

The Foreclosure Crisis and Children: A Three-City Study

Research Report
January 2012

Prepared for:

Open Society Foundations

Prepared by:



The Urban Institute

2100 M Street, NW • Washington, DC 20037

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Submitted To:

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400 West 59th Street
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UI No. 08402-000-00

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Description of the Project

The National Neighborhood Indicators Partnership (NNIP) is a collaborative effort by the Urban Institute and local partners in 35 cities to further the development and use of neighborhood-level information systems in local policymaking and community building. This brief is the culmination of an NNIP cross-site project funded by the Open Society Foundations to explore how the foreclosure crisis affects school-age children in New York City, Baltimore, and Washington, D.C. The Urban Institute coordinated the project in partnership with NNIP local partners: New York University's Furman Center for Real Estate and Urban Policy and Institute for Education and Social Policy, and the Baltimore Neighborhood Indicators Alliance-Jacob France Institute at the University of Baltimore. This cross-site policy brief summarizes the findings from the three cities. All cross-site and local publications related to the project can be found on the National Neighborhood Indicators Partnership Website at <http://www.neighborhoodindicators.org/activities/projects/effects-foreclosure-children-and-schools>.

Acknowledgments

The authors thank the Open Society Foundations for providing us with the opportunity to examine how foreclosure affects children; in particular, Solomon Greene carefully reviewed the report and provided constructive advice throughout the project. In addition, support from Fannie Mae enabled us to include Washington, D.C. in the study. The in-depth analysis of these issues would not have been possible without the contributions of our National Neighborhood Indicators Partnership colleagues: Ingrid Gould Ellen, Vicki Been, Amy Ellen Schwartz, Leanna Stiefel, Meryle Weinstein, and Mary Weselcouch at New York University and Matthew Kachhura and Nancy Jones at the University of Baltimore. We also benefited from comments from Tom Kingsley and Mary Cunningham from the Urban Institute. Finally, Michel Grosz and Sophie Litschwartz supplied vital research assistance. All errors and omissions remain the responsibility of the authors.

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Executive Summary

The subprime mortgage crisis and resulting foreclosure crisis began sweeping the nation in 2007 and we see no end to foreclosures in the near future. While federal, state, and local jurisdictions have been struggling with how to mitigate the impact on homeowners and affected neighborhoods, little focus has been directed to children in the crisis. In 2008, researchers estimated that 2 million children living in owner-occupied housing would be affected by foreclosure resulting from subprime loans (Lovell and Isaacs 2008). The number of children affected by foreclosure today far exceeds this estimate since the foreclosure crisis has worsened—spreading into the prime market and increasingly affecting multifamily rental properties.

Research has shown that involuntary residential moves and within-year school switching can have detrimental effects on children's academic and social development. In addition, the stress prompted by a looming foreclosure can also negatively affect households. Foreclosure has become yet another factor contributing to residential instability for many low-income families, both for homeowners and for renters. In this paper, we seek to show how foreclosures have affected public school students in Baltimore, New York City, and Washington, D.C., three cities participating in the National Neighborhood Indicators Partnership (NNIP). The three cities have different housing markets, foreclosure processes, and school enrollment policies, all of which provide different contexts for how foreclosure affects children.

While the cities differ in many ways, foreclosures affected a similar share of students across the three sites (for example, 1.8 to 2.7 percent in the most recent school year for which data was available). Also across the sites, the share of the students in foreclosed homes who lived in rental housing increased. African-American students were disproportionately affected in New York City.

In Baltimore, students affected by foreclosure were more likely to be better off than their average public school peers. They lived in slightly higher quality neighborhoods and attended slightly higher performing schools. Foreclosed students in Washington, D.C., however, were more likely than all students to live in more distressed neighborhoods, and foreclosed students in New York City and Washington, D.C., attended lower quality schools than the average public school student. In New York City, students affected by foreclosure were noticeably concentrated in certain schools in Queens and Brooklyn, but students were not highly clustered in the other two cities.

Foreclosure contributed to increased residential instability in Baltimore and Washington, D.C., even after statistically controlling for student and neighborhood characteristics. However, the change in the quality of the neighborhood for the foreclosed students who moved was not significantly different from that of other students who moved.

Students in foreclosed homes were likely to change schools from one year to the next more frequently than all students. Overall, the average destination schools' proficiency rates for all students who switched schools were slightly higher in Baltimore than those of the original schools and much lower than original schools in New York City. Still, the change in school quality was not significantly different in either city

for those experiencing a foreclosure compared to other students who switched. For students who are affected by foreclosure and switch schools in Washington, D.C., however, there is some evidence that the drop in the average proficiency rates is significantly worse than other students who change schools.

In Baltimore, we also analyzed whether the individual students' test scores changed one year post-foreclosure, and the exploratory findings showed that foreclosures were not significantly associated with changes in test scores for students in grades 3 through 8. However, we found that students who switched schools for any reason had lower average test scores the second year compared to students who did not switch schools, even after controlling for other factors.

In all three cities, foreclosure puts children at risk by increasing their residential and school mobility, which can potentially disrupt children's academic and social development. In New York City, the lower average quality of receiving schools exacerbates problems of school mobility for all students who switched schools. In Washington, D.C., the harm is compounded by a larger decrease in school proficiency rates for students affected by foreclosure than other students who switched for other reasons.

We recommend a series of steps that school officials, housing counseling organizations, and municipalities can take to reduce the negative impact of instability on children. Such recommendations include allowing students to remain in their origin school even after families move out of school zones due to foreclosure; providing housing counselors with the school enrollment policies and school administrator contact information for families; and targeting foreclosure prevention outreach to families at schools with high rates of foreclosure.

Introduction

While there has been considerable research on the size of the foreclosure crisis and the devastating effect that the loss of home can have on heads of household, there is little research on how foreclosure affects children. For families who own their home, the financial pressures throughout the foreclosure process are likely to place significant stress on family life and have negative consequences for children. Renter families may not even know about the foreclosure until the property is sold, and they have little time to search for a new home or save for moving expenses. If a renter or owner family affected by foreclosure does move out of their neighborhood, children may have to change schools, adjust to a different curriculum, and develop new relationships with teachers and peers. For many children, these moves can have detrimental impacts on their academic outcomes. Communities need more information on the magnitude and nature of these effects so they can design appropriate policies and programs in response. This paper contributes to that goal by documenting the experiences of public school students affected by foreclosure in three cities: Baltimore, New York City, and Washington, D.C.

The paper is divided into five sections:

- Part I outlines past research on mobility's impact on children, explains the methodology and data used by the three sites, and provides the foreclosure and housing context for our three cities.
- Part II describes the number and characteristics of the students affected by foreclosure, as well as the characteristics and spatial pattern of their origin schools and neighborhoods.
- Part III focuses on how foreclosure affects the rate of leaving the school system, the rate of residential mobility, and the changes in characteristics between origin and destination neighborhoods.
- Part IV analyzes foreclosure's relationship to students changing schools and the differences in characteristics between the origin and destination schools.
- Part V concludes with a summary of the findings, the implications for policy, and recommendations for local action and further research.

PART I: BACKGROUND AND METHODOLOGY

In this section, we review what we know about student residential and school mobility, describe the methodology for the analysis, and scan the housing market and school enrollment policy context for the three cities.

Impacts of Residential Mobility on Children

Approximately 12 percent of the U.S. population moves from one year to the next, and low-income populations move much more often (Cohen and Wardrip 2011, Coulton et al. 2009). For example, approximately half of all low-income households in one 10-city study, *Making Connections*, moved within two years (Coulton et al. 2009). Residents move for a wide variety of reasons, both positive and negative. Some positive motivations for moving include being closer to a job or having more income to purchase a bigger or better-quality apartment or house (Briggs et al. 2010, Coulton et al. 2009, Frey 2009). Residents also move for unplanned, negative reasons, such as problems with their landlords or creditors, financial stress, or poor housing conditions (Briggs et al. 2010, Coulton et al. 2009). Almost half of the moves that low-income households made during the *Making Connections* study were for unplanned, negative reasons. Foreclosure falls within that category.

Disruptive or numerous residential moves are linked to children's academic problems, such as grade retention, failure to complete school, and a lack of interpersonal skills (Scanlon and Devine 2001). Changing schools, particularly in the middle of the school year, has been shown to hinder children's academic performance (Hanushek et al. 2004). Besides the detrimental effects of school and residential mobility, students living in buildings in foreclosure are at added risk, since their families are more likely to be undergoing acute financial instability (Moore et al. 2000). Research shows that a family's financial trouble can negatively affect children's outcomes, such as academic performance and behavioral development (Pribesh and Downey 1999). Qualitative research based on a small group of Latino families who experienced foreclosure in five regions across the country found that the foreclosure process stressed their relationships with their children and negatively affected their children's academic performance and behavior at school (Boulder et al. 2010). Other research has shown the stressors inflicted on a family undergoing foreclosure or high-cost loans as well (Fields et al. 2007, Ross and Squires 2011). This research suggests that experiencing foreclosure and its resulting mobility could negatively affect children. Our analysis in this paper contributes to the literature by detailing the relationship between foreclosure and students' residential and school mobility, and the quality of the new schools and neighborhoods where foreclosed students relocate.

Methodology and Data Sources

This paper is based on unique local data files that combine three sources of information: 1) student-level public school administrative records that include home address, demographic information, and school attended; 2) property-level foreclosure data and parcel-level housing information about the characteristics of the home and the neighborhood; and 3) school-level files that include the share of students by

race/ethnicity, free and reduced price lunch, special education status, and English language learners; the location of the school; and the share of students per grade testing proficient or advanced on the school districts' standardized test.¹

Sites made decisions about the study period and grade levels for the analysis based on data availability and local context. The study period for Baltimore and Washington, D.C., was school years 2001–02 through 2008–09. The study period for New York City was school years 2003–04 and 2006–07. Baltimore and Washington, D.C.'s analysis includes students from preschool or prekindergarten through twelfth grade, while New York City included only first through eighth grade. Researchers in Baltimore and Washington, D.C. had direct access to the individual students' addresses for each year of the study period. In New York City, the city's Department of Education merged the student and *lis pendens* data internally and provided an analysis file to the researchers that excluded the specific address or parcel identifier.²

For the purposes of this study, we defined public school children as “affected” by foreclosure if they lived in properties in a given school year that had received a foreclosure notice or *lis pendens*.³ Panel datasets were then created by merging two individual one-year student-foreclosure datasets together. The cross-site analysis was restricted to just two years of matched school data because longitudinal data files spanning additional years were not available in New York City and Washington, D.C., at the time of the study. Using these two-year panel datasets, we determined whether students changed homes, switched schools, or left the public school system altogether from one year to the next. We also compared the characteristics of the origination and destination neighborhoods and schools. For instance, in order to assess whether school quality changed for students who switched schools from one year to the next, we compared the origination and destination school's share of students testing proficient and advanced between the two years.⁴

For Baltimore and Washington, D.C., mobility and school switching analyses are based on the 2007–08 school year data matched to the 2008–09 school year. New York City's analysis is from an earlier period,

¹ More details about the data sources and analytic techniques are available in the *Methodology Supplement to the Foreclosure Crisis and Children Study*. The student data are limited to those children attending public schools. According to the 2008 American Community Survey, about four-fifths of the kindergarten through grade 12 students in all three cities attended public school.

² New York University analysts provided the addresses that had received *lis pendens* with parcel identifiers and foreclosure outcomes to staff of the New York City Department of Education, who then matched the *lis pendens* data to the students' addresses for the 2003–04 and 2006–07 school years. The student identifiers on these files were consistent with student level data from adjacent years that the NYU researchers already had in-house, so they could match across years to identify changes in school enrollment.

³ Foreclosure outcome information was available for New York City and Washington, D.C., but is not the focus of the cross-site paper. See Been et al. 2011c and Comey and Grosz 2011.

⁴ When comparing neighborhood and school characteristics, the research team held the year of comparison constant in order to control for exogenous changes that may have occurred separate from students just moving. For instance, when the research team compared the average test scores between origination and destination schools, we compared the share of students who tested proficient and advanced at the origination school in the 2007–08 school year to the 2007–08 average share of proficient and advanced students in the destination school (as opposed to using the 2008–09 share at the destination school).

from school year 2006–07 to 2007–08. Figure 1 summarizes the sources and time spans available for the foreclosure, cross-sectional student-level, and two-year panel student data used in this study by the three sites. Further information about the data sources and methodology can be found in the methodological memos and the local policy briefs for each of the three sites.⁵

Figure 1: Foreclosure and Student-level Data Used for Analysis

	Foreclosure data		Student-level data		
	Foreclosure data source	Time period/update schedule	Cross sectional student-level data	Grades included in analysis	Panel student-level data (two year matched data files)
Baltimore	Lis pendens	2002-2009Q4	2003-04 through 2008-09 (includes student addresses)	Pre-kindergarten through 12th	2003-04 matched to 2004-05 2006-07 matched to 2007-08 2007-08 matched to 2008-09
New York City	Lis pendens	2002-2009Q2	2003-04, 2006-07 (does not include student addresses)	1st through 8th	2003-04 matched to 2002-03 and 2004-05 2006-07 matched to 2005-06 and 2007-08
Washington, D.C.	Notice of foreclosure, Trustee's deed, and Private/REO sale	2002-2009Q4	2003-04 through 2008-09 (includes student addresses)	Pre-school through 12th	2007-08 matched to 2008-09

Note: The most recent data are included in this cross-site report. Details about earlier analysis are included in the individual site's policy briefs.

Foreclosure Trends Similar in the Three Cities

The three study sites all experienced extraordinary housing market appreciation during the first half of the last decade, followed by sharp declines in housing prices with the national housing and economic downturn. In all three cities, the market slump came with sharp increases in foreclosure rates.

Housing prices increased by an average of 69 percent between 2000 and 2007 in New York City and by 155 percent in Washington, D.C., after controlling for inflation (figure 2).⁶ These two high-priced cities had median home prices at \$460,000 and \$476,000, respectively, by 2007. Baltimore has a much less expensive housing market, though its median price of \$145,000 in 2007 represented an increase of 92 percent since 2000.⁷

The rising share of subprime lending across the country fueled the housing boom and laid the groundwork for the foreclosure crisis. The share of home purchase loans in 2004 through 2006 that had high-interest rates, which is often used as a proxy measure for subprime lending, was roughly the same in Baltimore (20 percent) and New York City (18 percent). High-interest lending was less prevalent in Washington, D.C., accounting for only 12 percent of the purchase loans. African Americans were disproportionately more likely to receive these risky loans (Pettit et al. 2009). From 2004 to 2006, minority homebuyers made up about half of all the owner-occupant borrowers in the region but accounted for about 80 percent of all the high-cost loans (Pettit et al. 2009). In New York City, subprime home purchase loans were more

⁵ More detailed analysis and information about the methodology in each site can be found in Been et al. (2010, 2011a, b, c), Comey and Grosz (2010, 2011), and Kachura (2011 and forthcoming).

⁶ NeighborhoodInfoDC (2011), Armstrong et al. (2010) for sales data

⁷ Baltimore Neighborhood Indicators Alliance (2011).

than 40 percent of home purchase loans to black homebuyers compared to 8 percent of loans to white homebuyers (Furman Center 2007). This subprime lending led to higher levels of serious mortgage delinquency in African-American neighborhoods (Okah and Orr 2010). Similar disparities were documented in Baltimore (Goldstein and Urevick-Ackelsberg 2008). These lending patterns foreshadow the effects of foreclosures on African-American students described in the next section.

Figure 2: Housing Context for the Three Cities

	Baltimore	Washington, D.C.	New York City
Median sales price (2007)	\$145,000	\$476,037	\$459,926
Percent change in sales price (2000-2007)	92%	155%	69%
Percent of home purchase loans (1-4 units) that are high cost, 2004-2006	20%	12%	18%

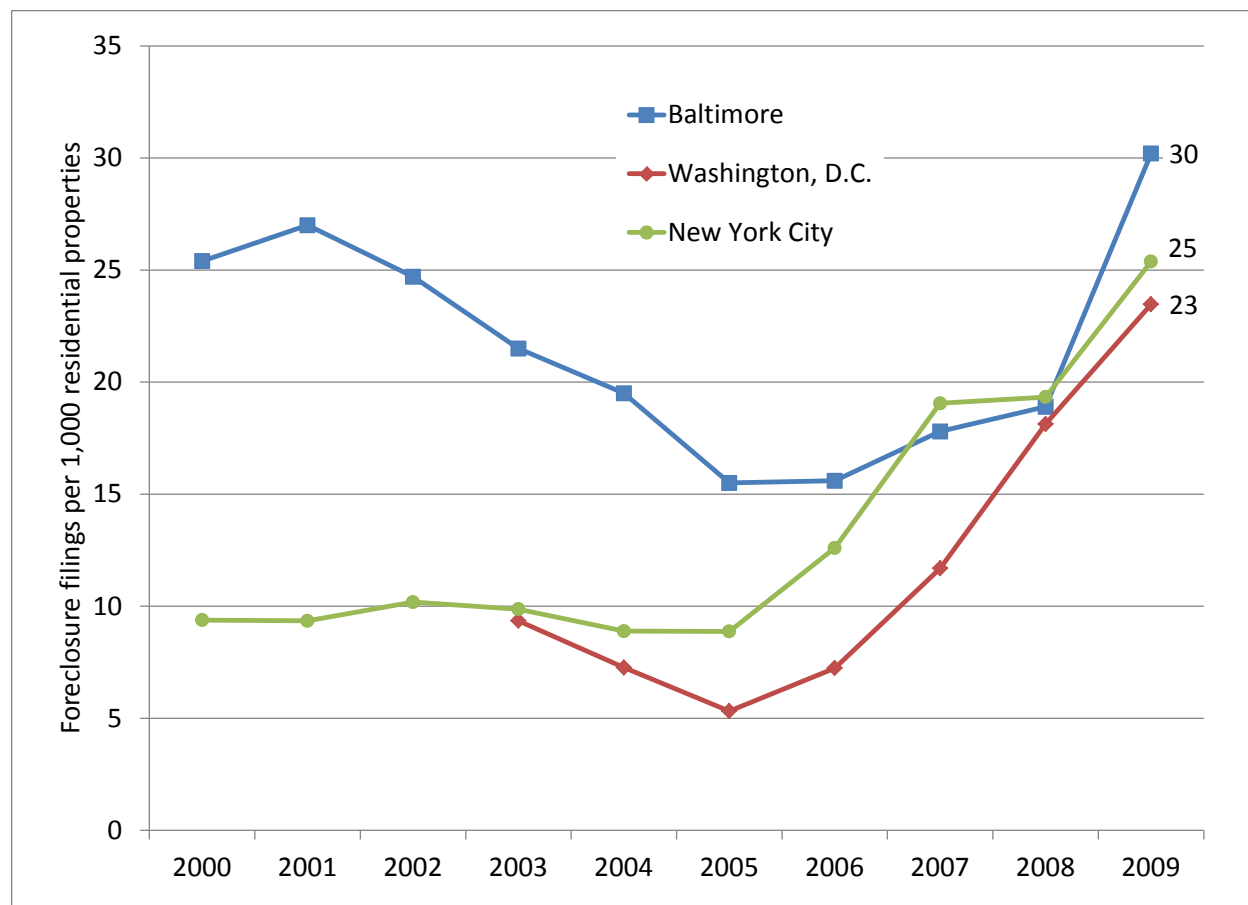
Notes: Sales price for DC and NYC includes single-family homes only. Baltimore's price includes condominiums, but condos account for only 6 percent of the housing stock.

Source: Baltimore Neighborhood Indicators Alliance (2011), NeighborhoodInfo DC (2011), Armstrong et al. (2010) for sales data; Foreclosure-Response.org for high cost data.

In New York City, the rate of foreclosure starts was stable for the first half of the decade and then began to rise rapidly. Baltimore and Washington's rates dipped during their respective housing booms and then began to climb (figure 3). In all three sites, foreclosure rates in 2009 exceeded the rates at the beginning of the decade, with Baltimore having the highest rate: 30 foreclosure filings per 1,000 residential properties.⁸ Washington, D.C., and New York City had lower rates of roughly 23 and 25 filings per 1,000 properties, respectively. Foreclosure starts fell by 15 to 30 percent between 2009 and 2010 in all the sites, but the inventories remained high.

We refer to the legal process to end an owner's rights to a property used to secure a mortgage loan as the *foreclosure process*. The foreclosure process happens relatively quickly in Washington, D.C., since it is a nonjudicial jurisdiction (i.e., the process occurs outside of the court system). For properties that received a foreclosure notice in 2009, the process took an average of 214 days to complete (NeighborhoodInfo DC 2011b). The foreclosure process in Maryland and New York City differs. New York is a judicial state, so foreclosure proceedings must go through the court system and thus take much longer, averaging more than 900 days. Maryland operates a quasi-judicial foreclosure process. Lenders must file the initial notice of foreclosure with the circuit court, and the court ratifies the foreclosure sale. Typically, the foreclosure process averages 419 days (Maryland Bar Association 2008, Miller 2011). In places like New York City, a homeowner has more time to find a resolution to the foreclosure or prepare to move than in places like Washington, D.C.

⁸ Residential properties include both single-family and multifamily homes.

Figure 3: Trends in Foreclosure Filings between 2000 and 2009

School Enrollment Policies Differ across the Three Cities

School districts have been experimenting with ways to offer more school choice to families and children. Traditionally, school district enrollment policies have been determined by residence; students were assigned to the nearby public school based on the neighborhood catchment area or zone where the family is located. Numerous studies have shown the direct relationship between property values and school performance (Jud and Watts 1981; Hayes and Taylor 1996; and Figlio and Lucas 2004). But many school districts, especially urban school districts, have implemented or recently begun implementing more flexible school choice enrollment policies, such as specialized traditional public schools with citywide enrollment lotteries, out-of-boundary enrollment policies at traditional schools, and public charters that have a citywide lottery enrollment.

As of November 2010, public charter schools operated in 40 states and the District of Columbia. A public charter school is one that provides public elementary or secondary education to eligible students under a specific charter granted by the state legislature or other appropriate authority using publicly available funds. Schools can receive charters via traditional school districts, state education agencies, or chartering organizations. Public charter schools are free to eligible families. The number of public charter schools

and the number of children enrolled in them has grown substantially since their inception. From school years 1999–00 to 2008–09, the number of students enrolled in public charter schools grew from 340,000 to 1.4 million, and the share of all public schools that were charter schools increased from 2 to 5 percent (Aud et al. 2011).

The degree of school choice varies across our three cities. In New York City, public school students (especially elementary school students) are very likely to attend their neighborhood school, and the enrollment policies are very clear. Elementary students enroll in their zoned neighborhood school. Middle school students may choose to enroll in zoned middle schools or in middle school “choice programs” that are separate from the zoned schools.

At the other extreme, Washington, D.C., has one of the nation’s highest shares of public school students attending public charters and very liberal out-of-boundary enrollment policies for traditional public schools. Students may choose to attend their neighborhood traditional school, apply for out-of-boundary traditional school enrollment through a citywide lottery, submit an application to a selective traditional school, or apply for enrollment to any public charter school through a citywide lottery process. In the 2008–09 school year, only 30 percent of Washington’s public school students attended their in-boundary traditional school; 37 percent went to an out-of-boundary traditional public school, and 33 percent attended a public charter school (Comey and Grosz 2010, and Filardo et al. 2008). Washington, D.C., is second only to New Orleans in the share of public school students enrolled in public charters,.

Baltimore has a small number of public charter schools, as well as selective schools and traditional schools reorganized to be kindergarten through eighth grade. Students in grades K–8 may attend their zoned neighborhood school, though transfers to out-of-zone schools are possible, or may apply to one of Baltimore City’s almost two dozen charter schools. High school students may enroll in their neighborhood zoned school, apply to citywide schools with entrance criteria, or apply to citywide high schools without entrance criteria.

PART II: WHO ARE THE STUDENTS AFFECTED BY FORECLOSURE?

We quantify in this section how many students were affected by foreclosure in the three cities during the study period. We describe their demographic and housing characteristics in comparison to all students. Finally, we examine the attributes of their original neighborhoods and schools to see if there are concentrations or significant differences from the average student.

The Share of Students Affected by Foreclosure Is on the Rise

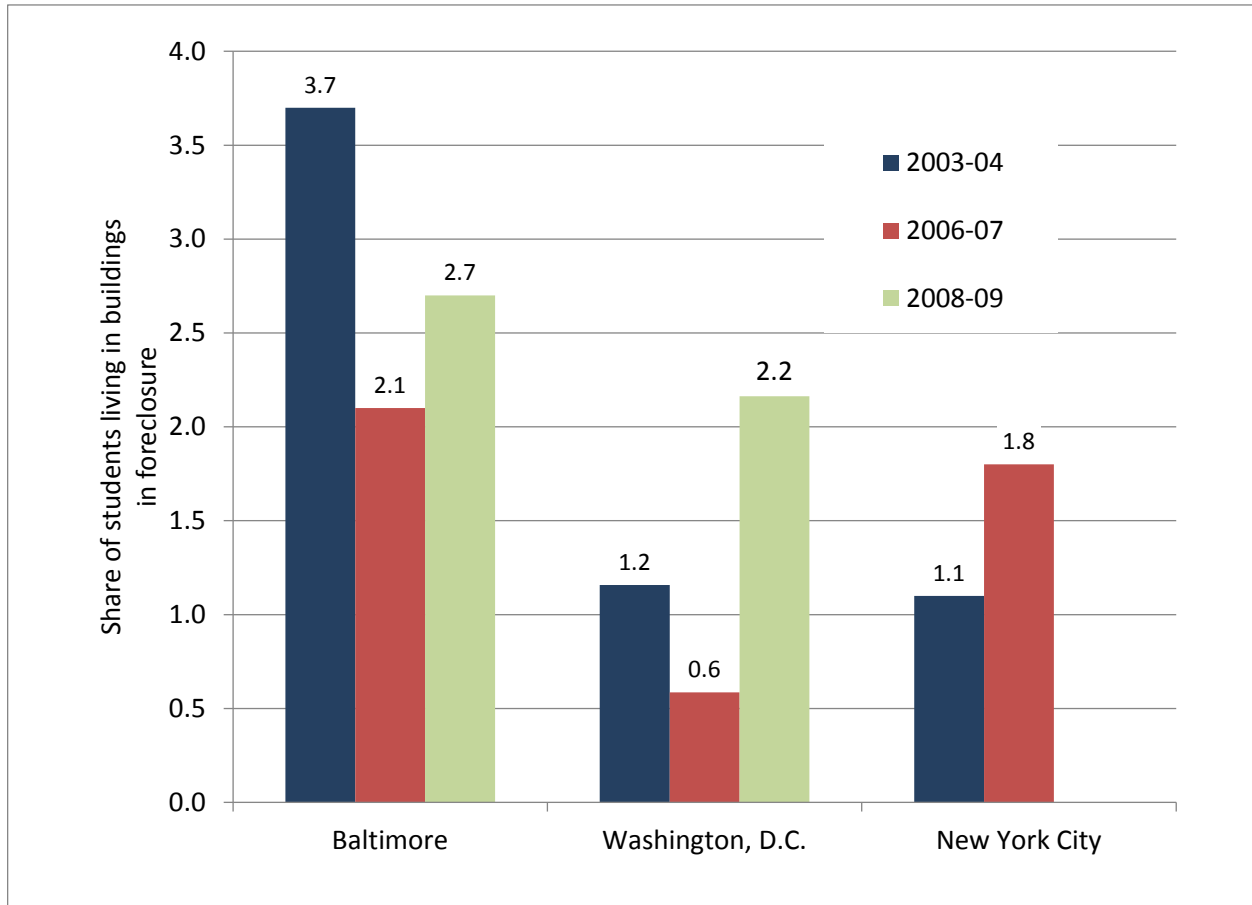
The share of public school students affected by foreclosure in Baltimore and Washington, D.C., parallels the overall foreclosure rates—a dip during the housing boom and then significant increases by 2008 (figure 4). In Baltimore, 3.6 percent of all students were affected by foreclosure in the 2003–04 school year. The share dipped to the low of 1.9 percent in 2007–08, and then rose to 2.7 percent (approximately 2,400 affected public school students) in 2008–09. We believe that the share of affected students in the 2008–09 school year was artificially low due to recent changes in Maryland law. In April 2008, Maryland’s foreclosure law changed to require servicers and lenders to first provide a Notice of Intent to Foreclose to the mortgage holder. Between April and July 2008, there was a moratorium on foreclosures in Maryland, resulting in a drastic drop in foreclosure filings as lenders and servicers grappled with meeting the new requirements. We assume that the number and share of affected students continued to rise in 2009 and 2010 due to the continuation of the crisis and to the backlog after the 2008 moratorium.

The share of students affected by foreclosure was slightly lower in Washington, D.C., compared to the other sites. In the 2003–04 school year, 1.2 percent of the public school students were affected by foreclosure. This was down to 0.6 percent in 2005 and 2006, but by 2008–09, 2.2 percent of public school students were affected by foreclosure.

Unlike the other sites, the share of New York City public school students living in homes in foreclosure started at a low point and then rose. The share of affected students went from 1.1 percent in the 2003–04 school year to 1.8 percent in 2006–07.⁹ Later data of students matched to *lis pendens* were not available at the time of the study, but the number of students affected by foreclosure was expected to rise as the number of *lis pendens* increased in 2009.

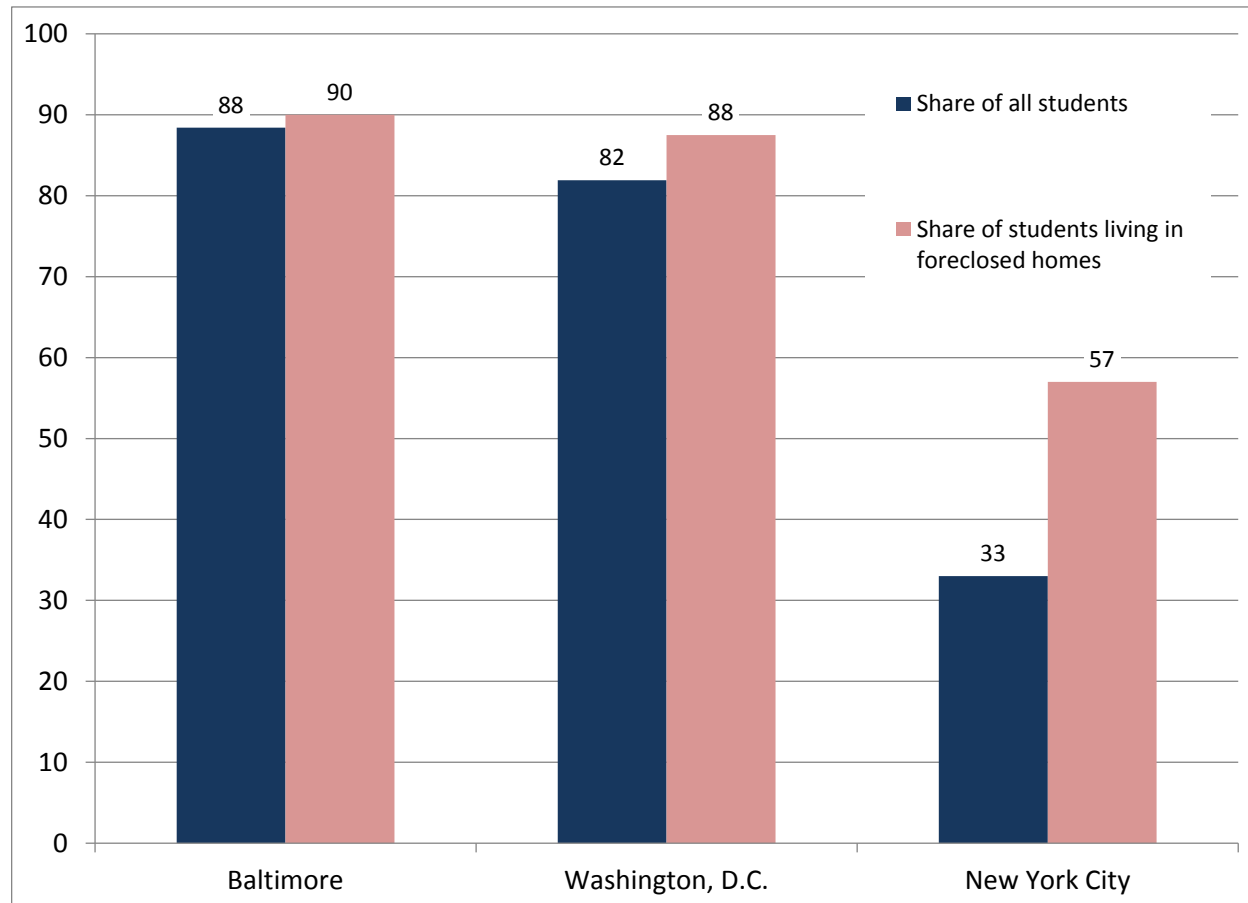
⁹ The New York City analysis could only match foreclosure notices and students to building addresses (not unit numbers), so the study excluded children in multifamily cooperative or condominium buildings.

Figure 4: Share of Public School Students Affected by Foreclosure



African-American Students in New York City Disproportionately Affected by Foreclosure

The share of students living in foreclosed homes who are African-American was much higher in Baltimore and Washington, D.C. than in New York City, but African-American students in New York City were disproportionately affected.

Figure 5: Share of Students who are African-American by Foreclosure Status

In New York City, while black students accounted for 33 percent of all students, they accounted for 57 percent of the students in foreclosed homes in 2006–07 (figure 5). Similar disparate impacts for African-American children were found in Minneapolis (Allen 2009). The disparity was less evident in Baltimore and Washington, D.C., although the majority of students in these two cities are African American.

Share of Students Who Are Hispanic Increasingly Affected by Foreclosure in Baltimore and Washington

While Hispanic students represent a relatively small share of students in Baltimore and Washington, D.C., (3 percent and 11 percent, respectively, in 2008–09), the share of all students in foreclosed properties who are Hispanic has been rising in both cities, particularly in Washington. Only 3 percent of all foreclosed students in Washington, D.C., were Hispanic in 2003–04, even though Hispanic students made up 10 percent of the overall student population. By 2008, the share rose to 11 percent, matching their share of the student population.

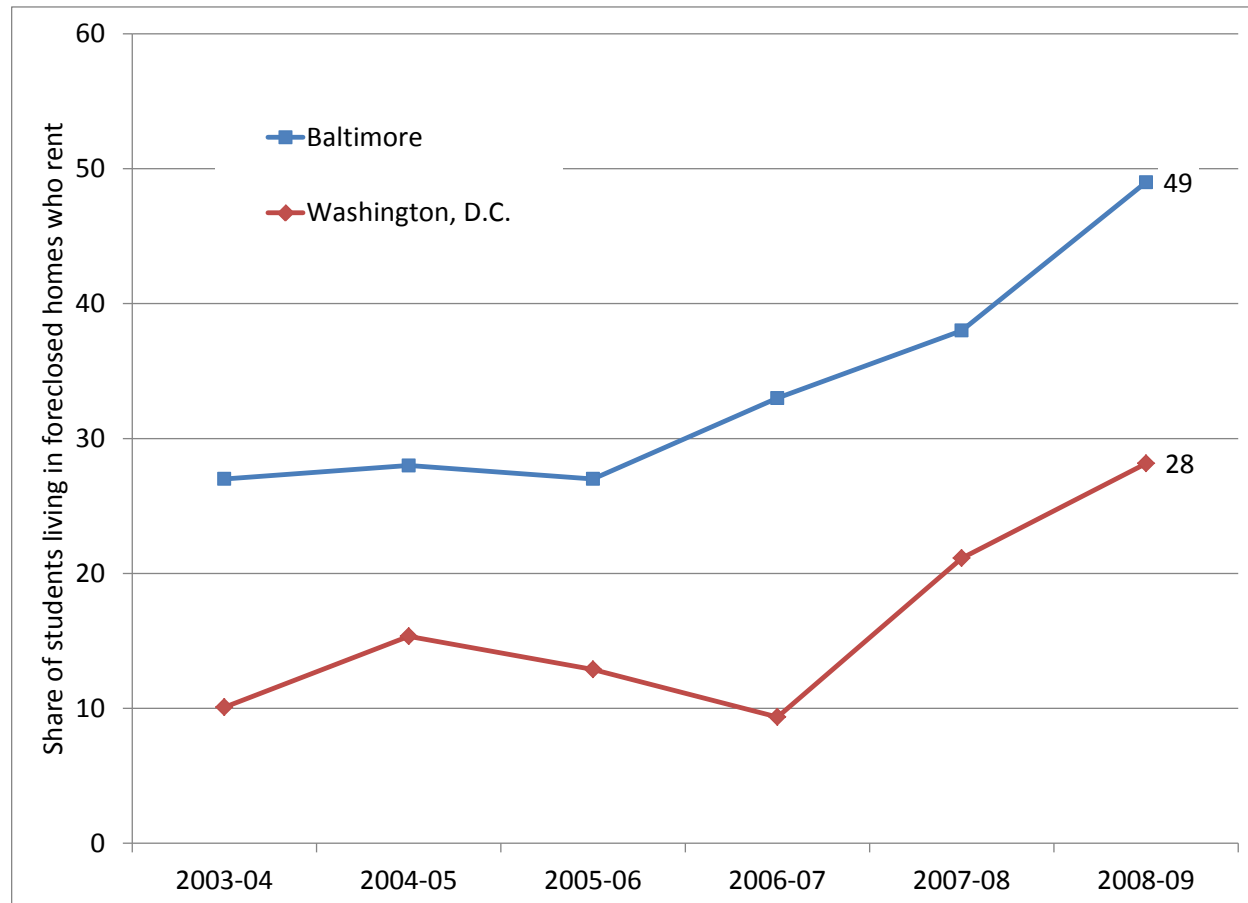
In New York City, the share of Hispanic students affected by foreclosure has been less than their share of the overall student body. For instance, in 2006–07, only 29 percent of all students in foreclosure were Hispanic, although they represented 39 percent of the student body.

Students Living in Rental Units Increasingly Affected by Foreclosure

Foreclosure is an exogenous shock to rental families, not related to any action of their own. These families are likely to be unaware that their landlord is in foreclosure while they continue to pay rent. If the property goes to foreclosure sale, renters may have little notice of a change in ownership. Some cities, including Washington, D.C., have local rental protection laws. Washington’s “just cause” eviction law allows renters in good standing to remain in the building even if the property changes ownership.¹⁰ Even though there were local legal protections in Washington at the time of the study, advocates reported frequent violations by both bank and nonbank owners that take over properties and evict tenants after the foreclosure has been completed. Similar violations of federal law have been reported (National Law Center on Homelessness and Poverty 2010, New Haven Legal Assistance Association 2009).

About two-thirds of families with school-age children rent in New York City and Washington, D.C., and more than half of families with school-age children rent in Baltimore, so it is not surprising that a considerable share of households affected by foreclosures are renters. However, even though rental rates for all students across the cities remained relatively steady over the time period, the share of households in foreclosed properties who rent increased in all three cities. For instance, the share of all Washington, D.C., public school students who lived in rental units remained steady from 2003 to 2008 (around 40 percent), but the share of students affected by foreclosure who rent jumped from 10 percent to 28 percent over the same period (figure 6). In Baltimore, the share of all students who lived in rental units increased by 5 percentage points (from 44 percent to 49 percent) between the 2003–04 and 2008–09 school years, dwarfed by the increase of 22 percentage points of the students affected by foreclosure who rent.

¹⁰ The federal Protecting Tenants at Foreclosure Act Renter Act, enacted in May 2009, required that renters have at least 90 days notice prior to eviction, but the law was not in effect during the time of this analysis.

Figure 6: Share of Students in Foreclosed Homes Who Rent Grew Over Time

New York City did not have data directly related to housing tenure, but indirect evidence suggests that the trend is similar, albeit less pronounced. Two-thirds of the students in foreclosure lived in two- to four-unit buildings in 2006–07, an increase of 4 percentage points from 2003–04. The share of all foreclosed properties in this category moved from 51 percent in 2003 to 56 percent in 2007, so the share of students entering foreclosure living in rental buildings most likely rose also. Most of these building have at most one owner occupant.

We do not know the income levels of renters in foreclosed homes, but looking at the characteristics of renters overall sheds some light on the households potentially affected. One-half to two-thirds of the renter households across all three cities earned less than \$35,000, below the approximate threshold needed to afford the median rent level (figure 7). About half of renters paid more than 30 percent of their incomes on rent. For renters already financially overextended, the costs of losing their security deposit, moving, and paying another security deposit and first month's rent for a new home could exacerbate their financial difficulties.

Figure 7: Characteristics of the Households in the Rental Housing Market (2007)

	Baltimore	Washington, D.C.	New York City
Percent of families with children age 6 to 17 who rent	55%	63%	64%
Median gross rent	\$778	\$934	\$985
Percent of renter households with income less than \$35,000	65%	49%	47%
Percent of renters paying more than 30% of income on rent	55%	48%	50%

Source: American Community Survey 2007

Location of Students in Foreclosure in Baltimore and Washington, D.C., Mirrors Location of Students Overall

In Washington, D.C., and Baltimore, the distribution of students affected by foreclosure closely mirrors the concentrations where all public school children live.¹¹ In Washington, D.C., the poorest areas of the city (Wards 7 and 8) were home to 45 percent of all children and accounted for almost half of all students affected by foreclosure (figure 8). In Baltimore, students affected by foreclosure in 2008–09 were concentrated in five of the city’s 55 Community Statistical Areas with high numbers of students: Belair Edison, Cedonia/Frankford, Southwest Baltimore, Allendale/Irvington/South Hilton, and Greater Rosemont (figure 9).

¹¹ Baltimore and Washington, D.C.’s student-level data included students’ residences. Students’ residences were not available for New York City for this analysis.

Figure 8: Concentration of Washington Public School Students Affected by Foreclosure, School Year 2008–09

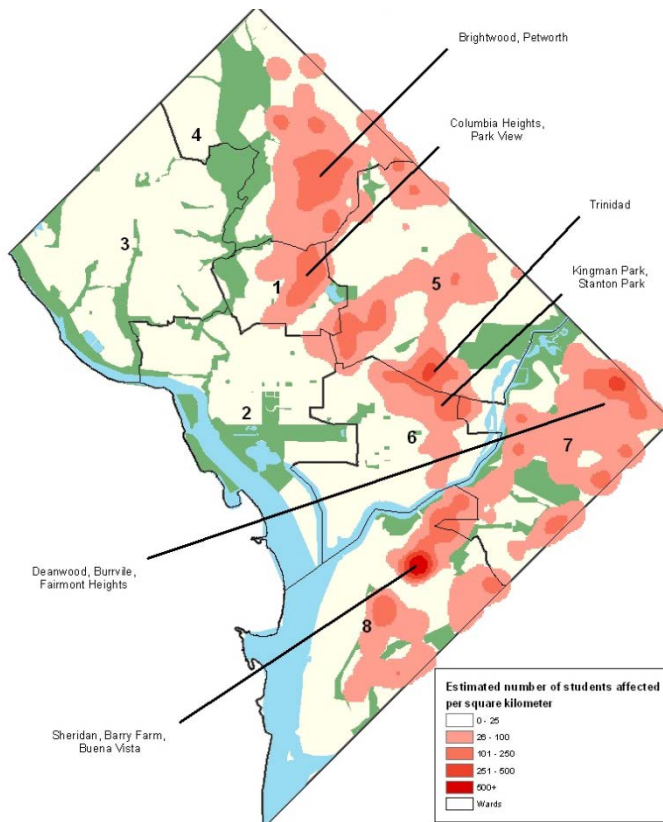
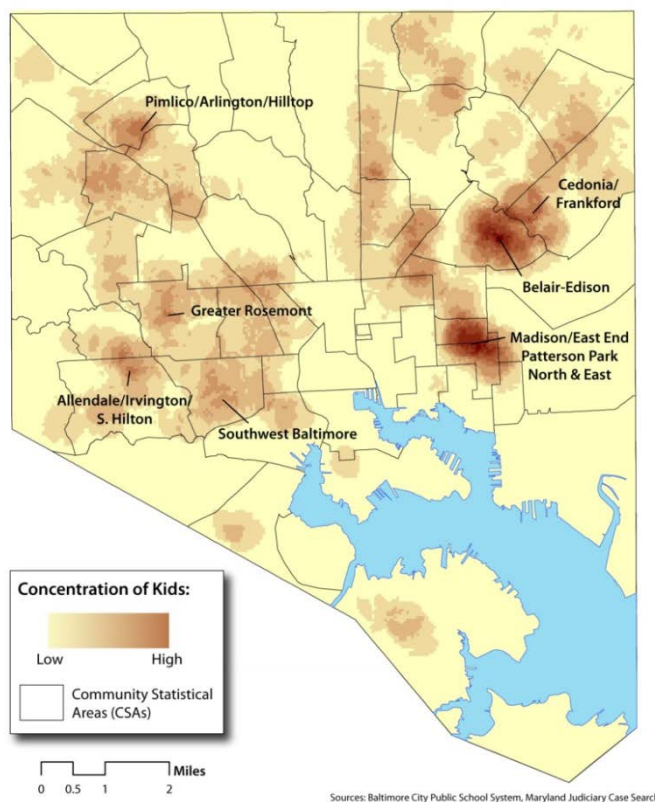


Figure 9: Concentration of Baltimore Public School Students Affected by Foreclosure, School Year 2008–09



Note: This density map has a default radius of 0.3 miles based on the geographic extent of the city.

Relative Quality of Origin Neighborhoods for Foreclosed Students

In addition to the spatial patterns of where foreclosed students lived, we were interested in how their neighborhoods compare to the neighborhoods of students overall. Measuring neighborhood quality is challenging, but the local sites conducted their analysis based on a select number of indicators that were available at the census tract level.¹² In Baltimore, the students in foreclosure started off in slightly better neighborhoods compared with all students on average: Students affected by foreclosure lived in places with moderately less poverty, lower crime, and stronger housing markets compared with all students (figure 10). The opposite was true in Washington, D.C. Students in foreclosure originally lived in neighborhoods with higher shares of Temporary Assistance for Needy Families (TANF) and Special Nutrition Assistance Program (SNAP) receipt and higher shares of property crimes compared with all students. The average violent crime rate for foreclosed students' neighborhoods was slightly lower compared with that for all students, however.

¹² The same data indicators measuring neighborhood characteristics were not available in both sites.

Figure 10: Average Origin Neighborhood Characteristics, 2007–08

	Origin	
	All Students	Students in Foreclosed Homes
<i>Baltimore</i>		
Part 1 crime (per 1,000 residents)	62	59
Juvenile arrests (per 1,000 juveniles)	124	112
Percent vacant & abandoned housing	10%	8%
Percent receiving free or reduced price meals	66%	64%
Median home sales Price	\$130,781	\$134,328
<i>Washington, D.C.</i>		
Percent of households receiving TANF	13%	15%
Percent of households receiving food stamps	26%	30%
Violent crime (per 1,000 residents)	48	47
Property crime (per 1,000 residents)	17	18

Schools in New York City Hardest Hit

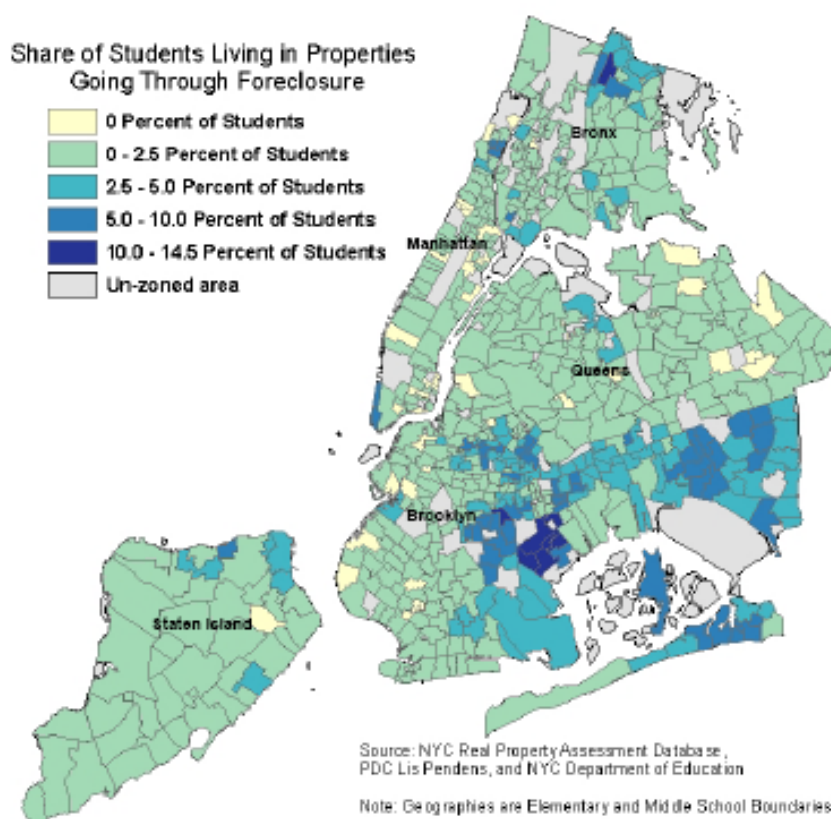
We also explored whether certain schools had disproportionately high shares of students affected by foreclosure. Schools with high shares of foreclosure are likely to have “churning” student bodies, in which affected students leave midyear and new students enroll. Classrooms with high churning rates can fall behind academically because new students who are unfamiliar with the curriculum need additional attention from the teachers (Fisher et al. 2002). This discontinuity in teaching can create a spillover effect on students not personally affected by foreclosure.

There is reason to believe that in cities where there are neighborhoods of concentrated foreclosure and where school enrollment is determined by neighborhood residence, schools would have higher shares of students affected by foreclosure. As described earlier, the degree of school choice varies across our three cities, with New York City continuing to have neighborhood-focused schools while Washington, D.C., has numerous public charters and allows out-of-neighborhood boundary enrollment.

As expected, New York City schools in high-foreclosure-rate neighborhoods also had high shares of students affected by foreclosure. The two hardest hit neighborhoods were in Queens and Brooklyn. The share of students affected by foreclosure in Queens approximately matches the overall share of students living there. However, public schools in Brooklyn were disproportionately affected. In the 2006–07 school year, 32 percent of all students in New York City attended school in Brooklyn, while 44 percent of all students affected by foreclosure attended school there. More than 14 percent of the students in one

Brooklyn school lived in properties that entered foreclosure during 2006–07 (figure 11). This is in part because the area had more multifamily buildings entering foreclosure that housed a large number of children. By 2006–07, nearly one in 10 New York City schools (93 schools) had more than 5 percent of its student body living in properties entering foreclosure.

Figure 11: Concentration of New York Public School Students Affected by Foreclosure, School Year 2006–07



Baltimore schools had less severe concentrations than New York City. Of 196 schools, nine had more than 5 percent of their student body affected by foreclosure in 2008. The highest rate for any school was 8 percent in the 2008–09 school year.¹³

In Washington, D.C., few public schools had particularly high concentrations of foreclosed students. The highest share was 7 percent at one school, and only 10 out of 231 public schools had rates above 5 percent in the 2008–09 school year. Again, this is most likely because of the large public charter school sector and high out-of-boundary enrollments in Washington, D.C.

¹³ Kachura (2011) analyzed only schools with more than 100 children and more than five children in foreclosure.

Foreclosure Students in New York City and Washington Begin in Lower Quality Schools Compared with Other Students

In all three cities, the average public school was predominantly nonwhite and low-income. Within this context, do students in foreclosed homes attend different schools than all students? Looking at the origin school for foreclosed students within the public system in New York City and Washington, D.C., students in foreclosed homes started off in schools that had even higher minority shares, higher rates of free and reduced lunch reciprocity, and lower reading and math proficiency than schools attended by all students (figure 12). In contrast, the origin schools of students Baltimore who lived in foreclosed homes had lower shares of free and reduced lunch and slightly higher reading and math proficiency on their assessment tests compared to the average school for all students. Like the other two sites, however, the schools of foreclosed students in Baltimore had higher average shares of African-American students.

Figure 12: Characteristics of Origin Schools for All Students and Those in Foreclosed Homes

	Baltimore (Grades PK-12) 2007-08		Washington, D.C. (Grades PS-12) 2007-08		New York City (Grades 1-7) 2006-07	
	All Students	Students in Foreclosed Homes	All Students	Students in Foreclosed Homes	All Students	Students in Foreclosed Homes
Percent African American students	88%	91%	83%	89%	30%	49%
Percent Asian students	1%	0%	2%	1%	15%	10%
Percent Hispanic students	3%	2%	10%	8%	40%	32%
Percent White students	8%	7%	5%	2%	15%	9%
Percent receiving free or reduced price meals	66%	63%	63%	66%	75%	78%
Percent special education	16%	16%	15%	16%	14%	13%
Percent limited English proficiency	2%	1%	7%	5%	16%	12%
Percent testing proficient or advanced on reading	68%	70%	43%	39%	57%	54%
Percent testing proficient or advanced on math	56%	57%	40%	37%	74%	72%
Number of students	88,507	1,702	70,000	704	473,632	9,151

PART III: HOW DOES FORECLOSURE AFFECT EXITING THE SCHOOL SYSTEM AND RESIDENTIAL MOBILITY?

In this section, we rely on our two-year panel datasets to determine if patterns of residential mobility for foreclosed students are different from all students. First, we review the patterns of leaving the school system altogether for foreclosed and nonforeclosed students. Then we answer three questions for students who remain in the public school system:

- 1) Do students in foreclosed homes move more often than other students?
- 2) Do foreclosed students move to neighborhoods that are different from where they started?
- 3) Do foreclosed students move to neighborhoods that are different from those of all students who move?

Foreclosure Effects on the Share of Students Who Leave the Public School System Vary across Cities

We analyzed residential moving and school switching of students in the three cities using two-year panel data. Because the data used in the analysis are restricted to students enrolled in the city's public school system, we can only confirm changes in residences or schools for students whose record matches to the following year's enrollment file. The records may not match for four reasons: (1) the family moved out of the city; (2) the child switched to a private school; (3) the child dropped out of school altogether; or (4) the child continued to attend public school but was assigned a new identification number through administrative error.

Regardless of why a student may not be enrolled the following year, there is large variation in the share of all students who "exit" the public school system across the cities.¹⁴ For all children in grades 1 through 7, those in New York City are least likely to leave the school system (7 percent), followed by Baltimore (9 percent), and Washington, D.C. (16 percent) (figure 13).¹⁵ More eighth graders in Washington, D.C., exit the public school system (20 percent) compared to the earlier grades, but the rates are similar between the earlier grades and eighth grade in Baltimore and New York. The exit rate for grades 9 through 11 is higher than for the youngest students in Baltimore and Washington, D.C. (16 and 22 percent, respectively), which is expected since it includes more students who drop out or attend private school. (New York City data are unavailable.)

¹⁴ We analyzed public school system exit rates by grade categories that represent typical points of transition across the three sites: grades 1 through 7, grade 8, and grades 9 through 11. We excluded twelfth graders from the analysis since they are typically expected to graduate and exit the system at this point.

¹⁵ Washington, D.C.'s exceptionally high rate of students leaving may be due to the city's challenges with assigning unique student IDs in a public school system with a high proportion of public charters. However, after talking to school officials, we believe this possible error accounts only for a portion of the rate. Many students move between Washington, D.C., and the surrounding counties, particularly in Maryland.

Figure 13: Share of Students Not in Public School Records the Following Year

	Baltimore 2007-08 to 2008-09	Washington, D.C. 2007-08 to 2008-09	New York City 2006-07 to 2007-08
Grades 1-7			
All students	9%	16%	7%
Students in foreclosed homes	15%	20%	3%
Grade 8			
All Students	10%	20%	8%
Students in foreclosed homes	15%	25%	3%
Grades 9-11			
All students	16%	22%	NA
Students in foreclosed homes	18%	25%	NA

Note: The analysis for New York City did not include ninth through twelfth grade students.

Students in homes in foreclosure in New York City are more likely to stay in the public school system in the following year and not exit than students in the other two cities, with an exit rate less than half that of all students (3 percent). In Baltimore and Washington, foreclosed students are more likely to exit the system, with exit rates 6 and 4 points higher, respectively, than the rates for all students.¹⁶ The differences in the exit rates among the three cities make sense given the size of New York City (303 square miles), compared to the much smaller Baltimore (80 square miles) and Washington, D.C. (61 square miles). It should be easier to find new housing post-foreclosure in the larger area of New York City.

Foreclosure Results in More Residential Moves for Students

Next we explored the residential mobility for all students and foreclosed students who remained in the public school system.¹⁷ The analysis shows a significant amount of residential mobility overall for the youngest students through grade 11, but demonstrates that foreclosed students have even higher mobility rates. Of all students who remain enrolled in the Baltimore school system, 14 percent moved between the 2007–08 and 2008–09 school years, compared to 21 percent of students affected by foreclosure (figure 14). In Washington, D.C., the mobility rates for all students and students in foreclosed homes were higher (17 percent and 30 percent, respectively) than Baltimore's, and the gap between the two groups was larger.

¹⁶ In New York City and Washington, D.C., multivariate regression analysis showed that these differences persisted even after controlling for student and school characteristics. See table A1 in the appendix for details.

¹⁷ This analysis includes only Baltimore and Washington, D.C. Home addresses for New York City students were not available. Residential mobility rates may be understated for several reasons. See Project Methodology Supplement (forthcoming).

Figure 14: Share of Students Who Moved between 2007–08 and 2008–09

	Baltimore Grades PK-11	Washington, D.C. Grades PS-11
Number of students		
All students	74,776	51,689
Students in foreclosed homes	1,367	470
Share of students who moved homes		
All students	14%	17%
Students in foreclosed homes	21%	30%

Note: Analysis includes only students who were enrolled and matched in the public school system between 2007–08 and 2008–09.

Multivariate regression analysis confirmed that living in homes that enter foreclosure in both cities increases a student’s likelihood of moving even when controlling for student demographics and neighborhood characteristics.¹⁸ Foreclosure had a larger effect in Washington, D.C., than in Baltimore. Students in foreclosed homes were 11 percentage points more likely to move than other students in Washington, but only 7.5 points more likely in Baltimore.¹⁹ A larger coefficient is consistent with the fact that Washington, D.C.’s time to process foreclosure is half that of Maryland, so more of the filings would have been completed within the one year’s time.

We also tested whether students in foreclosure living in rental homes were more likely to move than students affected by foreclosure in owner-occupied homes. Foreclosure completion rates are generally higher for investor-owned homes, so it follows that students in rental housing undergoing foreclosure would be forced to move more often than those in owner-occupied homes. However, our analysis shows that renter students in Baltimore and Washington, D.C., who lived in foreclosed homes were not significantly more likely to move than students living in foreclosed owner-occupied homes.²⁰ Washington’s rental protection law may explain the lack of difference. In Baltimore, the regression did show a positive relationship as we expected but did not quite reach the significance standard.

Foreclosed Students’ New Neighborhoods Were Mixed Quality Compared to Where They Started

One concern about foreclosed families is that those forced to move will end up in more distressed neighborhoods than where they started because of limited resources or a lack of affordable housing options. The patterns across the neighborhood quality indicators paint a mixed picture in both sites.

¹⁸ See table A2 in the appendix for details.

¹⁹ The R-squared was low in the Baltimore model, but the magnitude and significance of the coefficients are comparable to the Washington, D.C., analysis. Our methodology for this analysis is limited because it only captures the change over one calendar year, while the average length to complete a foreclosure in Baltimore is longer. The shares of children affected by foreclosure who move in Baltimore would be higher if we could trace the children to later years.

²⁰ See table A2 in the appendix for details.

Figure 15 shows that foreclosed students in Baltimore moved to neighborhoods with slightly lower crime and shares of free and reduced meals receipt. However, juvenile arrests were higher on average in the foreclosed students' new neighborhoods, as were vacant properties. In Washington, D.C., foreclosed students relocated to neighborhoods with slightly higher TANF and SNAP receipt and marginally increased property crimes. However, the average violent crime rate was lower in the foreclosed students new neighborhoods.

Figure 15: Characteristics of Destination Neighborhoods for Students Who Moved

	Origin		Destination		Difference	
	All students	Students in foreclosed homes	All students	Students in foreclosed homes	All students	Students in foreclosed homes
<i>Baltimore</i>						
Part 1 crime (per 1,000 residents)	64	61	61	60	-3	-1
Juvenile arrests (per 1,000 juveniles)	134	122	127	131	-7	9
Percent vacant & abandoned Housing	12%	10%	11%	11%	-1.1%	0.9%
Percent receiving free or reduced price meals	67%	66%	59%	60%	-8.2%	-6.0%
Median home sales price	\$124,743	\$125,258	\$125,756	\$123,055	\$1,013	(\$2,203)
<i>Washington, D.C.</i>						
Percent of households receiving TANF	14%	15%	15%	17%	1.0%	2.0%
Percent of households receiving food stamps	29%	29%	29%	32%	0.0%	3.0%
Violent crime (per 1,000 residents)	50	47	48	43	-2	-4
Property crime (per 1,000 residents)	18	18	19	20	1	2

Students Affected by Foreclosure Did Not Move to Neighborhoods That Were Significantly Different from Other Movers

To answer the question of whether students affected by foreclosure moved to neighborhoods that were different from those of all students who moved, we used multivariate regression. The analysis showed that students in homes in foreclosure who moved in Baltimore and Washington, D.C., did not end up in significantly different quality neighborhoods than other students who moved, with the exception of one neighborhood indicator in Baltimore.²¹ Students in foreclosed homes in Baltimore moved to neighborhoods with significant increases in the juvenile arrest rate, controlling for other student and neighborhood characteristics.

²¹ See tables A3.1 and A3.2 in the appendix for details.

PART IV: HOW DOES FORECLOSURE AFFECT SCHOOL MOBILITY?

Our next set of research questions analyzed the type of schools that foreclosed students attended before and after foreclosure. We focused on (1) whether students in foreclosed homes changed schools more often than other students; (2) whether they switched to schools that differed from their origin schools; and (3) whether they enrolled in schools that differed from those of all students who switched schools.

Foreclosure Results in More School Changes for Students

In addition to residential mobility, we explored whether students affected by foreclosure were more likely to change schools than all students. Again, we analyzed school changes by grade categories that represent typical points of transition across the three sites: grades 1 through 7, grade 8, and grades 9 through 11.

The overall rates of changing schools for foreclosed students were higher than for all students in virtually all grade categories across all three cities. We expected the difference in the rate of switching schools for foreclosed students versus students overall to be less pronounced in Washington, D.C., because of its liberal school choice policies. That is, even if a family moved due to foreclosure, we expected more of these foreclosed students to be able remain in their origin school. However, the gap in the school switching rate in Washington, D.C., between the two groups was much larger than those in the other two cities. While we are not certain of the reason, the low administrative barrier for school switching may prompt parents to switch schools at any point of family transition, including a move caused by foreclosure.

Figure 16: Shares of Students Who Switched Schools in Three Cities

	Baltimore 2007-08 to 2008-09	Washington, D.C. 2007-08 to 2008-09	New York City 2006-07 to 2007-08
Grades 1-7			
All students	21%	38%	19%
Students in foreclosed homes	24%	48%	22%
Grade 8			
All students	96%	90%	93%
Students in foreclosed homes	96%	95%	94%
Grades 9-11			
All students	10%	25%	NA
Students in foreclosed homes	10%	33%	NA

Note: Analysis includes only students who were enrolled and matched in the public school system between 2007–08 and 2008–09.

The study teams also used multivariate regression to determine if foreclosure had an independent effect on school switching after taking into account student and school characteristics. Students living in homes

that received a foreclosure notice were more likely to switch schools in all three cities.²² In Baltimore and New York City, foreclosure increased the likelihood of switching schools by 2.9 and 2.2 percentage points, respectively. The impact in Washington, D.C., was much higher, at 8 percentage points. Like the residential regression, the larger coefficient in Washington, D.C., is likely due to the larger share of foreclosure starts going to sale within one year, and might be higher in Baltimore and New York if we could follow the students into later years.

We also explored whether residential moves are the sole driver behind foreclosures' effect on school switching in Baltimore and Washington, D.C., where we could control for whether students moved homes. In Baltimore, foreclosure did not have an independent effect on the likelihood of school switching after controlling for the residential move. That is, a residential move prompted school switching, whether or not related to foreclosure. In Washington, D.C., a residential move increased the likelihood of school switching by 20 percentage points, but foreclosure still had an impact *over and above* the move, increasing the probability of switching schools by 5 additional percentage points. While the New York City analysis did not include tracking students' residential moves, their analysis included a model which tested whether the stage of the foreclosure process affected school mobility.²³ The results did show that there was a significant increase in school switching even for students in homes where the foreclosure process was still ongoing, before the family would have been legally forced to move.

Qualitative research on families in foreclosure has documented the turmoil in family life during the foreclosure process, even if the foreclosure does not result in losing the home (Fields et al. 2007, Ross and Squires 2011). While our analysis cannot reveal the mechanisms through which this effect takes place, the fact that foreclosure prompts both residential and school switching in the high school-choice environment of Washington, D.C., suggests that foreclosure may have similar effects in cities with liberal school choice policies.

Quality of Destination Schools for Students in Foreclosure Varied Depending on City

The students in foreclosed homes in the three cities had different experiences concerning whether their destination schools were more or less distressed as measured by average proficiency rates in statewide assessment tests. On average, students in foreclosed homes in New York City who changed schools moved to substantially worse schools than their initial schools, as measured by test results (figure 17). Specifically, the receiving schools in school year 2007-08 had an average proficiency rate of 48 percent for reading (5 percentage points lower than the initial schools in 2006-07) and 62 percent for math (12 percentage points lower than the initial schools in 2006-07). However, the new schools in 2007-08 also had also somewhat lower shares of students receiving free and reduced price lunch.

In Baltimore, students in foreclosed homes had a different outcome—they moved to schools with higher test scores. The average proficiency rates for reading and math in the new schools were higher by 3 and 4

²² See tables A4.1 to A4.3 in the appendix for details.

²³ See Appendix Table A.4.3 with the results of the model that includes the interaction of *lis pendens* by the foreclosure outcome.

percentage points, respectively, than those of the origin schools. As in New York, the shares of African-American students and free and reduced lunch reciprocity fell.

In Washington, the students in foreclosed homes enrolled in new schools that had about the same characteristics as their origin schools. Average reading proficiency rates for the new schools (37 percent) were 0.7 percentage points lower than the origin schools, and the share of proficient and advanced for math (34 percent) was 0.4 percentage points higher.

Beyond the average outcome, we explored whether these outcomes persisted even after controlling for student characteristics and school fixed effects. In Baltimore and New York City, multivariate regression analyses using the foreclosure notice as an independent variable showed that foreclosed students who switched schools did not experience a change in school quality significantly different than other students who switched schools.²⁴ From New York City, there was some evidence that students who lived in two- to four-unit buildings that entered foreclosure moved to schools with relatively worse test scores than students living in other types of buildings entering foreclosure.

In Washington, D.C., findings from the regression analysis differed from the other two cities, showing that the the students who lived in a foreclosed home experienced a significantly greater decrease in mean test scores between the origin and destination schools compared to other children who moved. The effects were 2.8 and 3.6 percentage points lower for reading and math, respectively. These results were surprising since the change in average test scores did not differ greatly for all students and students who received a foreclosure notice (figure 17). As with the other school-related models, the primary model included school fixed effects to control for unobservable characteristics in each school. We tested the sensitivity of the multivariate regression results with three versions of the model. In the second variation, the conclusions remained the same even after adding clustered standard errors. In the third variation, when we excluded the school fixed effects from the original model, experiencing foreclosure no longer significantly affected the change in average test scores between the origin and destination schools.²⁵ We know that there are differences across the schools that cannot be captured by the data we have and likely affect school mobility rates. Therefore, we believe there are advantages to the original fixed-effects regression model, and that the resulting significant effect on change in school quality is meaningful.

The Baltimore analysts had a unique dataset of individual test scores for students in third through eighth grade in the 2007–08 and 2008–09 school years. With these data, they ran an exploratory analysis to see if the change in test scores between two years for students in foreclosed homes was different compared to all other students who attended Baltimore City schools in both years. They found that just living in a home that was foreclosed had no significant effect on a change in test scores.²⁶ However, they did find that changing schools for any reason lowered the test score by about 6 points for both reading and math,

²⁴ See tables A5.1 to A5.3 in the appendix for details.

²⁵ There were 177 students in foreclosed homes that switched schools and had school test scores available for both analysis years. The number of students affected by foreclosure per origin school ranged from one to seven, with half of the observations attending schools with one or two students affected by foreclosure in each school.

²⁶ See table A6 in the appendix for details.

representing about 1.5 percent of the mean scores.²⁷ This is in line with other research about the importance of school stability (Hanushek et al. 2004). We recognize that one year may not be enough time to see the effects of foreclosure, especially since Maryland's foreclosure process typically takes more than one year to be resolved. Also, it would be worth exploring how much foreclosure could affect students during the year of foreclosure not just one year after.

²⁷ The mean test score for math was 400 and for reading was 394.

Figure 17: Difference in Average Characteristics of Origin and Destination Schools for Students Who Switched Schools

	Origin		Destination		Difference	
	All students	Students in foreclosed homes	All students	Students in foreclosed homes	All students	Students in foreclosed homes
<i>Baltimore (Grades PK-11)</i>						
Percent African American	92%	93%	91%	91%	-0.6%	-1.9%
Percent Hispanic	2%	2%	2%	2%	-0.1%	0.1%
Percent receiving free or reduced price meals	70%	70%	63%	63%	-7.3%	-6.8%
% testing proficient or advanced on reading	64%	64%	66%	67%	1.4%	2.7%
% testing proficient or advanced on math	52%	52%	54%	56%	2.0%	3.9%
Number of students	18,543	374				
<i>Washington, D.C. (Grades PS-11)</i>						
Percent African American	85%	90%	88%	87%	2.7%	-2.7%
Percent Hispanic	11%	8%	8%	10%	-2.8%	1.7%
Percent receiving free or reduced price meals	69%	70%	66%	68%	-3.4%	-2.2%
% testing proficient or advanced on reading	40%	38%	40%	37%	0.2%	-0.7%
% testing proficient or advanced on math	36%	34%	37%	34%	1.2%	0.4%
Number of students	18,712	223				
<i>New York City (Grades 1-7)</i>						
Percent African American	31%	50%	32%	47%	1.1%	-3.0%
Percent Hispanic	41%	34%	40%	35%	-1.1%	1.0%
Percent receiving free or reduced price meals	77%	81%	74%	78%	-3.2%	-3.0%
% testing proficient or advanced on reading	57%	53%	51%	48%	-5.4%	-5.0%
% testing proficient or advanced on math	77%	74%	65%	62%	-12.4%	-12.0%
Number of students	91,393	1,998				

Note: For Baltimore and Washington, D.C., the origin year is 2007-08 and the destination year is 2008-09. For New York City, the origin year is 2006-07 and the destination year is 2007-08.

PART V: SUMMARY OF FINDINGS AND POLICY IMPLICATIONS

The purpose of this cross-site study was to determine if there were any common patterns among three cities that have different housing markets and different school enrollment policies. Across all three cities, we found that more students have been affected by foreclosure over time (and we believe the numbers are continuing to increase), resulting in increased residential mobility and school switching. This increased instability affected students in New York City and Washington, D.C., who were worse off than their average peers, and presumably has added hardship to already challenging circumstances. In Baltimore, the foreclosure crisis has affected students who were slightly more affluent, attended slightly better schools, and lived in better neighborhoods than their peers. The foreclosure crisis in Baltimore may be introducing instability to a previously stable population.

Summary of Findings

- The number and share of students affected by foreclosure rose in Washington, D.C. and New York City over the time period, and we expect it to continue rising for all three cities. The three cities had similar shares of public school students affected by foreclosure by the end of the study period: 2.7 percent in Baltimore, 2.2 percent in Washington, D.C., and 1.8 percent in New York City.
- African-American students were disproportionately affected by foreclosure in New York City, and the share of Hispanic students increased dramatically in Washington, D.C., although the group was not disproportionately affected. There were no significant discrepancies in the race/ethnicity of students affected by foreclosure in Baltimore compared to the entire student body by the end of the study period.
- The share of students in foreclosed properties who rented increased during the study period for Baltimore and Washington, D.C., disproportionate to the overall share of students who rent.
- Students affected by foreclosure started off in less affluent neighborhoods in Washington, D.C., and in lower performing schools in Washington, D.C., and New York City compared with all students. Conversely, in Baltimore, students affected by foreclosure started off in slightly better quality neighborhoods and were originally enrolled in higher performing schools compared with all students.
- Some schools in New York City, specifically in Brooklyn and Queens, had high concentrations of students affected by foreclosure. There was less concentration of foreclosed students in Baltimore schools and even less in Washington, D.C., schools, presumably because students there are more likely to enroll in schools outside of their neighborhoods.
- Students in foreclosure in Baltimore and Washington, D.C., were more likely to leave the school system (either due to moving out of the city, transferring to private/parochial schools, or dropping out of school altogether), but not in New York City.

- Foreclosed students in Baltimore and Washington, D.C., were more likely to move than students not affected by foreclosure. The characteristics of the new neighborhoods post-foreclosure were not substantially different from the originating neighborhoods.
- Foreclosure leads to increased school switching across all three cities, which was expected because of the forced residential moves of foreclosed students. However, in Washington, D.C., foreclosure notices resulted in school switching even after controlling for residential moves.
- Switching schools due to foreclosure resulted in a significantly lowered change in the quality of schools for New York City students, but this was similar to all non-foreclosed students who changed schools. Foreclosure did not lead to a significant difference in the quality of schools for foreclosed students in Baltimore. In Washington, D.C., there was some evidence that foreclosed students switched to schools that had statistically greater drops in average test scores than their previous schools when controlling for student and school characteristics.

Policy Implications and Recommendations

This project revealed that foreclosure leads to increased residential mobility and school changes for public school students in our three cities. In Washington, D.C., foreclosed students were switching to schools of lower quality. The impact of adding residential instability and school disruptions for students in New York City and Washington, D.C., and possibly introducing new instability for students in Baltimore is troubling. And the foreclosure crisis continues. Foreclosure starts in cities across the nation slowed in 2010, in part due to the banks implementing more stringent oversight after the “robo-signing” controversy, but currently about 8 to 10 percent of the mortgages in the three cities in this study are either more than 90 days late in their payments or already in foreclosure (Hendey and Pitingolo 2011). A recent report from the Center for Responsible Lending suggests that the United State housing market is not even halfway through the foreclosure crisis (Bocian et al. 2011). The foreclosure crisis is far from over.

Housing counseling programs can prevent foreclosures and help families stay in their homes, but there are additional ways for municipalities, school officials, and housing counselors to reduce residential mobility and school switching and mitigate their impacts. Below we make a series of recommendations. Some are common sense: They involve understanding the housing and school policies and resources available and communicating them to affected families. The local study teams in each of the three cities have already started conversations among housing and education agencies about how procedures and communication can be improved to support families going through the stress of foreclosure.

Recommendations for School Officials

- Public school officials and principals in jurisdictions where schools have strong neighborhood enrollments should be aware of the surrounding foreclosure trends so they can (1) prepare their school counselors and homeless liaisons to conduct targeted outreach to students and their families at the schools, (2) be prepared to provide social services counseling, and (3) refer families to housing counseling services. Because foreclosure can result in increased churning of students, administrators and teachers should be given additional resources to cope with the added challenges.
- School districts should allow students to remain enrolled in their original school for the duration of the school year even if a foreclosure happens midyear and students move outside of the school boundary area. This will help maintain consistency for the students and their families, as well as reduce instability in the classroom. See the Poverty & Race Research Action Council's handbook, *Improving Education for Mobile Students*, for more information.²⁸
- Foreclosure may result in doubling up and homelessness. Principals and school administrators should identify students eligible for benefits under the McKinney-Vento Homeless Assistance Act and provide them with the appropriate services, such as the right to stay in the origin school for the duration of the school year, as well as transportation subsidies to get the students to and from school.²⁹ See the National Law Center on Homelessness & Poverty's guide, *Education of Homeless Children & Youth: The Guide to Their Rights*, regarding the rights of homeless children and youth to receive public education for more information.³⁰

Recommendations for Housing Counselors

- Housing counselors should inform families going through foreclosure about the potential negative impacts on their children of switching schools midyear, and provide information about available school support services, as well as the school policies regarding midyear residential moves.
- Counselors should connect displaced families with housing search and rapid rehousing assistance.

²⁸ The handbook can be found at http://www.prrac.org/pubs_fiems.php.

²⁹ The McKinney-Vento Act gives homeless children and youth the right to enroll and participate in public school. Specifically, the law gives homeless children and youth the right to remain in the same school even if they move; enroll in a new school without paperwork such as proof of residency, immunizations, and school records; get transportation to school; receive school services that they need; and challenge decisions made by school districts in regard to receiving education services. Students eligible under McKinney-Vento include those who “lack a fixed, regular, and adequate nighttime residence.” This includes students who share housing with others owing to economic hardship (i.e., double up), live in motels or hotels, live in emergency or transitional shelters, and who live in a public or private places not intended for sleeping (e.g., cars, parks).

³⁰ See guide can be found at [http://www.nlchp.org/content/pubs/Basic%20McKinney-Vento%20Booklet%20\(2011\).pdf](http://www.nlchp.org/content/pubs/Basic%20McKinney-Vento%20Booklet%20(2011).pdf)

- To protect renters, counselors should provide outreach and counseling that specifically address the rights of renters in foreclosed properties (many counseling programs focus on helping homeowners alone). For suggestions on particular policies, see the Foreclosure-Response.org website section on “Protect Renters Living in Foreclosed Properties”.³¹
- In areas with Latino families, counseling services and outreach materials should be available in Spanish.
- Counselors can partner with highly affected schools to do financial education outreach to parents.

Recommendations for Municipalities

Municipalities can stem the negative effects of foreclosure, even for families that do not have children.

- Strengthen local renter protections so that renters in good standing are able to remain in their apartment even if the building is foreclosed and ensure that the property is adequately maintained (e.g., utilities stay on, grass is cut, and upkeep of the property continues).
- Create a “real-time” data-sharing system that gives housing and school counselors the location of buildings (homeowner and multiunit rental) that receive a first notice of foreclosure. Housing counselors, as in Washington, D.C., can then visit the buildings to inform renters of their rights and opportunities for counseling, and municipalities can send information to homeowners informing them of their rights.

Recommendations for Researchers

In addition to implications for practice, the findings from this study raise new questions for research. This study relied on first notices of foreclosure or *lis pendens*. Because the foreclosure process takes longer than a year or even two years in many of the quasi-judicial or judicial municipalities, it is worthwhile to conduct this analysis in school districts where longitudinal student data are available. Also, it would be worthwhile to compare the impact of receiving a first notice of foreclosure with actually being foreclosed upon.

With the exception of the limited analysis of Baltimore, our analysis was restricted to testing for changes in the characteristics of the destination schools as opposed to changes in the academic performance of individual students. While we found a mixed story across the sites about whether foreclosure leads to students attending schools that have significantly lower average test scores, this analysis does not answer how foreclosure has impacted the performance of the students individually. The field would benefit from further exploration of the effect of foreclosure on individual students’ test scores.. The Furman Center for Real Estate and Urban Policy and New York University’s Institute for Education and Social Policy have been awarded a grant by the John D. and Catherine T. MacArthur Foundation to build upon their research started here to test this further in four major markets suffering from unusual housing instability—New York City, San Diego, Fresno and Pinellas County, Florida. The researchers will

³¹ See http://www.foreclosure-response.org/policy_guide/help_families_recover.html?tierid=287

apply various strategies to examine the causal relationships between housing instability and educational outcomes, along with strategies to better understand the mechanisms by which housing instability affects children's educational outcomes.

This study was conducted in three cities with moderate foreclosure rates and high proportions of low-income students. Policymakers need to know more about the children in places with particularly high foreclosure rates and where foreclosures are driven by different market conditions, such as Arizona and Florida. Similar analysis would benefit the many suburban communities that are hard hit by foreclosures but may have education systems without experience in dealing with housing instability and few other social service agencies to help. Qualitative analysis is needed to learn more about the family dynamics and impacts on children when families are undergoing the stresses of the foreclosure process. This understanding would enhance the ability to design more targeted policy interventions.

Finally, this study also demonstrates the high rates of mobility among all students. Many of the policies above could also help students displaced by eviction or other reasons, but they will only help at the margins. We need to better understand financial stresses and how to reduce disruptive moves for low-income families overall in order to improve the chances for the children's healthy social and educational development.

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Appendix Tables

Table A1: OLS Regression Results for Leaving the School System

Dependent Variable: Exited school system (0/1)

Universe: Students who attended school in origin year

	New York City Origin Year: 2006-07		Washington, D.C. Origin Year: 2007-08	
	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.
Foreclosure	-0.047	-0.002 **	0.0593	0.0167 **
White	0.010	-0.002 **	omitted	omitted
Black	omitted	omitted	0.001	0.008
Hispanic	-0.003	-0.001 *	-0.044	0.009
Asian	NA	NA	0.016	0.014
Asian/Other	-0.009	-0.001 **	NA	NA
Male	0.001	-0.001	0.011	0.003 **
Poor	-0.030	-0.001 **	-0.035	0.004 **
Constant	0.069	-0.001 **	0.433	0.009 **
Number of observations	585,584		67,666	
Adjusted R-squared	0.01		0.192	

** p<0.01, * p<0.05

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

Table A2: OLS Regression Results for Moving Residences in Baltimore and Washington, D.C.

Dependent Variable: Moved Residences (0/1)

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

	Baltimore		Washington, D.C.	
	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.
Foreclosure	0.075	-0.012 **	0.110	0.029 **
Renter*foreclosure	0.043	0.024	0.097	0.068
Student Characteristics				
Renter	0.081	0.003 **	0.034	0.005 **
Black	0.016	0.005 **	0.059	0.010 **
Hispanic	0.034	0.010 **	0.031	0.011 **
Asian	-0.047	0.011 **	0.001	0.013
Free/Reduced Meals	0.041	0.003 **	0.019	0.005 **
Male	-0.004	0.003	0.001	0.004
Constant	0.047	0.007 **	0.105	0.007 **
Observations	61,721		51,664	
R-squared	0.040		0.278	

** p<0.01, * p<0.05

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

Table A3.1: 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	
	Coeff	Robust Std. Err.	Coeff	Robust Std. Err.	Coeff	Robust Std. Err.	Coeff	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 **	-258.466	39.847 **
Observations	8,313		8,313		8,313		8,313	
R-squared	0.32		0.35		0.33		0.38	

** 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 A3.2: OLS Regression Results for Neighborhood Quality Change in Washington, D.C.

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

	Change in TANF Rate		Change in Food Stamp Rate		Change in Violent Crime Rate		Change in Property Crime Rate	
	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.
Foreclosure	0.016	0.070	0.022	0.068	0.075	0.055	-0.022	0.037
Renter	0.049	0.019 **	0.029	0.020	-0.027	0.041	-0.049	0.031
African American	0.612	0.055 **	0.725	0.061 **	0.348	0.060 **	0.035	0.056
Hispanic	0.100	0.054	0.182	0.061 **	0.262	0.060 **	0.024	0.056
Asian	0.140	0.089	0.230	0.097 **	0.127	0.076	0.031	0.067
Male	0.004	0.018	-0.006	0.018	-0.040	0.036	-0.036	0.026
Poor reduced price meals	0.064	0.021 **	0.049	0.022 *	0.051	0.020 *	0.012	0.020
Constant	-0.545	0.060 **	-0.633	0.066 **	-0.333	0.058 **	-0.007	0.052
R-squared	0.360		0.359		0.086		0.096	
Observations	8,590		8,590		8,588		8,588	

** 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 A4.1: OLS Regression Results for Switching Schools

Dependent Variable: Switched Schools (0/1)

Universe: Students who Remained in the School System from 2007-08 to 2008-09

Baltimore Grades PK - 11				
	Foreclosure		Foreclosure, including move dummy	
	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.
In Foreclosure	0.029	0.010 **	0.016	0.009
Foreclosure, Single-Family	NA	NA	NA	NA
Foreclosure, 2-4 unit	NA	NA	NA	NA
Foreclosure, 5+ units	NA	NA	NA	NA
Home Sold	NA	NA	NA	NA
Home Auctioned	NA	NA	NA	NA
Unknown Outcome	NA	NA	NA	NA
Moved Address			0.151	0.005 **
Renter	0.038	0.003 **	0.025	0.003 **
Free/Red lunch	-0.036	0.003 **	-0.042	0.003 **
White	omitted	omitted	omitted	omitted
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 **
Asian/Other	NA	NA	NA	NA
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	0.40		0.41	

** p<0.01, * p<0.05

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

Table A4.2: OLS Regression Results for Switching Schools

Dependent Variable: Switched Schools (0/1)

Universe: Students who Remained in the School System from 2007-08 to 2008-09

Washington, D.C. Grades PS - 11				
	Foreclosure		Foreclosure, including move dummy	
	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.
In Foreclosure	0.080	0.020 **	0.053	0.020 **
Foreclosure, Single-Family	NA	NA	NA	NA
Foreclosure, 2-4 unit	NA	NA	NA	NA
Foreclosure, 5+ units	NA	NA	NA	NA
Home Sold	NA	NA	NA	NA
Home Auctioned	NA	NA	NA	NA
Unknown Outcome	NA	NA	NA	NA
Moved Address			0.196	0.005 **
Renter	0.006	0.004	-0.002	0.004
Free/Red lunch	-0.0002	0.004	-0.005	0.004
White	omitted	omitted	omitted	omitted
Black	0.038	0.008 **	0.025	0.008 **
Hispanic	-0.0001	0.009	-0.008	0.009
Asian	0.004	0.012	0.002	0.012
Asian/Other	NA	NA	NA	NA
Male	0.011	0.003 **	0.011	0.003 **
Constant	0.207	0.010 **	0.190	0.010 **
Observations	51,664		51,664	
R-squared	0.40		0.423	

** $p < 0.01$, * $p < 0.05$

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

Table A4.3: OLS Regression Results for Switching Schools

Dependent Variable: Switched Schools (0/1)

Universe: Students who Remained in the School System from 2006-07 to 2007-08

New York City Grades 1-7						
	Foreclosure		Interaction: Foreclosure/ structure type		Interaction: Foreclosure/	
	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.
In Foreclosure	0.022	0.004 **				
Foreclosure, Single-Family			0.011	0.006		
Foreclosure, 2-4 unit			0.027	0.005 **		
Foreclosure, 5+ units			0.026	0.011 *		
Home Sold					0.012	0.006 *
Home Auctioned					0.061	0.013 **
Unknown Outcome					0.018	0.004 **
Moved Address						
Renter	NA	NA	NA	NA	NA	NA
Free/Red lunch	0.011	0.002 **	0.011	0.002 **	0.011	0.002 **
White	-0.015	0.002 **	-0.015	0.002 **	-0.015	0.002 **
Black	omitted	omitted	omitted	omitted	omitted	omitted
Hispanic	-0.011	0.002	-0.011	0.002 **	-0.011	0.002 **
Asian	NA	NA	NA	NA	NA	NA
Asian/Other	-0.016	0.002 **	-0.016	0.002 **	-0.016	0.002 **
Male	0.004	0.001 **	0.004	0.001 **	0.004	0.001 **
Constant	-0.038	0.011 **	-0.038	0.011 **	-0.038	0.011 **
Observations	543,749		543,749		543,749	
R-squared	0.59		0.59		0.59	

** p<0.01, * p<0.05

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

Table A5.1: 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 Test

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

Baltimore Grades 1 - 7				
	Math		Reading	
	Coefficient	Std. Err.	Coefficient	Std. Err.
<i>Foreclosure</i>	2.166	9.686	0.012	0.015
<i>Student Characteristics</i>				
White	omitted	omitted	omitted	omitted
Black	-23.683	8.858 **	-0.072	0.013 **
Hispanic	-17.392	12.367	0.019	0.019
Asian/Other	NA	NA	NA	NA
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 **
Renter	NA	NA	NA	NA
Moved	NA	NA	NA	NA
Constant	199.595	9.797 **	0.129	0.014 **
N	7,595		7,595	
Adjusted R-squared	0.26		0.57	

** p<0.01, * p<0.05

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

Table A5.2: OLS Regression Results for Changes in Average School Proficiency Rates in Washington, D.C.

Dependent Variable: Change in Percent of Students Scoring Proficient or Above on Standardized Test
 Universe: Students who switched schools and stayed in school system from 2007-08 to 2008-09

Washington, D.C. Grades PK-11														
Incl. school fixed effects alone					Incl. school fixed effects and clustered standard errors				Excl. school fixed effects and clustered standard errors					
	Math		Reading		Coefficient	Std. Err.	Reading		Coefficient	Std. Err.	Math		Reading	
	Coefficient	Std. Err.	Coefficient	Std. Err.			Coefficient	Std. Err.			Coefficient	Std. Err.	Coefficient	Std. Err.
<i>Foreclosure</i>	-0.036	0.012 **	-0.028	0.0112 *	-0.036	0.014 *	-0.028	0.0122 *	-0.0124	0.0177	-0.0127	0.0155		
<i>Student Characteristics</i>														
White	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted						
Black	-0.099	0.012 **	-0.111	0.011 **	-0.099	0.024 **	-0.111	0.023 **	0.00843	0.0125	-0.00566	0.0101		
Hispanic	-0.064	0.013 **	-0.086	0.012 **	-0.064	0.023 **	-0.086	0.021 **	0.033	0.0148 *	0.0232	0.0124		
Asian	-0.018	0.020	-0.036	0.019	-0.018	0.028	-0.036	0.026	0.0327	0.0243	0.0208	0.0224		
Male	-0.072	0.003 **	-0.011	0.003 **	-0.072	0.004 *	-0.011	0.003 **	0.00653	0.00368	0.00398	0.00349		
Poor	-0.036	0.004 **	-0.035	0.004 **	-0.036	0.004 **	-0.035	0.004 **	-0.00881	0.00439 *	-0.0118	0.00416 **		
Renter	-0.019	0.003 **	-0.015	0.003 **	-0.019	0.003 **	-0.015	0.003 **	-0.0159	0.00372 **	-0.0123	0.00354 **		
Constant	0.153	0.013 **	0.165	0.012 **	0.153	0.026 **	0.165	0.024 **	0.0311	0.014 *	0.0328	0.0117 **		
N	13,762		13,883		13,762		13,883		13,762		13,883			
Adjusted R-squared	0.41		0.40		0.41		0.40		0.030		0.021			

** p<0.01, * p<0.05

All models included grade dummy variables, though coefficients are not included on the table.

Table A5.3: OLS Regression Results for Changes in Average School Proficiency Rates in New York City

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

Universe: Students who switched schools and stayed in school system from 2006-07 to 2007-08

	New York City Grades 1-7							
	Math		Reading		Math		Reading	
	Coefficient	Std. Err.	Coefficient	Std. Err.	Coefficient	Std. Err.	Coefficient	Std. Err.
<i>Foreclosure</i>	-0.003	0.003	-0.005	0.003				
<i>Foreclosure, by Property Type</i>								
Foreclosed*Single family home					-0.002	0.006	0.005	0.006
Foreclosed*2-4 unit building					-0.007	0.004	-0.010	0.004 **
Foreclosed*5 or more unit building					0.014	0.010	0.009	0.011
<i>Student Characteristics</i>								
White	0.053	0.002 **	0.061	0.002 **	0.053	0.002 **	0.061	0.002 **
Black	omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted
Hispanic	0.009	0.001 **	0.002	0.001	0.009	-0.001 **	0.002	-0.001
Asian/Other	0.05	0.002 **	0.055	0.002 **	0.05	0.002 **	0.055	0.002 **
Male	-0.01	0.001 **	-0.011	0.001 **	-0.01	0.001 **	-0.011	0.001 **
Poor	-0.026	0.001 **	-0.035	0.002 **	-0.026	0.001 **	-0.035	0.002 **
Constant	0.012	0.002 **	0.012	0.002 **	0.014	0.002 **	0.012	0.002 **
N	89,288		89,131		89,288		89,131	
Adjusted R-squared	0.47		0.35		0.47		0.35	

** p<0.01, * p<0.05

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

Table A6. 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

	Reading				Math			
	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.
Foreclosure	3.15	1.84	3.18	1.85	2.40	2.50	2.44	2.51
Switched schools			-5.53	0.96 **			-5.95	1.15 **
Student characteristics								
African American	4.54	1.80 *	4.69	1.80 **	4.77	2.01 *	4.93	2.01 *
Hispanic	13.91	2.18 **	13.94	2.18 **	11.13	2.43 **	11.16	2.43 **
Asian	5.86	3.47	5.78	3.46	5.39	4.01	5.30	4.00
Male	-3.50	0.66 **	-3.51	0.66 **	-3.46	0.73 **	-3.47	0.73 **
Free/Reduced Meals	-1.69	0.85 *	-1.61	0.85	-3.00	0.94 **	-2.91	0.94 **
Constant	-9.52	1.79 **	-9.24	1.80 **	14.12	2.02 **	14.42	2.02 **
Observations	24,968		24,968		24,968		24,968	
R-squared	0.0952		0.0965		0.0813		0.0825	

** p<0.01, * p<0.05

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