

LOAN PERFORMANCE AMONG LOW INCOME HOUSEHOLDS:
Does Prior Parental Teaching of Money Management Matter?

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**Loan Performance among Low Income Households:
Does Prior Parental Teaching of Money Management Matter?**

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Abstract

Financial literacy and financial education play a central role in asset accumulation, shaping individuals' attitudes, behaviors, and decisions that, ultimately, impact their financial and social well-being. The acquisition of financial skills begins with parental teaching and role modeling, which provides children with their first exposure to concepts of saving and money management. Because such parental instruction is crucial to children's later financial outcomes, children whose parents lack basic financial literacy may be further disadvantaged by the absence of financial instruction at home.

This article uses a sample of low- and moderate-income homeowners to test the hypothesis that parental teaching of money management influences their children's asset-building outcomes in adulthood. The empirical analysis examines the likelihood of delinquency and default among low- and moderate-income homeowners with mortgages purchased through the Community Advantage Program (CAP). The results are consistent with a long-term impact of parental teaching on children's later asset outcomes—greater parental teaching is found to be associated with reduced loan delinquency and foreclosure. Implications for intervention programs to close the financial literacy gap are discussed.

Key words: loan performance, financial education, low-income mortgages, foreclosure, financial socialization

The past few years have shown too clearly the havoc that home mortgage delinquency and foreclosure can bring to individuals, families, and society. These events undermine the benefits that accrue from stable homeownership such as the ability to accumulate wealth and assets. Moreover, stable homeowners benefit communities through economic growth and an array of positive social outcomes such as increased civic involvement (Retsinas & Belsky, 2002; Rohe & Stewart, 1996; Shlay, 2006). Delinquency and foreclosure have harmed low- and moderate-income (LMI) households in particular because these households, even in a healthy economy, face multiple barriers to achieving successful homeownership. Barriers faced by LMI households include poor credit scores, low savings, high debt-to-income ratio, and being steered toward high-cost loans (Barakova, Bostic, Calem, & Wachter, 2003; Grinstein-Weiss et al., 2008; Rosenthal, 2002; Santiago & Galster, 2004). The toll exacted by subprime lenders and faulty mortgage products is more than a temporary setback for these families and could have negative repercussions that resonate across generations. As seen in the recent crisis and supported by empirical research (Firestone, Van Order, & Zorn, 2007), LMI and minority households are more likely to default on their mortgages than are other households.

Because homeownership is a common pathway toward building financial stability but delinquency and foreclosure exact such a high toll on individuals and communities, it is imperative to fully understand the factors that predict these outcomes and the social experiences and financial skills that may minimize risk of experiencing them. Although we agree that poor loan outcomes are closely related to the nature of the loan product (Kaplan & Sommers, 2009) and the financial health of the borrower (Doms, Furlong, & Krainer, 2007), we suggest the decision process leading to these events may be embedded in the social context of the individual (Granovetter, 1985). We argue that early financial education—usually by parents—imparts

durable dispositions and attitudes that manifest in better decision making and, ultimately, better financial and social outcomes. From this perspective, parental teaching of financial skills early in life may serve as a protective factor and may be a vehicle for the intergenerational transmission of financial knowledge.

Though loan performance is certainly influenced by material factors, this article demonstrates that early financial socialization, in the form of parental financial teaching, may have an important relationship with financial outcomes later in life. This study combines different streams of data for a sample of LMI homeowners with mortgages purchased through the Community Advantage Program (CAP) to examine the relationship between the family context of financial socialization of LMI homeowner respondents as children and their current mortgage loan performance outcomes as adults. We hypothesize that as compared to respondents who received little or no parental teaching, respondents who received more parental teaching of money management will exhibit reduced rates of loan delinquency and foreclosure.

Literature Review

Homeownership is integral to the American Dream because it not only marks personal economic achievement but also provides a cushion of financial assets to buffer economic downturns. Unlike some countries in which mortgages are rare, most U.S. home purchases use a mortgage. Since the 1970s, prime loans had seen consistent delinquency rates, hovering just below 4% (Agarwal & Ho, 2007; Mortgage Bankers Association [MBA], 2009), but that rate almost doubled in 2008, increasing to just over 9% by the end of the first quarter of 2009 (MBA, 2009). Delinquency, which is the same as and also called default, occurs when a borrower is late in making a payment, and is typically measured in 30-day intervals. The current study uses measures of loan performance to examine the influence of parental financial education on their

children's financial outcomes as adults. Specifically, we look at LMI and minority household loan performance because these households have been most at risk for subprime mortgages. After a period of loan delinquency, the lender may initiate the foreclosure process if the lender believes they will not receive the principal or the interest on a loan (Mills & Lubuele, 1994). This process is costly for both the lender and the borrower and is often only viewed as a last resort for the lender (Avery, Bostic, Calem, & Canner, 1996). Foreclosures are unevenly distributed, and more likely to occur in specific neighborhoods (Gramlich, 2007). As with delinquency, subprime loans go into foreclosure at higher rates than do prime loans (Gaines, Stilwell, Waddell, & Watt, 2009). According to the National Delinquency Survey for the second quarter of 2008, subprime mortgages represent 12% of loans, but account for 48% of foreclosures (MBA, 2008).

Beyond the substantial emotional and psychological stress and health related outcomes that delinquency and foreclosure place on individuals and families, these events also lead to serious and long-term financial impact (Kingsley, Smith, & Price, 2009; Bennett, Scharoun-Lee, & Tucker-Seeley, 2009). Households that have defaulted on loans face higher fees for credit, home and auto insurance, and are at risk for being rejected for employment or rental properties, as well as future borrowing opportunities (Avery, Calem, & Canner, 2004), all of which make homeownership less attainable in the future (Ambrose & Capone, 1996) and may negatively affect the next generation's prospects as well. These barriers put additional strain on households and further disadvantage the already disadvantaged.

In an attempt to improve loan performance and reduce the incidence of mortgage delinquency and foreclosure, researchers and practitioners have developed intervention programs designed to deliver financial education and homeownership counseling. These programs target

populations with low homeownership rates and aim to facilitate homeownership for underserved populations and positively impact loan performance (McCarthy & Quercia, 2000). Based on a theoretical perspective that financial outcomes have roots in social behaviors that are malleable, these programs do not alter participants' financial situations but rather seek to teach participants better decision making within their constraints (Quercia & Spader, 2008). Mortgage counseling programs take multiple approaches to educating and counseling potential and current borrowers to help households make informed choices about home purchases, loan pre-payment, and other mortgage decisions (Hartarska & Gonzalez-Vega, 2005; 2006; Hira & Zorn, 2002; Quercia & Spader, 2008).

Evidence on the effectiveness of these programs is mixed (Hornburg, 2004). Several studies suggest that pre-purchase counseling may reduce the incidence of default among LMI borrowers compared to their counterparts who do not receive counseling (Hartarska & Gonzalez-Vega, 2005; 2006, Hira & Zorn, 2002). In addition, findings have suggested individual counseling had a greater effect than either classroom or home based education (Hira & Zorn, 2002). On the other hand, Quercia and Spader (2008) found that participation in a homeownership counseling program was not related to mortgage default, though LMI borrowers who participated in such programs demonstrated increased knowledge of their mortgage options after participation. However, the authors emphasize their study had few cases that entered default, so the lack of a finding is likely due to sample size, and does not imply that no effect exists.

Homeownership education and mortgage counseling programs target adults entering or participating in the mortgage lending process. However, people approach financial decisions in adulthood with knowledge and skills learned throughout childhood. This knowledge may have

been acquired through formal instruction or picked up through observation and role modeling; either way, what is learned in childhood affects behaviors and outcomes later in life.

Research has demonstrated that the family is a primary socialization agent for financial knowledge (Danes, 1994; Rettig, 1983, 1985). Children form a great deal of their subjective knowledge early in life (Berger & Luckmann, 1966). Although financial socialization includes many influences that can shape a child's financial perspective, research has shown children gain more financial knowledge from their parents than from any other source (Clarke, Heaton, Israelsen, & Eggett, 2005; Danes & Haberman, 2007; Employee Benefit Research Institute [EBRI], 2001). In addition, a growing body of evidence suggests the importance of beginning the teaching of financial skills early, while children are young (Alhabeeb, 2002; Danes, 1994; Heckman, 2000; O'Neill, 1992).

Because a significant portion of financial socialization happens in the home, the child's financial skills and habits often mirror the economic environment of the child's home (Berger & Luckmann, 1966; Moschis, 1987; Rettig, 1983). Consequently, inadequate financial socialization can reproduce gaps in financial literacy across generations and further perpetuate wealth inequalities. Substantial research has examined the impact of financial literacy deficits (Bowen, 2002; Braunstein & Welch, 2002; Fox & Bartholomae, 2008; Fox, Bartholomae, & Lee, 2005; Hilgert, Hogarth, & Beverly, 2003). Such deficiencies not only affect daily money management but also hamper the achievement of long-term goals such as homeownership or higher education (Braunstein & Welch, 2002). In a recent study, Grinstein-Weiss et al. (2009) found that parental teaching of money management in childhood had a significant, positive effect on credit outcomes among LMI homeowners; respondents who reported receiving more financial education from

their parents during childhood had significantly less credit debt and higher credit scores as adults than respondents who reporting receiving very little or no financial instruction.

Parents are critical in the intergenerational transfer of financial skills, and the extent of that transfer appears to have significant social and economic implications. Research has suggested LMI families are at greater risk for passing on deficits in financial literacy. For example, as compared to responses from upper-income parents on a parenting survey, lower-income parents reported they not only felt less prepared to teach their children financial skills or to serve as role models for their children but also felt less comfortable doing so (EBRI, 2001).

As suggested above, most research on the causes of delinquency and foreclosure focuses on the material conditions of the borrower and on the loan product. To our knowledge, the relative role of parental teaching in predicting risk has not been the subject of any research related to loan performance. Financial characteristics of borrowers, measured at the time of loan origination, represent a short time horizon. In contrast, parental teaching is capturing a long time horizon. The objective of the paper is to explore this long-term relationship between parental teaching and asset building, and to shed light on the understudied relationship between parental teaching of money management in childhood and loan performance later in life. Our study is particularly important at this time, in light of the recent mortgage crisis, and carries significant implications for social work given the important role social workers play in promoting financial education for both adults and children and the fact that a considerable portion of the population experiencing delinquency and foreclosure fit within typical social work cliental.

Method

Data and Sample

The Community Advantage Program (CAP) is a secondary-market mortgage pilot program started in 1994 by the Self-Help Credit Union, a community development financial institution in Durham, North Carolina. Through CAP, Self-Help purchases 30-year, fixed-rate mortgages originated through lenders' Community Reinvestment Act (CRA) lending activities. These mortgages have flexible underwriting features such as low or no down payments, a waiver of private mortgage insurance, and acceptance of limited credit or work histories to enable LMI borrowers to obtain prime financing for homeownership.

To qualify for CAP, applicants must meet at least one of three criteria: (a) have an income under 80% of the area median income (AMI); (b) have racial/ethnic minority status and income below 120% of AMI; or (c) purchase a home in a high minority (greater than 30% concentration of minority populations) or low-income census tract area (less than 80 % AMI) and have an income below 120% of AMI. Since the inception of CAP, more than 50,000 homeowners in 47 states and the District of Columbia (Self-Help, n.d.) have borrowed a total of \$4.6 billion through the mortgages purchased by CAP.

All mortgages are structured as 30-year fixed-rate products with near-prime interest rates, with many using flexible underwriting to mitigate any risk associated with lending to LMI borrowers. The purchase of these mortgages through CAP is not designed to create a nationally representative dataset; therefore, our analysis must be interpreted within the context of the CAP program.

Nonetheless, the CAP dataset provides rich information on both borrower characteristics and loan performance, creating an opportunity to examine the relationship between parental

teaching and loan performance within this sample of home buyers. CAP borrowers share similar risk profiles and the CAP mortgages are structured with similar risk characteristics for borrowers, allowing comparison of loan performance within this sample that isolates the effect of individual traits and social contexts from the characteristics of the loan product.

Controlling for demographic and financial characteristics, loan product characteristics, and neighborhood characteristics, we employ Cox regressions to estimate the risk of 30-day delinquency, 90-day delinquency and foreclosure by level of parental financial teaching in childhood. We find that respondents reporting higher levels of parental financial teaching are, net of control variables, significantly less likely to experience poor loan performance than respondents reporting less parental financial teaching.

This study is based on data from six sources. (1) The CAP survey is an annual survey of 3,700 CAP borrowers whose loans originated between September 1999 and May 2003. For the baseline CAP sample, efforts were made to exclude borrowers who were full-time students or who had purchased a CAP loan as a refinancing option and therefore entered CAP with mortgage debt already (Center for Community Capital, 2008). The baseline CAP survey was collected in 2003, followed by annual waves of data collection that collect various participant information, such as demographics, income, wealth, and savings. (2) The CAP loan origination data, provided by Self-Help, includes information on loan characteristics such as the original housing value, fixed mortgage rate, and borrower information at the time the loan was originated (e.g., credit score and household income). (3) Data on the performance of CAP mortgages, provided by Self-Help, provides information on monthly loan payments and loan status of each mortgage. For each borrower, loan origination data was first recorded between February 2000 and May 2003, and was completed by March 2009 (for CAP loans that were still active at this point) or at the

point of loan termination (foreclosure or prepayment; prior to March 2009). This monthly data provides information on 30- and 90-day delinquency and foreclosure between the month of loan origination and March 2009 or the end of the loan (whichever occurred first). (4) The quarterly LTV data, provided by Fannie Mae, is a dynamic measure of the fair value of the CAP loans and provides a realistic appraisal of the value of the loans. LTV is the ratio of the outstanding amount of the loan to the total value of the property. Because loan payments are made and house value fluctuates with market forces, current LTV is a time-varying measure. (5) The U.S. national average monthly interest rate on 30-year fixed-rate mortgages was retrieved from the Freddie Mac Primary Mortgage Market Survey (PMMS). (6) A measure of neighborhood economic condition was retrieved from the 2000 U.S. Census and matched to the sample by Census tract level.

Of the 3,700 borrowers in the 2003 baseline CAP survey, 2,917 respondents completed the 2005 CAP survey that collected information on prior parental teaching of managing money. Among these 2,917 borrowers, 489 borrowers terminated their loans prior to baseline, and were removed from our sample. An additional 302 cases were removed from our sample because of missing information: credit score (n=205), prior parental teaching of managing money (n=203), current LTV (n=111), and census tract (n=1). The final sample consists of 2,126 CAP borrowers with complete information on all measures, whose loans originated between September 1999 and March 2003 and were not terminated before the collection of the 2003 baseline CAP survey.

The CAP survey data linked with Self-Help monthly loan performance data provides a unique resource to investigate the mortgage loan experiences of LMI households in the U.S., especially during a period of economic crisis. More importantly, the CAP survey provides

important information regarding parental teaching of money management to their children, who are the LMI respondents in this data set.

Measurement

This study includes three outcome events: 30-day delinquency, 90-day delinquency, and foreclosure (defined as loans terminated after no payment was made in the fourth consecutive month of delinquency; 120 days). For each outcome, the dependent variable is time, measured in months, from the first month of loan payment (between February 2000 and May 2003) to the month of occurrence of each outcome event. The length of time between the first loan transaction and first month that a borrower experiences each outcome (delinquency or foreclosure) is examined. The respondents who did not experience any outcome event by March 2009 or who terminated their loans without an event, such as through prepayment, were recorded as censored cases.

The study consists of four sets of independent variables retrieved from various data related to the CAP borrowers. First, respondents' experiences with *parental teaching of money management in childhood*, our primary variable of interest in this study, is measured by a question in the 2005 CAP survey, 'How much did your parents teach you about managing money? Would you say that they taught you a lot about managing money, taught you some, didn't teach you much, or that they didn't teach you anything about managing money?' A set of dummy variables has been developed to represent the amount of teaching the respondent reported having received growing up: a lot, some, and none/not much (the reference category).

Second, respondent characteristics include (a) *gender* (1=male; 0=female); (b) *age* (in years); (c) a set of dummy variables indicating *race/ethnicity*: white (the reference category), black, Hispanic, and other race/ethnicity; (d) a set of dummy variables for *marital status*:

partnered, married (the reference category), separated/divorced/widowed, and never married; (e) a set of dummy variables for *education level*: less than high school diploma, high-school diploma or GED (the reference category), some college, and bachelor's degree or more; (g) *number of children* in the household; (h) *number of adults* in the household; and (i) *total household income*, which was defined as the total annual household income. For ease of presentation and interpretation, total household income was divided by 1,000 in the analysis. All respondents' characteristics except race were treated as time-varying covariates.

Third, several loan characteristics were included as covariates in this study. These include (a) *credit score* measured when the borrower originated the loan; (b) *original house value*, which was divided by 1,000 in the analysis; (c) *current LTV*, measured quarterly, representing the ratio of outstanding loan balance to the value of the property;¹ (d) *current rate spread*, measured monthly, calculated by the difference between the fixed note rate on the CAP mortgage and the monthly average interest rate on originated 30-year fixed-rate mortgages, reported by the Freddie Mac PMMS. Credit score and the original housing value were time-fixed variables, while current LTV and the mortgage rate were time-varying covariates.

Last, a neighborhood economic condition measure related to the house location is measured by the *concentrated economic disadvantage scale* (Caughy, Hayslett-McCall, & O'Campo, 2007; Sampson, Raudenbush, & Earls, 1997). This scale is constructed by incorporating the following four indicators in Census tract area: % of single-headed households with children, % of people unemployed, % of people receiving public assistance, and % of

¹ Fannie Mae provided quarterly home value estimates using its proprietary automated valuation model (AVM), which produces four different estimates of the homes appreciated value based on repeat sales information, public tax records, and property characteristics. When discrepancies arise between the estimates, a fifth reconciliation model generates the final estimate.

individuals in poverty. To develop the scale, each indicator is first standardized, and then a composite score is divided by four, the number of indicators ($\alpha = .91$).

Analyses

We compared our study sample with general LMI homeowners in the United States using the Current Population Survey (CPS) and described important characteristics such as age, gender, race/ethnicity, and household income. Second, we described the study sample using mean and standard deviation for continuous variables and frequency and percentage for categorical variables. The frequencies of loan delinquencies (30- and 90-day) and foreclosure of the study sample until March 2009 were reported based on the three categories of prior parental teaching of managing money: a lot, some, and none/not much.

In order to investigate the effect of parental teaching on loan performances, we conducted three Cox regression models (Cox, 1972) for each outcome: 30-day delinquency, 90-day delinquency, and foreclosure. For each outcome, each borrower contributes a single period to the data, with each period ending either when the loan first experienced the outcome event or when the loan was terminated, whichever comes first. The borrowers who terminated their loans (i.e., refinancing or pre-payment) without experiencing an outcome event, and the borrowers who did not experience an outcome by March 2009 were treated as right censored cases for each Cox regression model. Time zero was assigned to the month of the borrower's first loan payment.

The standard Cox proportional hazard model assumes that the regression coefficients are constant over time. Because the incidence of delinquency and foreclosure largely depends on contemporaneous borrower and loan characteristics and economic conditions, it is important to control the temporal effects of these covariates. This study used extended Cox regression models to investigate the effects of prior parental teaching on loan delinquency and foreclosure with time-varying covariates, such as borrower and loan characteristics. Maximum likelihood

estimation is used to estimate a hazard function predicting conditional probability of loan delinquencies and foreclosure over time. The Cox regression model has been popularly used to investigate mortgage data because of its flexibility in using time-varying covariates (i.e., Hartarska & Gonzalez-Vega, 2006; Stepanova & Thomas, 2002; Vandell, Barnes, Hartzell, Kraft, & Wendt, 2003).

Results

CAP Study Sample Compared with General LMI Homeowners in the U.S.

The Current Population Survey (CPS) is a survey of 60,000 households representing the non-institutionalized civilian population in the United States. For more than 50 years, the CPS has served as a primary indicator of the nation's economic climate and is used widely by the press and academics. To compare CAP homebuyers to the broader population of LMI homeowners, the CPS sample was narrowed using similar criteria to the CAP eligibility criteria (Riley, Ru, & Quercia, 2009): income no greater than 80% of the AMI at the metropolitan statistical area level or no greater than 115% of the AMI if the respondent is a minority. This comparison is not perfect—CAP borrowers are all recent home buyers whereas CPS homeowners may have owned their homes for a longer period of time—but nonetheless provides context for interpreting the CAP dataset.

The comparison of CAP study sample at baseline with LMI homeowners in the CPS is summarized in Table 1. Compared with the CPS LMI homeowners, our study sample tends to be younger and more educated. About 37% of the CAP sample was age 30 years or younger, compared with only 12% of the CPS LMI homeowners. The proportion of respondents with less than a high school education among the CPS LMI homeowners (18%) was more than twice that among our study sample (8%).

Despite these differences, CAP homeowners and the CPS LMI homeowners were similar regarding gender, household size and marital status. The proportions of white and black respondents in these two samples are quite similar. The income distribution of our study sample is similar to that of the CPS LMI homeowners, except that only 12% of our sample had household income less than \$20,000, compared with 24% of the CPS LMI homeowners. The majority of both the CAP study sample and the CPS comparable sample was married or partnered. Taken together, these characteristics reflect the general similarity between CAP homeowners and the broader population of LMI home buyers. While the mortgage products and risk characteristics of CAP borrowers reflect the segment of the mortgage market occupied by CRA lending (e.g. the margin between prime and subprime lending), this comparison suggests that the LMI households receiving CAP mortgages are roughly comparable to the broader set of LMI home buyers (see also Riley, Ru, and Quercia 2009).

[Table 1 about here]

Sample Description

Table 2 summarizes the respondent and loan characteristics of the 2,126 CAP borrowers used in this study. Our study sample shows a relatively even distribution of prior parent teaching of money management, with 34% of the sample reporting having received *a lot* of parental instruction of money management, 36% reporting *some* prior parental teaching and 30% reporting they received *none* or *not much*.

Measured in the baseline CAP survey (2003), the majority of our sample is white (64%), married (45%), and has some college education (43%). Gender appears to be evenly distributed. Respondents' average age is 34 years, the mean annual household income is \$31,088, and the average number of children and adults in the household is 0.8 and 1.8, respectively. Regarding

loan and housing characteristics, the average credit score is 674 and the average housing value was \$80,841, ranging from \$12,000 to \$352,000. When the CAP loans were originated, the average LTV and mortgage rate were 96.43 and 7.61%, respectively.

[Table 2 about here]

Frequencies of Loan Delinquency and Foreclosure by Prior Parental Teaching

By March 2009, 35% of the study sample had experienced 30-day delinquency and 14% had experienced 90-day delinquency. About 8% of the study sample experienced foreclosure of their loan. Respondents with a lot of prior parental teaching had the lowest prevalence of 30-day delinquency (30%), 90-day delinquency (12%) and foreclosure (7%). However, respondents with none/not much prior parental teaching had the highest prevalence of all three outcomes (40% with 30-day delinquency, 16% with 90-day delinquency, and 10% with foreclosure).

The Effect of Prior Parental Teaching on Loan Delinquency and Foreclosure

The results from the three Cox regression models are presented in Table 3. Compared with the respondents who reported none/not much parental teaching of managing money, the respondents who reported a lot of parental teaching had a 25% ($p < .05$), 28% ($p < .05$) and 40% ($p < .01$) lower hazard rate of experiencing 30- and 90-day delinquency and foreclosure, respectively. There were no significant differences in the risk of experiencing 30- and 90-day delinquency between the respondents reporting some parental teaching and those reporting none/not much. However, the respondents reporting some parental teaching had 38% ($p < .05$) lower hazard rate of experiencing foreclosure than respondents with none/not much parental teaching.

Regarding other covariates, older respondents were significantly less likely to experience either loan delinquency or foreclosure than younger respondents. Compared to white respondents,

Hispanics were less like to experience loan delinquency and foreclosure. However, black respondents had a higher risk of experiencing loan delinquency than white respondents. Level of education attained was found to be a significant predictor of foreclosure only; for example, respondents with some college education and respondents with a bachelor's degree or more had a 43% ($p < .01$) and a 44% ($p < .05$) lower hazard rate of foreclosure, respectively, than respondents with only a high school diploma or GED. Respondents with more children were at a greater risk of experiencing delinquency and foreclosure than those with fewer children. A higher income was found to significantly reduce the risk of experiencing both delinquency and foreclosure. The current LTV, credit score, and current rate spread² were also significant factors in predicting higher loan delinquency and foreclosure.

In sum, prior parental teaching of managing money is significantly and negatively related to loan delinquency and foreclosure among LMI homeowners, even after controlling for respondent and loan characteristics. Further, several important indicators that predict loan delinquency and foreclosure among LMI homeowners are age, number of children, credit score, income, and current LTV.

[Table 3 about here]

These findings should be viewed in light of several limitations of the analysis. First, the measure of prior parent teaching of money management is self-reported and retrospective; respondents are asked to recall how much their parents taught them about money management during their childhood³. Second, our finding does not speak to the content of the parental

² Conventional wisdom suggests that rate spread should have a negative impact on delinquency and foreclosure. Our finding is, we suspect, driven by a steady increase in rate spread over time rather than by a causal effect.

³ Sensitivity analyses were performed to assess the risk of financial outcomes coloring recollection of parental teaching. The analyses were replicated on sub-groups composed of 1) those who experienced the event before the date of the interview and 2) those who experienced the event after the date of the interview or did not experience the event. The estimated parameters were consistent between the sub-groups and with the main analysis.

financial teaching. Third, because of data limitations this study did not include all possible predictors of loan performance. For example, we would expect wealth or net worth to be strongly related to better loan performance by buffering the effect of financial instability caused by unexpected life events (e.g., job loss, onset of disability) on loan delinquency and foreclosure. Finally, although the sample used in this study was found to possess individual characteristics similar to general LMI homeowners (i.e., gender, marital status, household size), it is important to acknowledge that the study sample came from CAP, which is a secondary-market mortgage program administered by Self-Help Credit Union and is not designed to be representative of all U.S. LMI homeowners. This analysis should therefore be replicated if and when similarly rich data becomes available for the population of LMI homeowners.

Discussion

This paper presents the first empirical examination of the relationship between parental teaching of money management in childhood and loan performances later in life among a sample of LMI households. While most studies that look at loan performance focus on the financial characteristics of the borrower and the terms of the loan, our study expands this line of investigation to explore the role that parental financial socialization early in life can play in explaining financial outcomes later in life. The findings demonstrate that higher levels of parental financial teaching in childhood are associated with better mortgage loan performance for LMI borrowers with prime loans later in life. Specifically, those who report high levels of parental teaching face lower risk of 30-day delinquency, 90-day delinquency, and foreclosure than those reporting lower levels of parental financial teaching.

We chose to focus on foreclosure and default as our main outcomes in this paper, as they are key indicators of loan performance and encompass a significant burden with long lasting

implications for the households experiencing these adverse events. While delinquency and foreclosure are each negative events in and of themselves, each also imposes lasting constraints on the financial health of those who suffer from them through loss of assets and decreased credit scores. Moreover, the economic difficulty they produce is not discreet but continues and can compound over time.

Our findings on the significance of parental financial teaching in childhood to loan performance in adulthood may yield important insights to broaden our understanding of the intergenerational transmission of economic inequality. While substantial attention is given to the intergenerational transfer of material resources (Berger & Luckmann, 1966; Gale & Scholz 1994, Moschis, 1987; Rettig, 1983), less attention has been given to the intergenerational transfer of financial knowledge and capabilities, through financial socialization within the family, and its role in broadening economic inequality. Our findings contribute to this limited body of scholarship by suggesting that the skills and knowledge transferred early in life by parents may be quite important and have long term implications for financial outcomes as adults. Our findings reinforce the argument that economic disadvantage is comprised of more than the lack of material resources.

These findings have important implications for policies and programs aimed at promoting financial education for parents and children. Over the last decade there has been growing interest in programs and interventions designed to increase financial skills for this population. The field of social work has been integral to the development of this practice and research and social workers are involved at the frontlines of implementing and evaluating financial education. Many initiatives have been developed and introduced both at the federal and state levels to improve

financial literacy and, by extension, financial decision-making and outcomes (Cramer, O'Brien, and Boshara 2007).

Considering financial education for children, our findings suggest that providing a foundation of financial knowledge in childhood seems to have a lasting impact later in life. Our findings reflect the central role that parents play in shaping financial behaviors, and the importance of this relationship to the later outcomes of the children. These findings also illustrate the differences in long-term exposure to financial teaching from parents that may differentiate levels of financial well-being later in life and these gaps may not be ameliorated by a short-term pre-purchase counseling intervention. It is unclear whether the relevant mechanism is early intervention or the parental relationship; these findings provide support for initiatives promoting the inclusion of financial skill building in school curriculum as well as through parent-child instruction. Likewise, it may reflect an additional externality benefit of financial education for parents. Both types of interventions are intensive and target initial habit-forming behaviors early in life.

With regard to financial education for adults, our findings suggest that this may have some ancillary benefits for the next generation if parents enact what they learn and share the knowledge they gain with their children. Though we do not assess the content of parental teaching, research does indicate that more financially aware parents may be more comfortable providing financial lessons to their children (EBRI, 2001). Additionally, these findings can inform the content of programs that target populations at risk for poor loan performance. Program designers, seeking to offset differences in financial socialization, should design programs with recognition that recipients will begin the intervention with substantially different financial backgrounds, experiences, and dispositions.

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Table 1. Comparison of CAPS Study Sample with LMI Homeowners in CPS.

Characteristics	CAPS study sample	CPS
Age (in years)		
18-30 years old	37.0%	11.6%
21-40 years old	44.4%	23.8%
41 years old and more	18.6%	64.6%
Gender		
Male	50.4%	49.6%
Female	49.6%	50.4%
Race/ethnicity		
White	63.6%	58.7%
Black	20.8%	16.8%
Hispanic	12.0%	16.3%
Others	3.6%	8.2%
Marital Status		
Married/partnered	55.8%	51.3%
Divorced/widowed	21.3%	31.3%
Never married	23.0%	19.1%
Education		
Less than high school grad.	7.9%	17.5%
High school grad.	23.9%	35.4%
Some college	43.2%	27.9%
BA and more	25.1%	19.1%
Household size		
One	23.2%	25.1%
Two	30.6%	25.9%
Three	20.8%	17.4%
Four and more	25.4%	31.7%
Household Income		
Less than \$20,000	12.1%	23.8%
\$ 20,000 - \$29,999	36.8%	24.7%
\$30,000 - \$39,999	35.8%	26.5%
\$40,000 and more	15.3%	25.0%

Table 2. Sample Characteristics at Baseline CAP Survey (2003).

Variables	N	Mean (SD) / %	Min - Max
Age (in years)	2,126	33.51 (9.82)	18 - 78
Male	1,071	50.38%	0, 1
Race/ethnicity			
White	1,352	63.59%	0, 1
Black	442	20.79%	0, 1
Hispanic	256	12.04%	0, 1
Others	76	3.57%	0, 1
Marital Status			
Married	964	45.34%	0, 1
Partnered	222	10.44%	0, 1
Divorced/widowed	452	21.26%	0, 1
Never married	488	22.95%	0, 1
Education			
High school grad.	167	7.86%	0, 1
Less than high school grad.	507	23.87%	0, 1
Some college	918	43.22%	0, 1
BA and more	532	25.05%	0, 1
Number of children	2,126	0.81 (1.06)	0 - 6
Number of adults	2,126	1.83 (0.83)	1 - 9
Credit score	2,126	674.53 (59.36)	300 - 850
Household Income	2,123	31,088 (10,868)	0 – 125,004
Original housing value	2,126	80,481 (32,691)	12,000 – 352,000
Original loan to value	2,126	96.43 (8.05)	20.51 – 124.32
Original mortgage rate	2,126	7.61 (1.01)	5.38 – 10.63
Neighborhood distress	2,126	0.082 (0.049)	0.01 – 0.44
Parental teaching of managing money			
None/not much	643	30.24%	0, 1
Some	758	35.65%	0, 1
A lot	725	34.10%	0, 1

Table 3. Cox Regression Models for Foreclosure and Delinquency.

Variables	Foreclosure		90 day delinquency		30 day delinquency	
	Hazard Ratio	Std. Err.	Hazard Ratio	Std. Err.	Hazard Ratio	Std. Err.
Age	0.970**	0.010	0.984*	0.008	0.985*	0.006
Male	0.738	0.185	0.823	0.143	0.874	0.109
Race/ethnicity						
(White)						
Black	1.415	0.200	1.495*	0.158	1.460**	0.128
Hispanic	0.435*	0.375	0.599*	0.255	0.496***	0.195
Others	1.473	0.358	1.030	0.309	0.826	0.246
Marital status						
(Married)						
Partnered	0.783	0.384	1.167	0.249	1.079	0.187
Divorced/widowed	1.072	0.245	1.207	0.189	0.941	0.153
Never married	1.203	0.244	1.237	0.193	0.904	0.158
Education						
(High school grad.)						
> High school grad.	0.389*	0.372	0.775	0.244	1.031	0.192
Some college	0.565**	0.184	0.786	0.143	0.950	0.111
BA and more	0.562*	0.263	0.710	0.199	0.800	0.153
Number of children	1.261**	0.069	1.185**	0.062	1.177***	0.044
Number of adults	0.912	0.109	1.004	0.079	0.996	0.070
Credit score	0.991***	0.001	0.990***	0.001	0.990***	0.001
Income/1000 ¹⁾	0.971***	0.005	0.978***	0.004	0.977***	0.003
Original housing value	1.000	0.004	0.995	0.003	0.996	0.002
Current loan to value	1.017**	0.005	1.014**	0.004	0.999	0.004
Current rate spread	1.330**	0.088	1.505***	0.068	1.554***	0.051
Neighborhood distress	0.834	1.770	0.917	1.350	0.136	1.120
Parental teaching of managing money						
(None)						
A lot	0.598**	0.197	0.722*	0.156	0.747*	0.123
Some	0.615*	0.190	0.879	0.149	0.936	0.117
N	2,126		2,099		1,838	
-2 Log Likelihood	2,095.83		3,509.59		5,829.82	
WALD (<i>d.f.</i>)	190.81 (21)***		251.43 (21)***		363.62 (21)***	

*<.05; **<.01; ***<.001