Does Losing Your Home Mean Losing Your School?: Effects of Foreclosures on the School Mobility of Children

Vicki Been
Ingrid Gould Ellen
Amy Ellen Schwartz
Leanna Stiefel
Meryle Weinstein

New York University

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In the last few years, millions of homes around the country have entered foreclosure, pushing many families out of their homes and potentially forcing their children to move to new schools. Unfortunately, despite considerable attention to the causes and consequences of mortgage defaults, we understand little about the distribution and severity of these impacts on school children. This paper takes a step toward filling that gap through studying how foreclosures in New York City affect the mobility of public school children across schools. A significant body of research suggests that, in general, switching schools is costly for students, though the magnitude of the effect depends critically on the nature of the move and the quality of the origin and destination schools.

We use data on students in New York City's public schools to explore the reach of the foreclosure crisis into the city's student population. To begin, we assess how many students have been affected by foreclosures and compare the characteristics of the students living in foreclosed buildings and the schools that they attend to those of students not directly affected by foreclosures. We next examine whether children living in properties entering foreclosure are more likely to switch schools than otherwise similar students. Further, we examine whether – and how – the characteristics of their new schools differ from the characteristics of their original schools and assess how those differences compare to the differences between the original and new schools of similar students who switched schools but were not living in buildings entering foreclosure. We focus primarily on elementary and middle school students for whom the link between residential and school location is strongest.

To undertake this work, we use a unique data set on New York City, which links student-level academic records to building-level foreclosure data. We focus on the 2003-04 and 2006-07 academic school years, to give a sense of the way in which the gathering foreclosure crisis played out for public school children. The results are intriguing, suggesting that the foreclosure crisis induced affected students to switch schools more often than they would have otherwise, and, on average, to schools offering academically weaker peers. Together these suggest that foreclosures may negatively affect the academic performance of students living in foreclosed buildings and put additional strain on public schools already facing budget cuts and fiscal retrenchment.[1]

Background and Literature Review

A foreclosure notice may result in several different outcomes. First, owners may resolve the foreclosure by paying back the arrearages or by receiving a modification from their lender that allows them to keep the property. Second, owners may sell their property and pay off the mortgage debt, assuming their mortgage debt does not exceed the value of their property or that the bank forgives any difference. Finally, the bank may complete the foreclosure by auctioning the property to a third party or by taking ownership of the property itself (so-called REO, or real estate owned). In New York City, the time between the filing of a Lis Pendens ("LP" or "foreclosure notice") and the auction of the property is typically about 18 months.

[1] According to a 2008 article in USA Today, several school districts, responding to a "wave" of homeless students now living outside the district lines are "having staffers or private investigators check for families using false addresses. Palm Beach County, Fla., set up an anonymous tip line that residents can call to report families who might be improperly enrolling students"(Armour, 2008).

Foreclosures may affect children in a variety of ways. First, if a homeowner is not able to cure or modify, and instead either sells her house to pay off the mortgage or loses it to the bank, the family will be forced to leave. Similarly, if a family's landlord cannot pay the mortgage and either sells or loses the property to the bank, then the tenants (and their children) may be forced to move to a new home. It is possible that families who move as a result of foreclosure will find new housing in the same neighborhood and children will be able to stay in the same school, but in many cases, families will end up moving to new, and perhaps more affordable, neighborhoods, and transfer their children, especially young children, to new schools.

If the owners resolve the foreclosure through cure or modification, the children may nevertheless still be affected if the families cut back on spending on the children's education and educational activities in order to have more money to pay off the mortgage. Further, whether the family is forced to move or not, the stress a foreclosure notice produces may affect the children's educational performance.

The majority of buildings receiving foreclosure notices in New York City have been multifamily buildings, and thus many of the households living in properties receiving foreclosure notices have been renters (Furman Center, 2008). The effects of foreclosure on tenants are not as clear, though for a vriety of reasons, we expect elevated rates of departure following a foreclosure notice. Until Congress passed the 'Protecting Tenants at Foreclosure Act of 2009,' which allowed tenants to stay in place for 90 days or the term of their lease in most circumstances following a foreclosure, many tenants had few protections in the event of a foreclosure (Been and Glashausser, 2009). (Note that most of the multifamily properties receiving foreclosure notices in New York City

have been 2-4 unit properties, which are not governed by the city's system of rent regulation.) When landlords sold their properties to pay off their mortgages, anecdotal reports suggest that they often encouraged tenants to leave because they believed their properties would be more marketable without tenants. New owners also sometimes pushed tenants out – and if a foreclosure was completed, banks typically evicted any remaining tenants, due to both liability concerns and a worry that properties would not be as attractive to potential buyers if they had tenants. Further, even when guaranteed the right to stay under federal or state law, tenants may choose to move from buildings receiving foreclosure notices more frequently than from other buildings because owners struggling to pay their mortgage cut back on maintenance and utilities. As tenants leave their homes, they may move to new neighborhoods and school zones.

Moves across schools have been shown to be damaging to children's academic performance (Hanushek, Kain & Rivkin, 2004). School moves may cause problems getting restarted (including difficulties with the subject matter or tensions with classmates) (Alexander, Entwisle, & Dauber, 1996; Lash & Kirkpatrick, 1994; Mehana & Reynolds, 2003; Nelson, Simoni, & Adelman, 1996; Schwartz, Stiefel, & Chalico, 2007; Xu, Hannaway, & D'Souza, 2009). The involuntary moves precipitated by foreclosure may be even more harmful to students as choices may be limited by the urgency of the move. Students accordingly may move to poorer quality schools, with lower quality teachers or peers who are performing less well (Pettit, 2004; Xu et al., 2009)

Despite these ways in which foreclosure could theoretically affect students, there has been little research into what happens to households that live in foreclosed properties, either in New York City or around the country, largely because foreclosure records are

property-based, and it is rarely possible to identify and follow occupants. Anecdotal evidence indicates that some homeowners leave the property to become renters or move in with relatives and friends. Others end up homeless (Goodman, 2009). Their children may have to change schools as a result and move to schools whose quality differs from their original schools. We hope in this paper to fill this gap in the literature regarding children's schooling, drawing on evidence from New York City.

Data

Student and school data

We use student-level data from the New York City Department of Education (NYCDOE) for all students enrolled in the City's public schools on October 31st of the school year. The dataset identifies each student's birth date, country of birth, race or ethnicity, gender, free and reduced price lunch status, and home language. The data set also includes the student's grade, information on annual school attendance, Limited English Proficient (LEP) status, special education status, and standardized test scores. We can link data for individual students across academic years, as long as a student attends a New York City public school.[2]

The student data include information on school attended, allowing us to link to school-level data, including school demographics (e.g. percentage black, Hispanic, Asian, or white; percentage eligible for free or reduced price lunch), as well as resource data (expenditures, teacher characteristics), average test scores, and attendance.

[2] For each year, we exclude students who are missing admit/discharge dates, school, or grade codes. This decreases the number of full-time special education students who are frequently assigned ungraded classrooms. In most cases these students would be dropped because of the absence of testing data and/or due to limitations in the data on schools serving primarily special education students.

Foreclosure Data

We use a dataset of parcel level foreclosure starts, or *lis pendens* (LP) filings, from the Public Data Corporation. This dataset is updated quarterly; we use data from the first quarter of 2000 through the last quarter of 2009. The dataset includes all residential parcels that received a notice of foreclosure and the date of each notice.[3] We linked these data, through the borough-block-lot (BBL) identifier for each filing, to street address, property characteristics, and information about the disposition of the property after the LP was issued (in particular, whether the property was transferred in an arms-length sale, sold at auction or retained by the lender as REO, or had an unknown outcome).

The property data come from the Primary Land Use Tax Output (PLUTO) file maintained by the New York City Department of City Planning, as well as the City's Automated City Register Information System (ACRIS), and in some cases the Real Property Assessment Data (RPAD), a database of individual tax lots in New York City with characteristics such as area, zoning, and building class.

Matching Students to Residential Parcels in Foreclosure

To link students to properties receiving foreclosure notices, the New York City Department of Education (DOE) matched the students' addresses, for the 2003-04 and 2006-07 school years, to the addresses of all properties (other than condominiums and cooperatives[4]) receiving foreclosure notices.

[3] For properties that had more than one LP without a transfer of ownership and a second LP within 6 months of the prior filing, we consider it to be the same "instance of foreclosure" and trace outcomes based on the date of the first LP. LPs that occur more than six months after an earlier LP are included and considered a separate foreclosure filing.

[4] The Department of Education matched foreclosure notices and students to building addresses that did not include identifiers distinguishing different units within a building. As a result, for foreclosure notices issued

The DOE records a student's address at three different times during each academic year, on October 31st, March 1st, and June 1st. We classify students as living in a building entering foreclosure if the building they live in at a given date receives a foreclosure notice between that date and the next date when addresses are recorded. For example, for a student with an address recorded on October 31st, 2003, we classified that student as living in a building receiving a foreclosure notice if that building received a foreclosure notice between that date and March 1st when the DOE again records each student's address. More specifically, we classified a student as living in a building that received a foreclosure notice if:

- The student lived in a property on October 31st, 2003, and that property received an LP between November 1st, 2003 and February 29th, 2004;
- The student lived in a property on March 1st, 2004, and that property received an LP between March1st, 2004 and May 31st, 2004; and
- The student lived in a property on June 1st, 2004, and that property received an LP between June 1st, 2004 and October 30th, 2004.

This definition is conservative for several reasons. First, the count includes only foreclosure notices that are issued after the date on which we know a child's address, in order to ensure that we are not including students whose families move into a building after a foreclosure notice is resolved or completed. Thus, we may miss students who move into a unit after a foreclosure is filed, but before a foreclosure is resolved. For example, if a property receives an LP in August, and a student moves into that property in September, the student will not be counted as affected, even though the student's family may be moving into a rental unit in the building and the foreclosure may not yet be

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to a unit in a multifamily cooperative or condominium building, the match would not have reliably identified which students living in the building were actually living in the unit receiving the foreclosure notice. These represent a small share of total foreclosure notices, however.

resolved. The foreclosure notice could still therefore affect the student. Second, we only match students to LPs issued in the three to five months after we capture a student's address, in order to be fairly confident that the student's family was still living in the property at the time the notice was issued, but the New York foreclosure process is considerably longer than three to five months, so we likely are missing some families who live in properties in foreclosure for periods outside our window.

To be clear, this designation does not assume that foreclosures only last three to five months. As noted, the foreclosure process is slow in New York City and takes about 18 months on average. Instead, the windows are used to be conservative and limit the noise that might be created by including the full 18-month foreclosure period. Through this matching process, we create a student-level data set that includes a set of variables identifying whether a student lived in a property that entered foreclosure during that academic year, when the foreclosure started, and the characteristics of the property, along with characteristics of the students and their schools.[5]

Foreclosures in New York City

Although New York City was not hit as hard by foreclosures as cities such as Cleveland and Detroit, it has experienced a significant spike in recent years. The number of properties receiving a notice of foreclosure each year more than doubled between 2000 and 2008, with sharp upturns occurring in 2005-06, 2006-07 and again in 2008-09 (see Figure 1). In 2009, almost 21,000 properties received a notice of foreclosure.

This rise in foreclosures came as housing prices in New York started to fall. For

[5] Note, however, that we do not know the addresses of the students - we simply know whether the address matched a foreclosure notice address. This prevents us from knowing the building type or neighborhood characteristics of the students whose properties do not experience a foreclosure.

most of the last decade, New York's housing market enjoyed strong price appreciation. Between 1996 and 2006, for example, prices in the City rose steadily and by 2006, prices were on average 124 percent higher than they were in 1996, even after controlling for inflation (Furman Center, 2009). That price appreciation probably helped some borrowers avoid foreclosures; while many New Yorkers turned to risky high-cost loans to finance their home purchases, a relatively small share of them ended up in foreclosure through 2005, most likely because they were able to refinance their mortgages or sell their homes if their loans became too burdensome. When prices started to fall near the end of the decade, the number of foreclosures began to rise.

Our analysis focuses on children living in properties going through the foreclosure process in the 2003-04 and 2006-07 school years. Figure 2 shows the number and type of properties entering foreclosure during these two school years. The figure underscores both the growth in foreclosures during this period, but also the fact that that a large share of the properties receiving notices of foreclosure in New York City have been small multifamily properties with 2-4 units.

Again, because many of the buildings entering foreclosure are multifamily properties, many affected households are renters. Even if all single-family homes are owner-occupied and one unit in each 2-4 family building is owner-occupied, more than half of the housing units in properties entering foreclosure in 2006-07 would have been occupied by renters. Using these assumptions, we estimate that the share of units entering foreclosure that are occupied by renters increased between our two sample years, reaching 54 percent in the school year 2006-07.

Characteristics of Students Living in Properties Entering Foreclosure

Not surprisingly, given both the increase in foreclosure starts and the increased share of affected buildings that were multifamily, the number of public school students living in buildings entering foreclosure rose during this period too. In the 2003-04 school year, we identify a total of 12,067 students living in properties entering foreclosure. By the 2006-07 school year, this number had risen to 20,453 students, just over half of whom were in elementary and middle school. These students constituted about two percent of all public school students.

As for their characteristics, Table 1 shows that 28 percent of the students living in homes that entered foreclosure during the 2006-07 school year lived in single family homes, which means that their families likely owned the homes that went into foreclosure.[6] Close to two thirds lived in 2-4 family homes and about 10 percent lived in larger apartment buildings. The majority of the students living in these multifamily homes are clearly renters (especially as cooperatives and condominiums have been excluded). In 2-4 family homes, the owner might live in one unit and rent out the others; in larger apartment buildings, all the units are likely to be rental. The share of students living in 2-4 family homes going through foreclosure grew between 2003-04 and 2006-07, while the share living in single family homes declined. While we do not have comparable information on the building types of children who did not live in homes going through foreclosure, we suspect that those going through foreclosure are far more likely to live in single-family and 2-4 family homes, as these buildings enter foreclosure at a much higher rate than larger buildings. Even after excluding cooperative and

[6] Recall that we do not have access to building type for the students whose buildings did not enter foreclosure.

condominium buildings, half of all housing units in New York City are located in apartment buildings with more than five units, but only 10 percent of students living in buildings entering foreclosure lived in such buildings.[7]

Just over half of the students whose buildings had entered foreclosure attended grades 1-8 in the 2006-07 school year, roughly one quarter attended high school, 10 percent attended Kindergarten or pre-Kindergarten, and 9 percent were enrolled in special education or adult education classes. These proportions are roughly the same as those for other students whose buildings did not enter foreclosure. In the 2003-04 school year, a slightly greater share of students attended elementary and middle school and a smaller share high school. Again, there was little difference between the students who lived in buildings entering foreclosure and those who did not.

We do see a difference in poverty rates, with a greater share of students living in properties entering foreclosure eligible for free lunch, especially in the later school year. The most striking difference between the students living in properties that entered foreclosure and those that did not was their racial composition. Students whose buildings entered foreclosure were far more likely to be black than other students in the school system: in 2006-07, 57 percent of students living in buildings entering foreclosure, but only 33 percent of all other students, were black. The proportions were almost identical in the earlier school year. Students whose buildings entered foreclosure were significantly less likely to be white or Asian, and perhaps surprisingly, they were also less likely to be Hispanic. Only 29 percent of students whose buildings entered foreclosure were Hispanic in the 2006-07 school year, as compared to 39 percent of other students.

[7] We exclude cooperative and condominium units as they are excluded from our pool of properties in foreclosure.

Again, these proportions were almost identical in the later school year.

Given the concentration of foreclosures in particular neighborhoods in New York City, it is not surprising that the students living in properties that entered foreclosure were not evenly dispersed throughout the City. Rather, they were concentrated in particular schools. Half of the students living in properties going through foreclosure in 2003-04 attended just 14 percent of all city schools, while 75 percent of those students attended just 31 percent of all schools. The level of concentration stayed roughly similar in 2006-07, with half of students living in properties entering foreclosure attending 17 percent of the City's schools.

The characteristics of the schools attended by these children were distinct from those of other schools. To illustrate these differences, we arrayed schools for the two sample years by the percentage of their students living in buildings that entered foreclosure and then divided the schools into quartiles based on this percentage. Table 2 compares the characteristics of the top quarter of schools -- with the highest percentage of children living in buildings that entered foreclosure -- with the characteristics of the schools in the bottom quarter, and with the characteristics of all public schools. The share of students who are black was far higher in the high foreclosure-concentration schools. In 2006-07, in the quartile of schools with the highest share of students living in foreclosed properties, 56 percent of students were black, compared to just 31 percent of the student population in all NYC public schools. In the high concentration schools, all other racial groups were under-represented. In addition, as compared to other schools, the percentage of students eligible for free or reduced price lunch (a measure of poverty) was higher in the high foreclosure-concentration schools, while the percentage of

students who were limited English proficient (LEP) was lower. Finally, in the schools with the highest shares of students living in buildings that received a foreclosure notice, both reading and math test scores were significantly lower than in other schools.

Were Children Living in Properties That Received Foreclosure Notices More Likely to Move to a New School?

Our primary question of interest is whether students living in properties that entered foreclosure were more likely than other students to move to a different school. To test this question, we track students to the next school year (i.e., we follow students originally in the 2006-07 school year to the 2007-08 school year), and we group them into one of three categories. Students could remain in their original school, move to a new school in the New York City public school system, or exit the school system altogether, either because they moved out of New York City or because they enrolled in a private school.

As Table 3 shows, elementary and middle school children living in properties that had received foreclosure notices during the 2006-07 school year were no less likely than other children to stay in their same school the following year. Approximately 84 percent of children in conventionally 'non-terminal' grades (grades 1-4, 6 and 7) stayed in the same school in the subsequent school year, regardless of whether they lived in a foreclosed property. While the percentage of students who stayed in their schools is much lower for the commonly 'terminal' grades (fifth and eighth grades in New York City, which are often the highest in their school), the percentages are again nearly identical for students living in buildings that had entered foreclosure and those who had not.

There is, however, a marked difference in moves made by the children who did not stay in their same school. Children living in properties that received foreclosure notices were *less* likely to exit the New York City school system but *more* likely to switch to a new school within the City school system. These patterns were nearly identical for the 2003-04 school year.

To understand these patterns more fully, we use regression analysis to examine whether children living in foreclosed buildings were more likely to switch schools and less likely to exit the public school system, after controlling for race, poverty, gender, grade, and the original school they attended. Specifically, we estimate the following models:

$$Y_{ij} = \beta_0 + \beta_1 X_i + \beta_2 F_i + \varphi_j + \varepsilon_{ij} \qquad (1)$$

where Y_{ij} is a dummy variable indicating whether student i in original school j moved to a new school between school years (or exited the school system in the second set of regressions), X_i is a series of student characteristics, including race, poverty, gender, and grade, F_i is a dummy variable indicating whether the student lived in a building that entered foreclosure in the initial school year, and φ_j is a series of school fixed effects, defined by the student's "origin" school. In the first model, we include a simple dummy variable to indicate whether the student lived in a building that entered foreclosure during the baseline school year. In the second model, we interact the foreclosure dummy with the property type, while in the third model, we interact the foreclosure dummy with the outcome of foreclosure (sale, foreclosure auction or REO, or unknown outcome). We

estimate these models for students in grades 1-8 in the base year. In all cases, we use robust standard errors, clustered by school. Finally, to test whether children of different races or income levels are affected differently, we also estimate models with interaction terms between foreclosure and free lunch status and foreclosure and the student race dummy variable

We experimented with using a probit regression, but because substantive results were the same, we show the linear probability model results for ease of interpretation. Note that because results were largely the same for the 2003-04 school year, we show regression results only for the 2006-07 school year.

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Looking first at Table 4, which shows the results for the regression of moves for all students from one New York City public school to another, we see that white, Hispanic and Asian children were all less likely to move to new schools than black children (omitted category). In addition, children who are not poor (as measured by eligibility for free and reduced priced lunch) and girls were less likely to switch schools. Although coefficients on grade dummy variables are not shown, the pattern for the grade variables is as expected, with children significantly more likely to switch schools after fifth and eighth grades. Controlling for these factors, we still see that children living in foreclosed buildings were more likely to switch schools. Results in Model 2 show that the probability of moving was higher for all students living in buildings that entered foreclosure, regardless of property type, but students living in 2-4 unit and larger multifamily buildings were somewhat more likely to move after foreclosure than those living in single-family homes.

Model 3 shows that students living in buildings that received a foreclosure notice were more likely to move, regardless of the outcome of that foreclosure, but the children living in foreclosed properties that later went to auction were significantly more likely to move. Specifically, the probability that children living in properties going to foreclosure auction will move between school years is 6.1 percentage points higher than the probability of moving for students not living in foreclosed properties.

Table 5 shows results of the first model, expanded to include interaction terms between foreclosure and poverty (column 1) and foreclosure and race (column 2). The results in the first column suggest that foreclosures do not increase the probability that non-poor students will switch schools. We only see a link between foreclosure and moving for poor students. This difference may result from ourlarger sample of poor students compared to non-poor students. Given our blunt measure of poverty, over 80 percent of students in our sample are identified as poor (and 89 percent of those living in foreclosed buildings in the 2006-2007 school year). But it is also possible that poor children are indeed affected more intensely by foreclosures. Students in poor families may have fewer resources to address the foreclosure and may be more likely to leave their homes and neighborhoods as a result. They are more likely to be renters and may also live in neighborhoods where banks are less willing to offer modifications, given their belief about future housing price appreciation.

When looking separately at the foreclosure effect for different racial groups, we find little difference across racial groups. The only difference is that the positive association between foreclosure and moving schools appears to be somewhat larger for Hispanic students. This may be because Hispanic students going through foreclosure

are much more likely to be poor, or because they are much more likely to be renters. (We find that Hispanic students living in buildings going through foreclosure are more likely than students of other races to live in multifamily buildings and therefore to rent their homes.) Poor renters may face fewer options when they experience foreclosure.

Do Students Living in Foreclosed Buildings Move to Worse Schools?

Our final question is whether students living in properties that entered foreclosure moved to schools that were worse than their original schools, perhaps because of a need to move to a cheaper neighborhood or because moves were unexpected and parents had little time to search. Table 6 begins to answer this question by comparing the origin and destination schools for students in grades 1-7 who moved after their building received a foreclosure notice, for the students in buildings receiving foreclosure notices during the 2003-04 and 2006-07 school years. The top panel of the table shows that students who moved tended to move to schools in which the percentage of students who are poor and Limited English proficient was lower. There is little apparent difference between origin and destination schools in the share of students who are black or Hispanic or the proportion who qualify for special education.

Most importantly, there is a notable difference in test scores between the origin and destination schools, especially in the 2003-04 school years. Students who switch schools after a foreclosure ended up on average in schools in which a lower percentage of students test proficient on math and reading tests. Thus not only did children who live in buildings that entered foreclosure move more often, but when they moved, they moved to lower-performing schools.

Interestingly, however, we see very similar differences between origin and

destination schools for the children who move but did not live in buildings entering foreclosure. In other words, students who move end up in lower performing schools, regardless of whether their move is related to a foreclosure.

To understand the school quality changes more fully, and to test more carefully whether students who move following foreclosures end up in worse schools relative to other students who move, we use regression analysis to examine school quality changes, after controlling for race, poverty, gender, grade, and the original school attended. Specifically, we estimate the following regression for students who switch schools between school years:

$$Tij = \beta_0 + \beta_1 X_i + \beta_2 F_i + \varphi j + \varepsilon ij \qquad (2)$$

where T_{ij} is a variable capturing the difference in test scores between the origin and destination schools for student i initially in school j. Note that we measure test scores in the base year, even for the destination schools, so that we capture a measure of test scores *before* the new children move to the school. We experimented with a variety of different measures of school test scores, but given that key results were largely the same, we simply show two – the change in the share of children who test at proficient level on math tests, and the change in the share of students testing proficient on reading tests. X_i is a series of student characteristics, including race, poverty, gender, and original grade, F_i is a dummy variable indicating whether the student lived in a building that received a foreclosure notice in the initial year, and φ_j is a series of school fixed effects, indicating the original school the student attended. We estimate this model for students originally in

grades 1-7.

Table 7 shows results for a model for students who moved between the 2006-07 and 2007-08 school years. We see that white and Asian students, and to a lesser degree Hispanic children, who moved were more likely to move to better schools than black students. Similarly, non-poor students who moved were more likely to end up in better schools than poor students, and girls who moved tended to end up in better schools as compared to boys. Our key interest is the coefficients on the foreclosure variables. There is little evidence that students living in properties that entered foreclosure moved to worse schools, on average, than other students. There is, however, modest evidence that students who lived in 2-4 unit buildings that entered foreclosure moved to relatively worse schools as compared to other students who move, as measured by share proficient.

As noted above, we replicated these regressions with other measures of school test scores, and the results were much the same. Although students experiencing foreclosure tend to move to schools that have lower test scores than their original schools, there was very little evidence that children living in buildings that entered foreclosure experienced a greater decline in school quality when they moved, as compared to other students who moved.[8]

Conclusion

Our results provide evidence that the foreclosure crisis may impose collateral costs on children. We find that public school students in New York City living in buildings that entered foreclosure were more likely to move to different public schools in

[8] That said, we find no evidence that children who lived in buildings that entered foreclosure moved to better schools on average as compared to other movers.

the City in the year after the foreclosure notice was issued and were especially likely to move when their building went all the way through the foreclosure process and was put up for auction. Interestingly, however, the students living in properties that entered foreclosure were significantly less likely to leave the public school system. What is more, students that moved to new schools after a foreclosure tended to move to lower-performing schools. The change in school quality, however, was no more dramatic than that for other students who moved schools who had not experienced a foreclosure. In other words, the cost that foreclosures have imposed on students in New York City seems to be that they have led students to switch schools more than they would have otherwise, and like other students who switch schools, they typically ended up in schools with lower test scores than their original schools.

Importantly, the full effect of these moves on academic performance will depend upon both the impact on the moving students and the impact on their peers, and the ability of recipient schools in ameliorating the effects of foreclosure, mobility and instability. It is likely that these will impose additional costs on the school budgets. Recipient schools may need additional resources to provide educational support for students affected by foreclosure including, say, guidance counselors to help students adjust or to evaluate students for placement. Recipient schools might also need additional teachers if enrollments swell significantly – increases that may eventually be matched by reductions in the teaching staff needed in schools experiencing losses in enrollment. In the transition, however, the costs of foreclosure may well add strain to school budgets already strained by cutbacks.

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Figure 1: Properties that Received a Lis Pendens Filing (2000-2009)

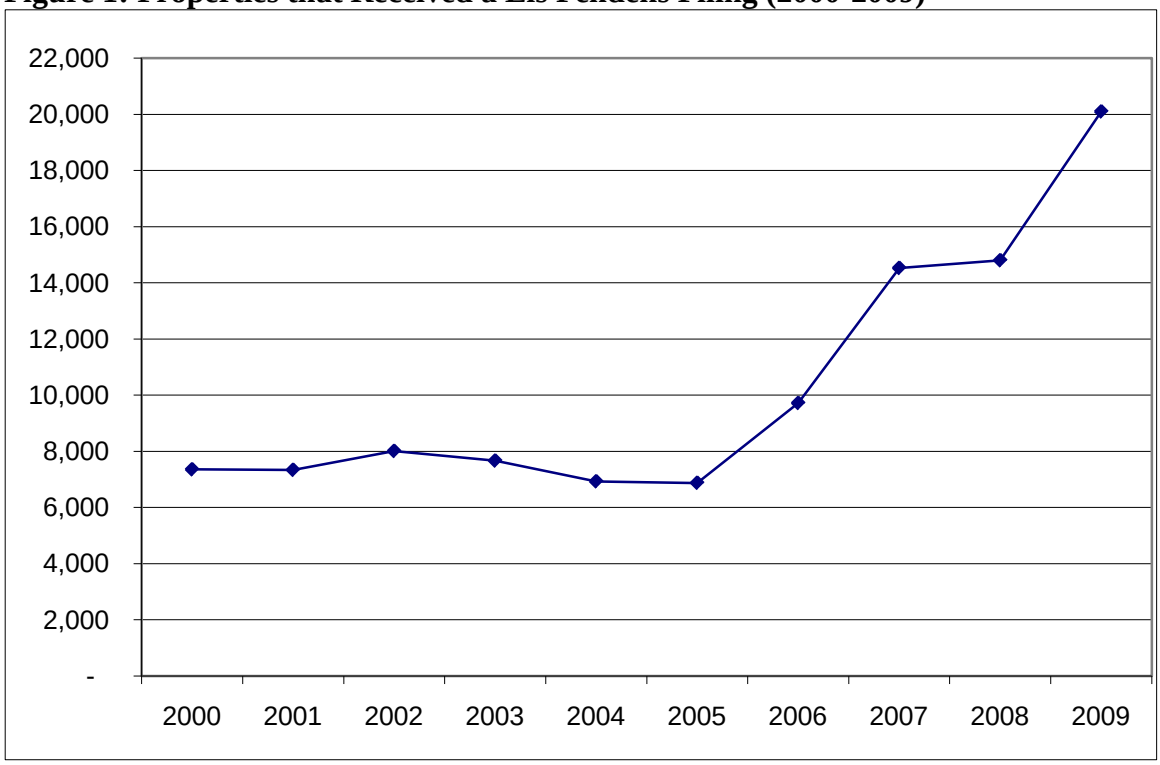

Figure 2: Foreclosures During School Study Years, 2003-04 and 2006-07

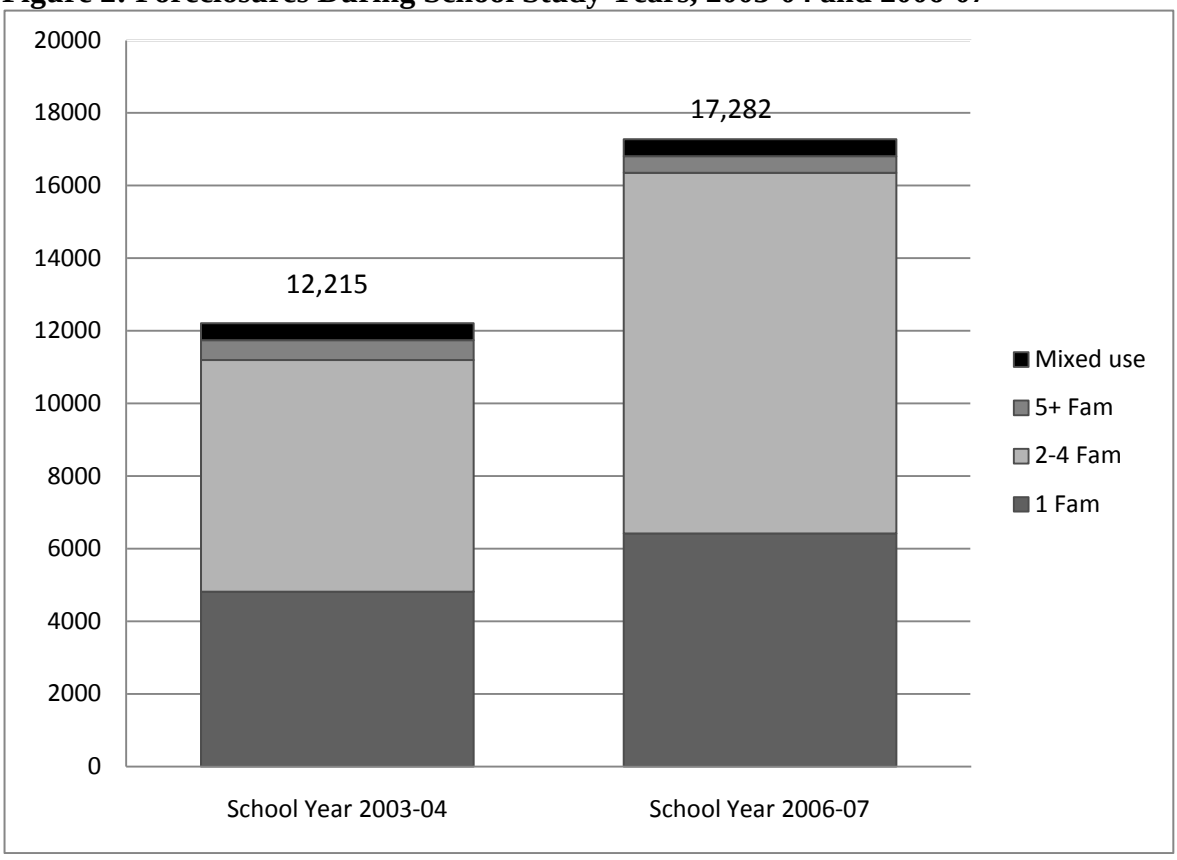

Table 1: Characteristics of Children Living in Foreclosed Property

	2003-04		2006-07	
	Students living in foreclosed property	**Students not living in foreclosed property**	**Students living in foreclosed property**	**Students not living in foreclosed property**
Building Structure Distribution				
Single family	31%	.	28%	.
2-4 units	59%	.	63%	.
5+ units	10%	.	9%	.
Grade Distribution				
Grades 1-8, total	57%	57%	53%	52%
Grades 9-12, etc	24%	24%	27%	29%
PreK/K	10%	10%	10%	11%
Special Ed/other	10%	9%	9%	8%
Eligibility for Free/Reduced Price Lunch				
Percent Eligible	78%	75%	89%	79%
Racial Composition				
Percent Black	56%	32%	57%	33%
Percent Hispanic	30%	39%	29%	39%
Percent White	9%	15%	8%	14%
Percent Asian/Other	6%	13%	7%	14%
Number of students	12,067	1,068,115	20,453	1,110,780

Table 2: Schools, by Quartile of Foreclosure Incidence

	2003-04			2006-07		
	All Schools	**Top Quartile**	**Bottom Quartile**	**All Schools**	**Top Quartile**	**Bottom Quartile**
Percent Black	33%	54%	18%	31%	56%	16%
Percent Hispanic	40%	31%	47%	40%	30%	44%
Percent White	14%	9%	16%	14%	5%	18%
Percent Asian/Other	13%	7%	19%	14%	8%	22%
% Receiving Free or Reduced Priced Lunch	83%	87%	81%	83%	89%	80%
% LEP	14%	9%	19%	16%	11%	21%
% Testing Proficient or Advanced on Reading	45%	41%	49%	55%	50%	61%
% Testing Proficient or Advanced on Math	54%	48%	58%	71%	67%	79%
Number of Schools	960	240	240	1085	271	271
Number of Students	721,387	194,294	151,663	665,496	168,037	162,434

Table 3: Distribution of Students by Mobility Status, 2006-2007

	Students living in foreclosed property	**Students not living in foreclosed property**
Grades 1-4		
stayed in same school	84%	83%
changed schools	13%	10%
exited system	3%	7%
Grade 5		
stayed in same school	23%	22%
changed schools	74%	71%
exited system	4%	8%
Grades 6-7		
stayed in same school	85%	83%
changed schools	12%	10%
exited system	3%	7%
Grade 8		
stayed in same school	6%	7%
changed schools	92%	85%
exited system	3%	8%

Table 4:

	Model 1	Model 2	Model 3
White	-0.015***	-0.015***	-0.015***
	(0.002)	(0.002)	(0.002)
Hispanic	-0.011***	-0.011***	-0.011***
	(0.002)	(0.002)	(0.002)
Asian/Other	-0.016***	-0.016***	-0.016***
	(0.002)	(0.002)	(0.002)
Female	-0.004***	-0.004***	-0.004***
	(0.001)	(0.001)	(0.001)
Not Poor	-0.011***	-0.011***	-0.011***
	(0.002)	(0.002)	(0.002)
Foreclosure	0.022***		
	(0.004)		
Foreclosure by Property Type			
Foreclosure*Single family		0.011	
		(0.006)	
Foreclosure*2-4 unit building		0.027***	
		(0.005)	
Foreclosure*5 or more unit building		0.026*	
		(0.011)	
Foreclosure by Outcome			
Sold			0.012*
			(0.006)
Auctioned			0.061***
			(0.013)
Unknown Outcome			0.018***
			(0.004)
Constant	-0.038***	-0.038***	-0.038***
	(0.011)	(0.011)	(0.011)
School Fixed Effects	YES	YES	YES
N	543749	543749	543749
Adjusted R-squared	0.59	0.59	0.59

(1) * p<0.05, ** p<0.01, *** p<0.001
(2) Robust, clustered standard errors in parentheses
(3) Not Poor = not eligible for free or reduced price lunch
(4) Grade dummies not shown

Table 5: Regression of Moving to a New School Between 2006-07 and 2007-08, with Race and Poverty Interactions[9]

	Model 1	**Model**
White	-0.015***	-0.015***
	(0.002)	(0.002)
Hispanic	-0.011***	-0.011***
	(0.002)	(0.002)
Asian/Other	-0.016***	-0.016***
	(0.002)	(0.002)
Female	-0.004***	-0.004***
	(0.001)	(0.001)
Not Poor	-0.010***	-0.011***
	(0.002)	(0.002)
Foreclosure	0.025***	0.017***
	(0.004)	(0.005)
Foreclosure, by Poor Status		
Foreclosure*Not Poor	-0.022**	
	(0.009)	
Foreclosure, by Race		
Foreclosed*White		-0.011
		(0.012)
Foreclosed* Hispanic		0.018
		(0.009)*
Foreclosed* Asian/Other		0.007
		(0.013)
Constant	-0.038***	-0.038***
	(0.011)	(0.011)
School Fixed Effects	YES	YES
Number of observations	543749	543749
Adjusted R-squared	0.59	0.59

(1) * p<0.05, ** p<0.01, *** p<0.001
(2) Robust clustered standard errors in parentheses
(3) Not Poor = not eligible for free or reduced price lunch
(4) Grade dummies not shown

[9]We replicated these same regressions for the 2003-04 school year and results were qualitatively the same.

Table 6: Comparison of Origin and Destination Schools for Students who Move, by Foreclosure Status, Grades 1-7

	2003-2004	2004-2005	Change Between Years	2006-2007	2007-2008	Change Between Years
Characteristics of pre- and post-move schools of children in buildings in foreclosure						
% African-American	51%	48%	-3%	50%	46%	-4%
% Hispanic	33%	34%	1%	34%	35%	1%
% Free/Reduced Price Lunch	75%	71%	-4%***	81%	77%	-4%***
% LEP	12%	10%	-2%*	13%	11%	-3%***
% Special Education	5%	5%	0%	13%	14%	0%
% Testing Proficient/Advanced in Math	62%	48%	-14%***	74%	62%	-12%***
% Testing Proficient/Advanced in Reading	58%	49%	-9%***	53%	48%	-5%***
Number of Students	1,439	1,423		1,998	1,956	
Characteristics of pre- and post-move schools of children in buildings NOT in foreclosure						
% African-American	34%	35%	1%	30%	31%	-1%
% Hispanic	43%	41%	-2%	41%	40%	-1%
% Free/Reduced Price Lunch	74%	70%	-4%***	77%	74%	-3%**
% LEP	16%	12%	-4%***	18%	13%	-5%***
% Special Education	4%	5%	1%	14%	14%	0%
% Testing Proficient/Advanced in Math	65%	51%	-14%***	77%	65%	-12%***
% Testing Proficient/Advanced in Reading	61%	52%	-9%***	57%	51%	-5%***
Number of Students	113,707	112,594		89,395	89,258	

(1) * $p<0.05$, ** $p<0.01$, *** $p<0.001$

Table 7: Regression Change in Percent Proficient Between 2006-07 and 2007-08 School Years[10]

	Math			Reading		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Student Characteristics						
White	0.053***	0.053***	0.053***	0.061***	0.061***	0.061***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Hispanic	0.009***	0.009***	0.009***	0.002	0.002	0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Asian/Other	0.050***	0.050***	0.050***	0.055***	0.055***	0.055***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Female	0.010***	0.010***	0.010***	0.011***	0.011***	0.011***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Not Poor	0.026***	0.026***	0.026***	0.035***	0.035***	0.035***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
Foreclosed						
Foreclosure	-0.003			-0.005		
	(0.003)			(0.003)		
Foreclosure, by Property Type						
Foreclosed*Single familyhome		-0.002			0.005	
		(0.006)			(0.006)	
Foreclosed*2-4 unit building		-0.007			-0.010**	
		(0.004)			(0.004)	
Foreclosed*5 or more unit building		0.014			0.009	
		(0.010)			(0.011)	
Foreclosure , by Outcome						
Sold			-0.006			-0.004
			(0.006)			(0.006)
Auctioned			-0.005			-0.010
			(0.009)			(0.008)
Unknown Outcome			0.000			-0.001
			(0.004)			(0.004)
				-	-	-
Constant	0.012***	0.014***	0.012***	0.012***	0.012***	0.012***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
School Fixed Effects	YES	YES	YES	YES	YES	YES
N	89288	89288	89288	89131	89131	89131
Adjusted R-squared	0.47	0.47	0.47	0.35	0.35	0.35

(1) * p<0.05, ** p<0.01, *** p<0.001
(2) Robust, clustered standard errors in parentheses
(3) Not Poor = not eligible for free or reduced price lunch
(4) Grade dummies not shown

[10]We replicated these same regressions for the 2003-04 school year and results were qualitatively the same.