in foreclosure, provide some protection against eviction (depending on the type of lease and whether or not the new owner intends to make the property their primary residence), and possible legal claims against the former property owner (http://mlis.state.md.us/2010rs/chapters_noln/Ch_587_sb0654T.pdf).

Appendix – Regression Tables

Table A1: OLS Regression Results for Moving Residences in Baltimore

Dependent Variable: Moved Residences (0/1)

Universe: Students who stayed in school system from 2007-08 to 2008-09

	Coefficient	Robust Std. Err.
Foreclosure	0.075	-0.012 **
Renter*foreclosure	0.043	0.024
Student Characteristics		
Renter	0.081	0.003 **
Black	0.016	0.005 **
Hispanic	0.034	0.010 **
Asian	-0.047	0.011 **
Free/Reduced Meals	0.041	0.003 **
Male	-0.004	0.003
Constant	0.047	0.007 **
Observations	61,721	
R-Squared	0.040	

**p<0.01, * p<0.05

All models included grade dummies and neighborhood fixed effects, though coefficients are not included on the table.

Table A2: OLS Regression Results for Neighborhood Quality Change in Baltimore

Universe: Students who moved and stayed in school system from 2007-08 to 2008-09

Dependent Variable:	Change in Violent Crime Rate		Change in Juvenile Arrest Rate		Change in Vacancy Rate		Change in Percent Free & Reduced Meals	
	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.
Foreclosed	0.444	0.423	8.943	4.323 *	0.960	0.607	50.852	34.007
Renter	0.402	0.164 *	4.535	1.514 **	1.092	0.261 **	64.171	13.207 **
Black	0.832	0.341 *	15.357	2.642 **	3.110	0.505 **	216.104	34.408 **
Hispanic	0.416	0.397	-6.436	3.402	-2.243	0.624 **	-143.827	44.391 **
Asian	-0.320	1.343	-13.955	6.791 *	-0.704	1.264	-10.404	105.331
Male	-0.116	0.147	-1.116	1.392	-0.132	0.236	-3.987	12.074
Free/Reduced Meals	0.877	0.206 **	7.475	1.874 **	1.229	0.308 **	NA	NA
Grade Pre-K	0.146	0.437	-2.967	4.067	-0.468	0.687	-26.002	35.666
Grade K	0.242	0.374	-0.033	3.606	-0.653	0.618	-16.991	31.380
Grade 2	-0.238	0.336	-3.997	3.222	-0.891	0.590	28.931	29.839
Grade 3	0.125	0.421	-1.884	4.009	-1.193	0.616	-29.506	31.431
Grade 4	-0.183	0.371	-4.908	3.474	-1.288	0.619	-22.811	31.552
Grade 5	0.436	0.362	1.357	3.463	-0.341	0.594	-60.838	29.390 *
Grade 6	0.551	0.381	4.175	3.686	0.233	0.619 *	-28.712	31.025
Grade 7	0.848	0.345 *	4.125	3.326	0.222	0.593	-7.275	29.588
Grade 8	0.710	0.341 *	2.296	3.185	0.375	0.601	5.986	30.185
Grade 9	0.570	0.352	4.159	3.350	0.201	0.572	0.180	28.733
Grade 10	0.827	0.368 *	5.148	3.551	0.241	0.612	26.971	31.351
Grade 11	0.845	0.464	6.281	4.417	-0.292	0.678	-51.729	32.901
Constant	-2.871	0.451 **	-29.416	3.854 **	-5.628	0.707 **	-288.466	39.847 **
Observations	8,313		8,313		8,313		8,313	
R-Squared	0.320		0.350		0.330		0.380	

**p<0.01, * p<0.05

All models included grade dummies and neighborhood fixed effects, though coefficients are not included on the table.

Table A3: OLS Regression Results for Switching Schools

Dependent Variable: Switched Schools (0/1)

Universe: Students who stayed in school system from 2007-08 to 2008-09

	Foreclosure		Foreclosure, inc. Move Dummy	
	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.
In Foreclosure	0.029	0.010 **	0.016	0.009
Moved Address			0.151	0.005 **
Renter	0.038	0.003 **	0.025	0.003 **
Free/Reduced Meals	-0.036	0.003 **	-0.042	0.003 **
Black	0.029	0.005 **	0.025	0.003 **
Hispanic	0.004	0.009	0.000	0.009
Asian	-0.035	0.013 *	-0.028	0.013 **
Male	0.008	0.003 **	0.009	0.003 **
Constant	0.054	0.013 **	0.049	0.013 **
Observations	61,722		61,722	
R-Squared	0.040		0.041	

**p<0.01, * p<0.05

All models included grade dummy variables and neighborhood fixed effects, though coefficients are not included on the table.

Table A4: OLS Regression Results for Changes in Average School Proficiency Rates in Baltimore

Dependent Variable: Change in Percent of Students Scoring Proficient or Above on Standardized Tests

Universe: Students who switched schools and stayed in school system from 2007-08 to 2008-09 (Grades 1-7 only)

	Math		Reading	
	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.
In Foreclosure	2.166	9.686	0.012	0.015
Student Characteristics				
Black	-23.683	8.858 **	-0.072	0.013 **
Hispanic	-17.392	12.367	0.019	0.019
Asian	96.077	35.521 **	0.058	0.038
Male	-12.764	2.574 **	-0.007	0.004
Poor	-15.740	3.752 **	-0.020	0.006 **
Constant	199.595	9.797 **	0.129	0.014 **
Observations	7,595		7,595	
R-Squared	0.260		0.570	

**p<0.01, * p<0.05

All models included grade dummy variables and neighborhood fixed effects, though coefficients are not included on the table.

Table A5: OLS Regression Results for Individual Student Test Score Changes in Baltimore

Dependent Variable: Change in Absolute Student Test Score

Universe: Students grade 3 to 8 who remained in public school system from 2007-08 to 2008-09

	Math				Reading			
	Robust Coefficient	Std. Err.	Robust Coefficient	Std. Err.	Robust Coefficient	Std. Err.	Robust Coefficient	Std. Err.
In Foreclosure	3.150	1.840	3.180	1.850	2.400	2.500	2.440	2.510
Switched Schools			-5.530	0.960 **			-5.950	1.150 **
Student Characteristics								
Black	4.540	1.800 *	4.690	1.800 **	4.770	2.010 *	4.930	2.010 *
Hispanic	13.910	2.180 **	13.940	2.180 **	11.130	2.430 **	11.160	2.430 **
Asian	5.860	3.470	5.780	3.460	5.390	4.010	5.300	4.000
Male	-3.500	0.660 **	-3.510	0.660 **	-3.460	0.730 **	-3.470	0.730 **
Free/Reduced Meals	-1.690	0.850 *	-1.610	0.850	-3.000	0.940 **	-2.910	0.940 **
Constant	-9.520	1.790 **	-9.240	1.800 **	14.120	2.020 **	14.420	2.020 **
Observations	24,968		24,968		24,968		24,968	
R-Squared	0.095		0.097		0.081		0.083	

**p<0.01, * p<0.05

All models included grade dummy variables and neighborhood fixed effects, though coefficients are not included on the table.

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