



WHITE PAPER

Long Term Social Impacts and Financial Costs of Foreclosure on Families and Communities of Color:

A Review of the Literature

OCTOBER 2012

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This research was funded by the Annie E. Casey Foundation. The authors thank them for their support but acknowledge that the findings and conclusions presented in this report are those of the authors alone and do not necessarily reflect the opinions of the Foundation.

Prepared by:

James H. Carr, Housing Finance and Banking Consultant, McLean, VA jim@jameshcarr.com

Katrin B. Anacker, Assistant Professor, George Mason University, Arlington, VA kanacker@gmu.edu



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EXECUTIVE SUMMARY

Prepared for the Annie E. Casey Foundation by James H. Carr and Katrin B. Anacker

Long-Term Social Impacts and Financial Costs of Foreclosure on Families and Communities of Color: A Review of the Literature

This is the second paper in a series of white papers prepared by the National Community Reinvestment Coalition (NCRC) for the Annie E. Casey Foundation. The first paper, *The Foreclosure Crisis and its Impact on Communities of Color: Research and Solutions*¹, authored by James H. Carr, Katrin B. Anacker, and Michelle Mulcahy, greatly benefitted from input from representatives of more than 40 housing advocacy, research, and civil rights organizations. In the first paper, the authors detailed the early damage caused by the foreclosure crisis, particularly in communities of color. The authors also reviewed the effectiveness of current foreclosure mitigation efforts, outlined the major proposals to revamp the mortgage finance system, and offered some perspectives on the likely impact of those recommendations on communities of color. This second paper was presented to representatives of more than 40 organizations via a national telephone conference. In this paper, we review the literature on the long-term social impacts and financial costs of foreclosure on families and communities of color. Below, we provide an introduction; discuss the impact of the foreclosure crisis and the Great Recession on (a) the wealth of families and communities of color, (b) the homeownership rate and home values of families and communities of color, (c) small business financing, and (d) the prospects for wealth building (including homeownership) for families and communities of color; and follow it with a conclusion.

We show that many non-Hispanic Whites and Asians diversify their accumulation of assets while Blacks/African Americans and Hispanics/Latinos tend to pursue only a few paths, typically not by choice but rather by constraint. We point out that Blacks/African Americans, Hispanics/Latinos, and select Asian groups are at a disadvantaged position in terms of wealth and wealth building as they are also more vulnerable to economic shocks due to the concentration of their wealth in homeownership. Therefore, many Black/African Americans, Hispanics/Latinos, and select Asian groups have experienced a catastrophic loss of wealth as a result of the foreclosure and economic crises. We show that during the Great Recession economic opportunities eroded faster for communities of color than for Whites and that these opportunities have been coming back more slowly in these communities. Despite the lower proportion of homeowners among Blacks/African Americans, Hispanics/Latinos, and select groups of Asians and the higher proportions of foreclosure and borrowers underwater, homeownership remains an important priority for many Americans. The anticipated reform of the Government Sponsored Enterprises (GSEs) and mortgage lending will determine the extent to which people of color will have the opportunity to (re)build wealth through affordable homeownership.

¹ http://www.ncrc.org/images/stories/pdf/research/ncrc foreclosurewhitepaper 2011.pdf

Introduction

Over the past five years or so, the United States has faced several economic crises that have and will continue to have vast effects on the opportunities, well-being, and wealth-building potential of current and future generations. Based on RealtyTrac analyses, between January 1, 2007 and December 31, 2011, more than 11.2 million properties received a foreclosure notice (Anacker, 2012). The Office of the Comptroller of the Currency and the U.S. Department of the Treasury estimate, based on a portfolio that comprises 60 percent of all mortgages outstanding in the United States, that as of December 31, 2011, more than 1.56 million borrowers were seriously delinquent (i.e., more than 60 days late or more than 30 days late with their mortgage payments in case of bankruptcy) (Office of the Comptroller of the Currency and U.S. Department of the Treasury, 2012). Bocian et al. (2011) estimate that some proportion of these serious delinquencies will translate into foreclosures, concluding that the "nation is not even halfway through the foreclosure crisis" (p. 3). Despite the fact that the crisis continues, the overall number of foreclosures by the first quarter of this year has decreased while the number of foreclosures in the 26 judicial foreclosure states, among them Indiana, Connecticut, Massachusetts, Florida, South Carolina, and Pennsylvania, has increased. Also, first-time foreclosure starts (i.e., either default notices or scheduled foreclosure auctions) increased seven percent from February to March 2012 in Nevada, Utah, New Jersey, Maryland, and North Carolina (RealtyTrac, 2012).

The total equity lost by families with recently foreclosed properties is estimated at more than \$7 trillion (Raskin, 2012). In addition, an estimated \$502 billion in property value has been lost due to nearby foreclosures (Center for Responsible Lending, n.d. based on CRL, Credit Suisse, Moody's Economic.com, MBA). The effects of the economic crisis have been enormous, both nationally and globally. Current and future generations will be impacted for decades to come.

While the foreclosure crisis has had vast consequences throughout the United States, it has had a disproportionate impact on persons of color. Bocian et al. (2010) estimated that among recent borrowers, nearly eight percent of both Blacks/African Americans and Hispanics/Latinos have been foreclosed upon, compared to 4.5 percent of non-Hispanic Whites, controlling for differences in incomes among the groups. These proportions are especially striking given the disproportionately high share of mortgage originations of non-Hispanic Whites.

As of the fourth quarter of 2011, the non-Hispanic White, Black/African American, and Hispanic/Latino homeownership rates are at 73.7, 45.1 and at 46.6 percent, respectively. In the fourth quarter of 2007, when the recession was officially declared, the homeownership rates were at 74.9, 47.7, and 48.5 percent, respectively. Thus, the economic crises have caused the greatest percentage point losses among Blacks/African Americans and Hispanics/Latinos (U.S. Bureau of the Census, 2012). Eakes expects that the homeownership rate for Black/African American and Hispanic/Latino families will drop even further, to a range of 40 to 42 percent in the future (USA Realty Group, 2010). A return to this level of homeownership would wipe out over 15 years of gains in homeownership rates for people of color.

The Impact of the Foreclosure Crisis and the Great Recession on the Wealth of Families and Communities of Color

While many non-Hispanic Whites and Asians diversify their accumulation of assets, Blacks/African Americans and Hispanics/Latinos tend to pursue only a few paths, typically not by choice but rather by constraint (Conley, 1999; Shapiro, 2004).

Chang (2010) uses 2004 Survey of Consumer Finances (SCF) data to illustrate this divergence by race, ethnicity, gender, and marital status. Her findings illustrate the racial and ethnic gap with regard to the number of routes for wealth building chosen by the different racial and ethnic groups. Table 1 below presents information on cash accounts, the term chosen by Chang (2010),² by race, ethnicity, gender, and marital status.

Table 1: Rate of Cash Accounts Held and Median Value of Cash Accounts by Race, Ethnicity, Gender, and Marital Status

Race, Ethnicity, Gender, Marital Status	Proportion with Cash Accounts	Median Value of Cash Accounts (if owned)
White ³		
Married/cohabitating	96%	\$7,000
Single male	92%	\$3,000
Single female	93%	\$1,605
Black/African American		
Married/cohabitating	85%	\$2,300
Single male	68%	\$1,580
Single female	76%	\$1,000
Asian		
Married/cohabitating	97%	\$7,500
Single male	96%	\$5,000
Single female	86%	\$365
Hispanic/Latino		
Married/cohabitating	77%	\$1,900
Single male	79%	\$1,700
Single female	68%	\$400

Source: Chang (2010) p. 80 slightly modified by authors

Table 1 shows that married/cohabitating and single male Asians and married/cohabitating Whites are the highest proportion (i.e., 97 and 96 percent, respectively) of people holding cash accounts as well as those with the highest median cash account balances of \$7,500, \$5,000, and \$7,000, respectively. The table above also shows that single female Blacks/African Americans and Hispanic/Latinos are the lowest proportion of people holding cash accounts (i.e., 68 percent), as well as those with the lowest median balances of \$1,000 and \$400, respectively. Having access to a cash account oftentimes prevents the need to use typically expensive alternative banking services, especially in times of emergency.

² According to Chang (2010), cash accounts include money held in savings accounts, checking accounts (including money market accounts), and certificates of deposit (CDs).

³ Chang (2010) uses the label "White." The authors of this paper do not know whether this label includes Hispanics or not.

Table 2 below provides information on stock ownership⁴ by race, ethnicity, gender, and marital status.

Table 2: Rate of Stock Ownership and Median Equity by Race, Ethnicity, Gender, and Marital Status

Race, Ethnicity, Gender, Marital Status	Proportion Stock Owners	Median Value of Stock Accounts (if owned)
White ⁵		
Married/cohabitating	67%	\$26,020
Single male	51%	\$18,250
Single female	45%	\$12,800
Black/African American		
Married/cohabitating	36%	\$9,400
Single male	25%	\$6,000
Single female	23%	\$3,240
Asian		
Married/cohabitating	53%	\$47,600
Single male	21%	N/A
Single female	28%	N/A
Hispanic/Latino		
Married/cohabitating	23%	\$5,100
Single male	21%	N/A
Single female	10%	N/A

Source: Chang (2010) p. 85 slightly modified by authors

Table 2 above shows that married/cohabitating Whites and Asians and single White males have the highest proportions of stock accounts, with 67, 53, and 51 percent, respectively. This table also shows that single Hispanic/Latino and single Black/African American females have the lowest proportion of stock accounts, with 10 and 28 percent, respectively. Married/cohabitating Asians have the highest median values of stock accounts (\$47,600), followed by married/cohabitating Whites (\$26,020) and single male Whites (\$18,250). While stocks are volatile and prone to risk in the short run, they are nevertheless considered as a wealth building tool in the long run (Thaler and Sunstein, 2008). Table 3 below shows information on investment real estate wealth⁶ by race, ethnicity, gender, and marital status.

Table 3: Rate of Investment Real Estate Ownership and Median Value by Race, Ethnicity, Gender, and Marital Status

Race, Ethnicity, Gender, Marital	Proportion of Investment Real	Median Value of Investment Real
Status	Estate Owners	Estate (if owned)
White ⁷		
Married/cohabitating	22%	\$110,000
Single male	14%	\$130,000
Single female	12%	\$36,000
Black/African American		
Married/cohabitating	17%	\$40,000

⁴ According to Chang (2010), stock ownership includes direct ownership of stock shares and indirect ownership through mutual funds and retirement accounts (such as 401(k) and IRA accounts).

 $^{^5}$ Chang (2010) uses the label "White." The authors of this paper do not know whether this label includes Hispanics or not.

 $^{^6}$ According to Chang (2010), investment real estate includes any real estate other than one's primary residence. The median value is pro-rated based on the percentage owned by the respondent if ownership is shared.

⁷ Chang (2010) uses the label "White." The authors of this paper do not know whether this label includes Hispanics or not.

Race, Ethnicity, Gender, Marital Status	Proportion of Investment Real Estate Owners	Median Value of Investment Real Estate (if owned)
Single male	9%	N/A
Single female	9%	N/A
Asian		
Married/cohabitating	24%	\$150,000
Single male	16%	N/A
Single female	8%	N/A
Hispanic/Latino		
Married/cohabitating	16%	\$60,000
Single male	13%	N/A
Single female	0%	N/A

Source: Chang (2010) p. 87, slightly modified by authors

Table 3 above shows that married/cohabitating Asians (24 percent) and Whites (22 percent) have the highest proportion of investment real estate owned and that single Hispanic/Latino, Asian, and Black/African American females have the lowest proportion, with zero, eight, and nine percent, respectively. While married/cohabitating Asians and single White males have the highest median values, with \$150,000 and \$130,000, respectively, Blacks/African Americans and Hispanics/Latinos have the lowest median values, with \$40,000 and \$60,000, respectively.

Table 4 below shows information on privately owned business assets by race, ethnicity, gender, and marital status.

Table 4: Rate of Privately Owned Business Assets and Median Value by Race, Ethnicity, Gender, and Marital Status

Race, Ethnicity, Gender, Marital Status	Proportion of Privately Owned Business Assets	Median Value of Privately Owned Business Assets (if owned)
White ⁹		
Married/cohabitating	19%	\$150,000
Single male	12%	\$100,000
Single female	6%	\$60,000
Black/African American		
Married/cohabitating	7%	\$50,000
Single male	9%	N/A
Single female	3%	N/A
Asian		
Married/cohabitating	18%	\$100,000
Single male	15%	N/A
Single female	3%	N/A
Hispanic/Latino		
Married/cohabitating	6%	\$62,000
Single male	2%	N/A
Single female	0%	N/A

Source: Chang (2010), p. 89, modified by authors

Table 4 above shows that married/cohabitating Whites (19 percent) and Asians (18 percent) are the highest proportion of privately owned business asset owners and single female Hispanics/Latinos,

⁸ Due to the size of the sample some subgroups do not have entries in the table.

⁹ Chang (2010) uses the label "White." The authors of this paper do not know whether this label includes Hispanics or not.

Blacks/African Americans, and Asians are the lowest proportion, with zero percent for the former group and three percent for the two latter groups. While Whites and Asians have the highest value of privately owned business assets, with \$150,000 and \$100,000, respectively, Blacks/African Americans and Hispanics/Latinos have the lowest value, with \$50,000 and \$62,000, respectively.¹⁰

Among Asian Americans and Pacific Islanders, however, there are vast differences in terms of incomes and wealth. Table 5 illustrates these differences, calculated by Patraporn et al. (2009), based on American Community Survey (2006) data¹¹.

Table 5: Parity Indexes of Select Economic Indicators for Select Asian Groups

	Mean Income	Mean Interest, Dividend, and Rental Income	Mean Home Value	Mean Home Equity
All Asians	\$81,500	\$2,000	\$283,300	\$104,400
Asian Indian	1.22	1.10	0.93	0.76
Chinese	1.01	1.35	1.14	1.29
Filipino	1.04	0.50	1.09	0.99
Japanese	0.99	1.65	1.18	1.84
Korean	0.86	1.00	0.88	0.68
Vietnamese	0.82	0.45	0.90	1.06
Other Southeast	0.68	0.15	0.53	0.40
Asian				
Other Asian	0.87	0.65	0.78	0.67

Source: Patraporn et al. (2009)

Patraporn et al. (2009) calculated parity indexes, taking the mean value of each economic indicator for each Asian group and divided that by the average for all Asians, concluding that there are vast differences among groups. Future research should analyze whether the parity indexes changed during and after the Great Recession.

The tables above illustrate that Blacks/African Americans, Hispanics/Latinos, and select Asian groups are at a disadvantaged position in terms of wealth and wealth building. They are also more vulnerable to economic shocks due to the concentration of their wealth in one major asset class. Although owner-occupied housing is the principal asset of the median household in the United States, the overreliance on owner-occupied housing for most Blacks/African Americans, Hispanics/Latinos, and select Asian groups has resulted in a catastrophic loss of wealth as a result of the burst of the national house price bubble in 2006 and the ensuing foreclosure crisis that started in early 2007, both of which have had a disproportionate impact on families and communities of color (Joint Center for Housing Studies of Harvard University, 2012). While many people rely on professional and personal networks to gain more insights for wealth building, many Blacks/African Americans rely on personal networks that might not necessarily benefit them (Reid, 2010).

¹⁰ Due to the size of the sample some subgroups do not have entries in the table.

¹¹ We thank Jane Duong of the National Coalition for Asian Pacific Community Development (CPACD) for referring us to this source.

Over the past few years, the vast majority of tangible assets has declined, although the literature on wealth lost during the Great Recession is thin due to the scarcity of data sources. Examples of works that have focused on this aspect are Wolff et al. (2010)², Kochhar et al. (2011), and Weller et al. (2012).

Kochhar et al. (2011) utilize data from the Survey of Income and Program Participation (SIPP) of 2005 and 2009 and find that non-Hispanic Whites experienced a negative change of 16 percent in median net worth, whereas Blacks/African Americans experienced a negative change of 53 percent and Hispanics/Latinos experienced an even higher 66 percent. More specifically, non-Hispanic White households had a median net worth of \$134,992 in 2005 and a median net worth of \$113,149 in 2009. In contrast, Black/African American households had a median net worth of \$12,124 in 2005 and \$5,677 in 2009. Hispanic/Latino households had a net worth of \$18,359 in 2005 and \$6,325 in 2009.

Weller et al. (2012) find that "communities of color are substantially less likely than their white fellow citizens to enjoy the opportunities that come from having a good job, owning a home, and having a financial safety cushion in the form of health insurance, retirement benefits, and private savings. [...] This difference exists because economic opportunities eroded faster for communities of color than for whites during the Great Recession – and those opportunities have been coming back much more slowly for communities of color than for whites during the economic recovery" (Weller et al., 2012, p. 1). More specifically, the authors show that Blacks/African Americans and Hispanics/Latinos have suffered from the following difficulties:

- High and increased unemployment rates compared to other racial groups;
- Lower employment rates than other racial groups;
- Lower median household incomes and decreased median household incomes compared to other racial groups;
- Disproportionate representation among minimum wage earners;
- Higher poverty rates and increased poverty rates since the beginning of the recession compared to other racial groups;
- Lower health insurance coverage rates than other racial groups;
- Lower retirement plan coverage rates in the private sector than other racial groups;
- Increase in the wealth gap between them and non-Hispanic Whites and Asians; and
- Substantial decrease in their homeownership rate, partly due to foreclosure.

The Impact of the Foreclosure Crisis and the Great Recession on the Homeownership Rate and Home Values of Families and Communities of Color

Not surprisingly, the homeownership gap between non-Hispanic White and Black/African American households, rich and poor households, and more-educated and less-educated households has widened considerably compared to a decade earlier, based on March Current Population Surveys taken in 2001, 2003, 2005, 2007, 2009, and 2011 (Rosenbaum, 2012; see also Kochhar et al., 2009). Table 6 below illustrates trends in homeownership by race and ethnicity.

Table 6: Trends in Homeownership among U.S. Households, by Race and Ethnicity, 2001 to 2011

	2001	2003	2005	2007	2009	2011
All Households	67.94%	68.47%	69.41%	68.46%	67.48%	66.45%
White ¹²	74.55%	75.21%	76.18%	75.22%	74.67%	74.03%
Households						
Black	48.32%	48.41%	49.61%	49.01%	46.92%	44.59%
Households						
Hispanic/Latino	45.61%	47.58%	49.23%	49.31%	47.86%	46.59%
Households						
Asian Households	53.43%	56.84%	59.60%	59.79%	58.68	57.83%
White/Black Ratio	1.54	1.55	1.54	1.53	1.59	1.66
White/Hispanic/Latino	1.63	1.58	1.55	1.53	1.56	1.59
Ratio						
White/Asian Ratio	1.40	1.32	1.28	1.26	1.27	1.28

Source: Rosenbaum (2012), slightly modified by authors

Table 6 above illustrates that the homeownership rate in 2011 was lower than the rate in 2001 for White, Black/African American, and Hispanic/Latino households but higher for Hispanics/Latinos and Asians. It also illustrates that the homeownership rate peaked in 2005 for Whites and Blacks/African Americans but only in 2007 for Hispanics/Latinos and Asians, indicating the negative impact of the foreclosure crisis but also a lag effect for Hispanics/Latinos and Asians. The lag effect for Hispanics/Latinos and Asians might be due to the higher average household size, which might include more household earners, thus possibly delaying foreclosure. While Hispanics/Latinos had an average household size of 3.52 members in 2010, Asians had a size of 3.02 members, followed by Blacks/African Americans (2.63 members) and non-Hispanic Whites (2.46 members) (U.S. Bureau of the Census, 2010).

The lag effect for Asians might also be explained by their favorable income situation *as a group,* which is more favorable than other racial and ethnic groups and might have impacted them to a lesser degree in the foreclosure crisis. While Asians had a median household income of \$67,022 in 2010, non-Hispanic Whites had a median household income of \$52,480, followed by Hispanics/Latinos (\$40,165) and Blacks/African Americans (\$33,578).

Table 6 also shows that Blacks/African Americans had the largest percentage point change in the homeownership rate of all racial and ethnic groups. This change was 2.09 percentage points between 2007 and 2009 and 2.33 percentage points between 2009 and 2011, followed by Hispanics (1.45 percentage points from 2007 to 2009 and 1.27 percentage points from 2009 to 2011) and Asians (1.11 percentage points between 2007 and 2009 and 0.85 percentage points between 2009 to 2011). In contrast, the White homeownership rate changed only 0.55 percentage points from 2007 to 2009 and

¹² Rosenbaum (2012) uses the label "White." The authors of this paper do not know whether this label includes Hispanics or not.

0.64 percentage points from 2009 to 2011. All ratios were lowest in 2007 but increased again in 2009 and 2011, indicating rising inequalities.

Table 7 below illustrates the vast differences and the trend in homeownership rates among Asian groups, based on the 2000 and 2010 Censuses.

Table 7: Homeownership Rates among Asian American and Pacific Islander Groups¹³

	Total Population	Homeownership	Total Population	Homeownership
	2000	Rate 2000	2010	Rate 2010
Asian Indian alone	536,883	46.96%	928,183	53.94%
Bangladeshi alone	11,028	27.11%	32,236	45.13%
Bhutanese alone	N/A	N/A	3,230	2.79%
Burmese alone	N/A	N/A	22,397	28.47%
Cambodian alone	37,567	44.24%	58,451	51.62%
Chinese (except	764,454	58.04%	1,057,114	61.96%
Taiwanese)				
Chinese alone	803,746	58.42%	1,135,720	62.25%
Filipino alone	507,658	60.18%	741,840	62.19%
Hmong alone	26,672	40.18%	46,495	46.71%
Indonesian alone	13,173	38.08%	19,701	51.00%
Japanese alone	337,226	60.74%	331,834	64.35%
Korean alone	338,196	40.73%	491,726	46.99%
Laotian alone	38,741	53.49%	51,775	59.64%
Malaysian alone	3,545	27.93%	5,306	47.70%
Mongolian alone	N/A	N/A	4,191	21.05%
Nepalese alone	N/A	N/A	15,141	28.39%
Okinawan alone	N/A	N/A	1,235	77.73%
Pakistani alone	40,570	41.77%	94,183	55.29%
Singaporean alone	N/A	N/A	1,203	49.88%
Sri Lankan alone	6,937	51.03%	13,505	57.22%
Taiwanese alone	39,292	65.86%	73,417	66.02%
Thai alone	34,718	49.10%	50,891	55.67%
Vietnamese alone	292,244	54.17%	433,498	65.49%

Source: 2000 and 2010 U.S. Censuses, Summary File 2, calculated by authors

While homeownership rates for all groups have increased from 2000 to 2010, the question remains whether the house price was inflated when a home was bought and, if so, how much equity has been lost during the national house price crash. Future research could focus on the factors that influence homeownership rates of these groups, in particular those groups that have seen large changes, the point in time when homes where bought, and how much equity has been lost.

While much work has focused on the decline in property values (e.g., Standard & Poor's Indices, 2012), not many works have focused on race and ethnicity. Wolff et al. (2010) utilize data from the 2007 Survey of Consumer Finances (SCF) and the 2009 Panel Study of Income Dynamics (PSID), both of which are national in scope. In regards to the decline in average value of home equity from 2007 to 2009, they find that all households faced a decline of 39.1 percent, while non-Hispanic Whites faced a decline of 36.9 percent, Blacks/African Americans of 48.0 percent, and Hispanics/Latinos of 44.6 percent, indicating racial and ethnic inequalities in terms of loss of value.

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¹³ We thank Jane Duong of the National Coalition for Asian Pacific Community Development (CPACD) for referring us to this source.

In addition, while significant work has focused on the number and proportion of underwater borrowers (Foote et al., 2008; Melzer, 2010), most analyses have not focused on race and ethnicity. Wolff et al. (2010) are an exception. They use data from the 2007 Survey of Consumer Finances (SCF) and the 2009 Panel Study of Income Dynamics (PSID), both of which are national in scope. With regard to the projected share of homeowners with negative home equity in 2009, Wolff et al. (2010) find that the overall projected proportion of homeowners with negative home equity is 16.4 percent, while the proportion of non-Hispanic Whites is 14.5 percent, the proportion of Blacks/African Americans is 27.9 percent, and the proportion of Hispanics/Latinos is 23.2 percent. These findings indicate that borrowers not only purchased properties in metropolitan areas and neighborhoods that disproportionately lost value due to the foreclosure crisis but could also indicate that some home values might have been inflated upon origination, corroborated by the literature (National Association of Home Builders, 2012).

While Wolff et al.'s (2010) focus is national, Cowen and Buitrago's (2012) focus is regional. They utilize proprietary data on home equity, property values, and outstanding mortgage debt on residential properties in zip code areas of six counties in the Chicago area (Cook, DuPage, Kane, Lake, McHenry, and Will Counties) in the fourth guarter 2011. Table 8 below illustrates their findings.

Table 8: Average Home Equity, Values, and Outstanding Mortgage Debt in the Chicago Six County Region (4th Ouarter 2011)

	Home Equity	Home Value	Outstanding	Loan-to-Value Ratio
			Mortgage Debt	
10% or Less of Color	\$108,069	\$334,292	\$226,223	67.7%
10 – 19.9% of Color	\$101,152	\$313,581	\$212,429	67.7%
20 – 49.9% of Color	\$60,379	\$240,833	\$180,455	74.9%
50 – 79.9% of Color	\$20,761	\$160,928	\$140,167	87.1%
80% or More	\$6,800	\$85,967	\$79,167	92.1%
Black/African				
American				
50% or more	\$35,174	\$278,163	\$242,989	87.4%
Hispanic/Latino				
Chicago Six County	\$72,272	\$260,847	\$188,575	72.3%
Region				

Source: Cowan and Buitrago (2012), slightly modified by authors

Table 8 above shows that home equity, home values, and the outstanding mortgage debt are highest but the loan-to-value ratios are lowest in those communities that have the lowest proportion of people of color. These findings illustrate not only the precarious financial situation many people of color are in but also the effect of the current economic crisis on these populations.

The decrease in property values has not only affected families, it has also affected adjacent properties and entire neighborhoods, triggering policy discussions. Numerous works have analyzed the spillover effects, coming to the conclusion that the spillover effects of foreclosure are negative, although there is variety when it comes to results (see Lee, 2008 for a literature review of the effect of foreclosures on property values). For example, Moreno (1998) calculates that for Minneapolis/St. Paul a foreclosure of a home with an FHA-insured mortgage that becomes vacant and boarded and that the city rehabilitates

for resale will affect surrounding properties by about \$10,000 (while the average cost per foreclosed property is \$73,300).

Immergluck and Smith (2006) analyze property characteristics and sales prices for single-family homes in Cook County, the central county in which Chicago is located. They estimate that each foreclosure within an eighth of a mile of a single-family home results in a decline of 0.9 percent in value, resulting in an average of \$159,000 (sic) per foreclosure. Schuetz et al. (2008) focus on a longitudinal data set from 2000 to 2005 in New York City and find that properties in close proximity to foreclosures sell at a discount that increases with the number of adjacent foreclosures, although the increase is not linear. Schuetz et al. (2008) also find that there is a threshold effect, where proximity to a very small number of foreclosures does not seem to have a consistent negative impact on property values.

Harding et al. (2009) take repeat-sales data from 1990 through 2007 from seven different Metropolitan Statistical Areas (MSAs) and find that the peak contagion effect from the closest foreclosures was approximately one percent but that the discount decreases as the distance to the foreclosed property increases. Lin et al. (2009) analyze the effect of foreclosures on property values for the Chicago Primary Metropolitan Statistical Area (PMSA), based on a 2006 data set with four models: first, a model that measures the time effect only; second, a model that measures the distance effect only; third, a model that includes time interacted with distance effects; and fourth, a model that includes time interacted with distance effects, corrected for sample bias. The most severe effect is 8.7 percent within a few blocks (i.e., less than 0.1 kilometers from a foreclosed home) within the first two years, although over time and with increased distance the negative effect of foreclosure decreases. Leonard and Murdoch (2009) focus on Dallas County, utilizing 2006 data and correcting for spatial lags. Consistent with other research, the magnitude of the negative effect disappears over space. Leonard and Murdoch find that the effect of an additional foreclosure within 250 feet of a sale is approximately \$1,666, controlling for everything else in the model. Campbell et al. (2011) analyze the effect of spillovers from foreclosures in Massachusetts, using longitudinal data that ranges from 1987 to 2009. They find that foreclosure discounts are about 27 percent on average, acknowledging vandalism that typically affects foreclosed homes. Lastly, Wassmer (2012) analyzes the external effects of residential home foreclosures on homes in Sacramento, California, and finds a 31.9 percent drop in market value for a non-Real Estate Owned (REO) home sale, translating into an average of \$48,827 per home. In sum, foreclosure spillovers are negative, thus justifying public intervention.

Follow-up work by Mikelbank (2008) for Columbus, Ohio, includes the impact of foreclosures on both adjacent and vacant and abandoned properties on property values. He finds that the foreclosure impact per property is \$4,738 (\$4,267, \$4,256) and that the vacancy impact is \$5,509 (\$4,710, \$4,411) per property (\$10,247, \$8,977, \$8,667 total per property) when (a) two separate models are run, one for foreclosure and one for vacant and abandoned homes; (b) one model is run, including a variable for foreclosure and a variable for vacancy; and (c) one model is run, including a variable for foreclosure and a variable for vacancy, in a spatial econometric framework.

Whitaker and Fitzpatrick (2012) expand Mikelbank's (2008) analysis and include foreclosed, vacant, and tax-delinquent properties in their analysis for Cuyahoga County, the county encompassing Cleveland, Ohio. They differentiate between high-poverty, medium-poverty, and low-poverty neighborhoods and

use different distance buffers. Whitaker and Fitzpatrick (2012) find that for the case of high-poverty neighborhoods, the sale price of a home is 1.5 percent lower with each additional delinquent home within 500 feet. In medium-poverty neighborhoods, there are negative impacts of 2.1 percent due to a vacant home, 1.9 percent due to a delinquent home, and 2.7 percent if a nearby home is both vacant and delinquent. In case of low-poverty neighborhoods, the impact of vacant homes is 1.7 percent and the impact of foreclosed homes is 1.8 percent on the price of a home.

The prolonged and severe national house price crash has also fueled discussions on strategic default (see Foote et al. (2008) and Quigley and van Order (1995) for earlier work). As Guiso et al. (2011) point out, the "main problem in studying strategic defaults is that this is de facto an unobservable event. While we do observe defaults, we cannot observe whether a default is strategic. Strategic defaulters have all the incentive to disguise themselves as people who cannot afford to pay and so they will be difficult to identify in the data" (Guiso et al., 2011, p. 2). Nevertheless, Tirupattur et al. (2010) develop a definition where strategic defaults are "defaults on mortgage obligations by borrowers who are a) underwater on their mortgages and b) have other meaningful non-mortgage obligations on which they continue performing" (Tirupattur, 2010, p. 2). They find that the incidence of strategic defaults is higher at higher credit scores, more recent vintages, among loans with large balances, and among nonrecourse states, for example California. Mayer et al. (2011; see also Griffith and Eizenga, 2012 for a discussion on strategic default in connection with principal reductions of mortgages secured by the GSEs) analyze strategic default in connection with the announcement of the Countrywide Settlement in October 2008. They point out that it is difficult to observe whether a borrower defaulted in response to the settlement but address this problem in three ways. First, they estimate the number of additional defaults among Countrywide borrowers until February 2009, just before the HAMP modification program was announced, relative to the number of additional defaults during the same period among comparable borrowers who did not benefit from the settlement. Second, they investigate the settlement's effects in a cross-section of borrowers with greater access to liquidity through credit cards and lower current combined loan-to-value (CLTV) ratios. Third, they analyze the effect of the settlement in a subset of Countrywide-serviced loans that were not eligible for the settlement. Mayer et al. (2011) find that the Countrywide Settlement's effects were largest among Countrywide borrowers who had access to substantial liquidity through credit cards and those with relatively low current CLTV ratios, indicating strategic behavior among borrowers in response to the settlement.

Bhutta et al. (2010) discuss two hypotheses about why borrowers default. The strategic or ruthless default occurs "when a borrower's equity falls sufficiently below some threshold amount and the borrower decides that the costs of paying back the mortgage outweigh the benefits of continuing to make payments and holding on to their home" (Bhutta et al., 2010, p. 3). The "double trigger" hypothesis holds when default occurs when equity is negative but above the threshold stated in the "strategic default" hypothesis (discussed above) yet there is a negative income shock.

While some studies utilize quantitative methods, others use qualitative ones. In regards to quantitative methods, Bhutta et al. (2010) study borrowers from Arizona, California, Florida, and Nevada who purchased homes in 2006, using non-prime mortgages with 100 percent financing. Of these approximately 133,000 loans, 80 percent had defaulted by September 2009. Based on a cumulative distribution function, the authors find that "the median borrower walks away from his home when he is

62 percent underwater" (Bhutta et al., 2010, p. 21), meaning that half of the borrowers would walk away if their home was less than 62 percent underwater and that half would walk away if their home was more than 62 percent underwater. This is helpful, as much of the literature has focused on the number and the proportion of borrowers underwater (e.g., about 12 million borrowers (Bernanke, 2012), or about 23 percent of borrowers (CoreLogic, 2012)) and the proportion seriously delinquent (i.e., past 60 days due) (Office of the Comptroller of the Currency and US Department of the Treasury, 2012). Nevertheless, it would be interesting to know more about those borrowers who are more underwater than 62 percent in terms of geography, demography, and socioeconomics. Future research should focus on these aspects.

In regards to qualitative methods, Guiso et al. (2011) utilize the Chicago Booth Kellogg School Financial Trust Index survey, with a total of 4,159 observations over eight waves from December 2008 to September 2010, to find out the proportion of current defaults that is strategic and to study the determinants of borrowers' attitudes towards strategic default. Three important questions were: First, "How many people do you know who have defaulted on their house mortgage?" Second, "Of the people you know who have defaulted on their mortgage, how many do you think walked away even if they could afford to pay the monthly mortgage?" Third, the authors of the survey asked, "If the value of your mortgage exceeded the value of your house by 50K [100K/150K] would you walk away from your house (that is, default on your mortgage) even if you could afford to pay your monthly mortgage?" Guiso et al. (2011) classify a defaulter as a strategic one when he/she goes from being current to sixty days late on his/her mortgage for the first time while remaining current on his/her credit card balances for the following six months. Overall, 82 percent thought that strategic default was morally wrong. The perceived strategic default rate is 35 percent. Nine percent would walk away once negative equity reaches \$50,000, and 23 percent would walk away once negative equity reaches \$23,000. More specifically, Table 9 below shows the proportion of borrowers defaulting strategically by house value.

Table 9: Proportion of Borrowers Defaulting Strategically by House Value

House Value	Shortfall at \$50K	Shortfall at \$100K	Shortfall at \$150K
Less than \$100K	14.4%	35.9%	52.8%
\$100K to \$200K	11.3%	27.8%	44.4%
\$200K to \$400K	8.6%	19.0%	31.1%
More than \$400K	6.7%	16.8%	30.8%

Source: Guiso et al. (2011), slightly modified by authors

Table 9 above illustrates that the propensity to strategically default is highest (52.8 percent) for those who have a shortfall of \$150,000 when the house value is less than \$100,000 and that this propensity is lowest (6.7 percent) for those who have a shortfall of \$50,000 when the house value is more than \$400,000. Guiso et al. (2011) also provide information on the change in the default probability when the shortfall increases, illustrated in Table 10 below.

Table 10: Change in Default Probability When Shortfall Increases by House Value

House Value	Change from 0 to \$50K [sic]	Change from \$50K to \$100K [sic]	Change from \$100K to \$150K [sic]
Less than \$100K	14.4% [sic]	21.5%	16.9%
\$100K to \$200K	11.3% [sic]	16.5%	16.6%
\$200K to \$400K	8.6% [sic]	10.4%	12.1%
More than \$400K	6.7% [sic]	10.1%	14.0%

Source: Guiso et al. (2011), slightly modified by authors

Table 10 above illustrates that, perhaps interestingly, the highest change in the default probability occurs when the shortfall increases from \$50,000 to \$100,000 in case the house value is less than \$100,000 (21.5%), followed by an increase from \$100,000 to \$150,000, also for homes below \$100,000, indicating borrowers who do not have much to lose any longer due to the severe house price crash. Guiso et al. (2011) also analyze socioeconomic factors that influence the decision to default strategically for two scenarios: (a) a strategic default for a decrease in home equity of \$50,000 and (b) a strategic default for a decrease in home equity of \$100,000. The authors conduct a logistic regression analysis with the dependent variable that equals 1 if the borrower says that he/she is willing to default when the value of his/her home equity decreased by \$50,000 or \$100,000, respectively, even if he/she can afford to pay the monthly mortgage costs.

The authors find that in the case of a \$50,000 decrease, Blacks/African Americans, Hispanics/Latinos, senior citizens, those who have wealth (measured with a proxy), and those who think that there is a probability of becoming unemployed over the next 12 months are more likely to default strategically, while those residing on the West coast, females, and those with an income higher than \$100,000 are less likely to default strategically. In the case of a \$100,000 decrease, Blacks/African Americans, Hispanics/Latinos, those under age 35, and those who think that there is a probability of becoming unemployed over the next 12 months are more likely to default strategically, while those residing on the West coast, those who hold a college degree, those who have children, and those with an income higher than \$100,000 are less likely to default strategically. The authors also analyze the effect of morality on strategic default; the change in morality; anger, trust, and strategic defaults; defaults and information about other defaulters; the determinants of the probability that lenders pursue defaults; and the role of the media in explaining strategic defaults in their study.

Riley (2012) replicated the Guiso et al. (2011) study, based on a 2011 survey of 600 loans in the Community Advantage Program (CAP). CAP is a secondary mortgage market program started in 1998 by the Ford Foundation, Fannie Mae, and Self-Help, a non-profit lender in Durham, North Carolina. Self-Help purchases 30-year fixed-rate loans with near-prime interest rates that were made to borrowers with incomes less than 80 percent of the area median income (AMI) or to borrowers of color who live in Census tracts with a high proportion of people of color that are below 115 percent of the AMI.

The Community Advantage Program and Panel Survey was conducted in 2011 by the Center for Community Capital at the University of North Carolina at Chapel Hill. The goal of the survey was to

collect attitudes about strategic default. Thirty-four percent of the respondents stated that they knew defaulters, and 14 percent answered that they knew strategic defaulters, similar to Guiso et al. (2011). Riley calculated the perceived strategic default rate (i.e., the number of strategic defaulters to total defaulters) as 34 percent, similar to Guiso et al. (2011)'s 35 percent. Eighty-one percent thought that default was morally wrong, 12 percent would walk away in case of a \$20,000 equity shortfall, 27 percent would walk away in case of a \$50,000 equity shortfall, and 51 percent would walk away in case of a \$100,000 equity shortfall.

These proportions are much higher than the proportions obtained by Guiso et al. (2011). In their case, only nine percent would walk away in case of a shortfall of \$50,000, and only 23 percent would walk away in case of a shortfall of \$100,000. However, Riley (2012) also found that the median borrower would default at 111 percent negative equity, compared to 62 percent negative equity in Bhutta et al. (2010). To minimize strategic default risk, Riley (2012) suggests targeting any principal write-downs or interest rate reductions based on negative equity debt service burden relative to income.

White (2010) points out that the vast majority of underwater borrowers has not walked away and argues that "the predominant message of political, social, and economic institutions in the United States has functioned to cultivate fear, shame, and guilt in those who might contemplate foreclosure. These emotions in turn function as a form of internalized social control, encouraging conformity to the norm of meeting one's mortgage obligations as long as one can afford to do so" (White, 2010, p. 997-998). He also points out that "the credit-reporting system operates in conjunction with other economic, political, and social institutions as a means of social control by increasing the emotional cost of default.

Moreover, the credit-reporting system operates largely outside of the legal process as a norm enforcer, ensuring immediate reputational punishment for those individuals who might be tempted to flout their 'moral commitment to pay' by exercising their legal right to default" (White, 2010, p. 1006-1007).

The implications of the economic crises have been enormous, both nationally and globally, and will continue to impact current and future generations for decades to come. At the same time, the decline in house prices in most communities in the United States could translate into homeownership opportunities for those who have maintained relatively stable employment, a favorable income and liability situation, and a FICO score that makes obtaining a sustainable mortgage possible. Nevertheless, some argue the recent decrease in lending (Sciré, 2011) makes homeownership a moot point.

Hendey and Steuerle (2011) analyze movement into and out of homeownership for 1,200 households with children in 15 low-income neighborhoods in six cities¹⁴, based on two surveys, one conducted in 2005-06 and one in 2008-09 or 2010. While the homeownership rate increased, 17 percent of both renters and owners changed tenure between the two survey data points. With regard to movements out of homeownership, the authors found that the poverty and equity statuses matter most. More specifically, homeowners surveyed in the first survey who lived below 100 percent of the federal poverty level or between 100 and 200 percent of the poverty level were, "respectively, 320 and 184 percent more likely to become renters than households living above 200 percent of the poverty level," after controlling for other characteristics (Hendey and Steuerle, 2011, p. 1).

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¹⁴ Denver, Des Moines, Indianapolis, Providence, San Antonio, and White Center, located in King County, Washington.

Also, "those with less than 10 percent equity in their homes were 3.7 times more likely to have become renters than those with 20 to 40 percent equity" (Hendey and Steuerle, 2011, p. 1). With regard to movement into homeownership, the authors found, interestingly, that Hispanics, regardless of whether they are immigrants or not, "have more than twice the probability of moving from renting to owning as non-Hispanic [W]hites [while] non-Hispanic blacks are 67 percent less likely to become owners than [W]hites living in these neighborhoods" (Hendey and Steuerle, 2011, p. 1-2). This is remarkable given the Hispanic/Latino homeownership rate of 46.59 percent in contrast to the non-Hispanic White rate of 74.03 percent in 2011 (Rosenbaum, 2012). This is also interesting given Kochhar et al.'s (2011) findings that Blacks/African Americans experienced a negative change of 53 percent and Hispanics/Latinos 66 percent, based on two SIPP surveys (2005 and 2009). More research in different communities should be undertaken on changes in tenure, equity, and assets among people, in particular people of color.

The Impact of the Foreclosure Crisis on Relocation of Families and Communities of Color

While involuntary moves are almost never easy for adults, they are typically very difficult for children, who need consistent routines and stable family structures. While the effects of moves on children have been studied extensively in the past (Birman et al., 1994; Jelleyman and Spencer, 2008; Kerbow et al., 2003; Rumberger, 2003; Tucker et al., 1998), the effects of moves due to the foreclosure crisis on children have only been studied recently and in select communities. At the national level, Isaacs (2012) estimates that more than eight million children have been affected by the foreclosure crisis; 2.3 million children in single-family homes have already lost their homes to foreclosures, three million children in owner-occupied homes are at serious risk of losing their homes in the future, and three million children lost or are at risk to lose rented homes due to foreclosure (see also Lovell and Isaacs, 2008, for earlier national estimates).

At the local level, Been et al. (2011a) analyze the prevalence of foreclosure among buildings housing New York City public school students, more specifically elementary and middle school students who attended public school in the 2003 to 2004 (12,067 foreclosed students) and 2006 to 2007 school years (20,453 foreclosed students). Consistent with the literature discussed elsewhere (Carr et al., 2011), 56 percent of students living in properties entering foreclosure were Black/African American in 2003 to 2004, and 30 percent were Hispanic/Latino. In 2006 to 2007, 57 percent of students living in properties entering foreclosure were Black/African American, compared to 29 percent Hispanics/Latinos. Been et al. (2011a) also analyze school mobility by foreclosure status for school years 2006 to 2007 and 2007 to 2008. Table 11 illustrates their findings on school mobility by foreclosure status.

Table 11: School Mobility by Foreclosure Status, 2006 to 2007 and 2007 to 2008

	Students Living in Properties Entering Foreclosure	Students Not Living in Properties Entering Foreclosure
Grades 1 to 4		
- stayed in same school	84%	83%
- changed schools	13%	10%
- exited system	3%	7%
Grades 6 to 7		
- stayed in same school	85%	83%
- changed schools	12%	10%
- exited system	3%	7%

Source: Been et al. (2011), abbreviated by authors

Table 11 above shows that a higher proportion of students living in properties entering foreclosure changed schools than students not living in properties entering foreclosure and a higher proportion of students *not* living in properties entering foreclosure exited the public school system, compared to students living in properties entering foreclosure.

Been et al. (2011b) also conduct regression analyses to understand these findings better. Controlling for race, ethnicity, poverty, grade, and original school, they find that for *all* students in the New York City public schools, Black/African American students were more likely to move than others (see Table 4 in Been et al. (2011b)). The authors also find that non-Hispanic White *foreclosed* students are less likely to move to a new school (although the regression coefficient is not significant at the five percent level), and that Hispanic and Asian foreclosed students are more likely to move to a new school (the coefficient for Hispanics is significant at the five percent level while it is not significant for Asians; Black/American American students serve as base case in the regression; see Table 5 in Been et al. (2011b)).

The impacts of moves triggered by the foreclosure crisis on academic achievement of children have been mixed (and these results are consistent with earlier studies before the foreclosure crisis (see Rumberger, 2003, among others)). Been et al. (2011a) find for New York city that students who moved, regardless of whether they moved due to a foreclosure or not, experienced a decrease in the proportion of testing proficient/advanced in both mathematics and reading, as illustrated in Table 12 below.

Table 12: Comparison of Mean School Characteristics of Students Grades 1 to 7 before and after Move by Foreclosure Status

	Origin School 2006 to 2007	Destination School 2007 to 2008	Change between School Years
Characteristics of Schools of Children in			
Buildings Entering Foreclosure Who			
Moved			
- % Black/African American	50%	46%	-4%
- % Hispanic/Latino	34%	35%	1%
- % Free and Reduced Price Lunch	81%	77%	-4%
- % English Language Learners	13%	11%	-3%***
- % Special Education	13%	14%	0%
- % Testing Proficient/Advanced in Math	74%	62%	-12%***
- % Testing Proficient/Advanced in Reading	53%	48%	-5%***
Number of Students	1,998	1,956	
Characteristics of Schools of Children in Buildings Not Entering Foreclosure Who Moved			
- % Black/African American	30%	31%	1%
- % Hispanic/Latino	41%	41%	-1%
- % Free and Reduced Price Lunch	77%	74%	-3%**
- % English Language Learners	18%	13%	-5%***
- % Special Education	14%	14%	0%
- % Testing Proficient/Advanced in Math	77%	65%	-12%***
- % Testing Proficient/Advanced in Reading	57%	51%	-5%***
Number of Students	89,395	89,258	

Source: Been et al. (2011a), slightly modified by authors

Notes: Less than one percent of students were excluded from the analysis each year because they attended special education schools; * indicates that the probability that the differences are random is less than 5 percent; ** probability less than 1 percent; *** probability less than .1 percent.

Been et al. (2011a) also compared the average characteristics of the neighborhoods surrounding the schools attended by students in grades one through seven before and after a school move by foreclosure status. Table 13 below provides details.

Table 13: Comparison of Mean Characteristics of Neighborhoods Surrounding Schools Attended by Students Grades 1 through 7 before and after a School Move by Foreclosure Status

	Origin School's Neighborhood 2006 to 2007	Destination School's Neighborhood 2007 to 2008	Change between School Years
Characteristics of Neighborhoods			
Surrounding Schools Attended by			
Students in Buildings Entering			
Foreclosure Who Moved Schools			
- % Black/African American	48%	39%	-9%***
- % Hispanic/Latino	27%	28%	0%
- % Living in Poverty	24%	23%	-1%
- % Owner-Occupied Units	33%	30%	-3%**
Number of Students	1,998	1,956	
Characteristics of Neighborhoods			
Surrounding Schools Attended by			
Students not in Buildings Entering			
Foreclosure Who Moved Schools			
- % Black/African American	30%	28%	-1%
- % Hispanic/Latino	32%	29%	-3%
- % Living in Poverty	24%	22%	-2%***
- % Owner-Occupied Units	28%	29%	0%
Number of Students	89,395	89,258	

Source: Been et al. (2011a), slightly modified by authors.

Notes: Less than one percent of students were excluded from the analysis each year because they attended special education schools; * indicates that the probability that the differences are random is less than 5 percent; ** probability less than 1 percent; *** probability less than .1 percent.

As illustrated in Table 13 above, moves, regardless of whether or not they were related to foreclosure, result in destination neighborhoods that have a lower proportion of Blacks/African Americans and a lower proportion of people living in poverty, but not a higher proportion of Hispanics/Latinos. Regardless of these findings and as pointed out above, moves, regardless of whether or not they are related to foreclosure, are disruptive and seem to have a negative impact on children.

Pettit and Comey (2012) study the relationship between foreclosure and students' residential and school mobility and the quality of the new schools and neighborhoods where foreclosed students relocate for three cities: New York City, Baltimore, and Washington, DC. They utilize three unique local data sets: first, student-level public school administrative records; second, property-level foreclosure data and parcel-level housing information; and third, school-level files. The analyzed cities have different housing markets, different foreclosure processes, and different school enrollment policies, yet the proportion of students affected was similar, ranging from 1.8 (in New York City) to 2.7 percent (in Baltimore) for the most recent school year for which data was available. Pettit and Comey (2012) also find that the proportion of Black/African American students who live in a foreclosed home as compared

to other groups is quite high: 90 percent in Baltimore, 88 percent in Washington, DC, and 57 percent in New York City.

With regard to residential mobility, Table 14 below presents the characteristics of origin and destination neighborhoods for all students and for students impacted by foreclosure who moved in Baltimore and in Washington, DC.

Table 14: Characteristics of Origin and Destination Neighborhoods for All Students and Foreclosed Students who Moved in Baltimore and in Washington. DC

	Origin: All Students	Origin: Students in Foreclosed Homes	Destination: All Students	Destination: Students in Foreclosed Homes	Difference: All Students	Difference: Students in Foreclosed Homes
Baltimore						
Number of Part 1 Crimes ¹⁵	64	61	61	60	-3	-1
Number of Juvenile Arrests ¹⁶	134	122	127	131	-7	9
Percent Vacant and Abandoned Homes	12%	10%	11%	11%	-1.1%	0.9%
Median Home Sales Price	\$124,743	\$125,258	\$125,756	\$123,055	\$1,013	(\$2,203)
Percent Receiving Free or Reduced Price Meals	67%	66%	59%	60%	-8.2%	-6.0%
Washington, DC						
Number of Violent Crimes ¹⁷	50	47	48	43	-2	-4
Number of Property Crimes ¹⁸	18	18	19	20	1	2
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%

Source: Pettit and Comey (2012), p. 28, slightly modified by authors

Table 14 above shows that students impacted by foreclosure in Baltimore moved to neighborhoods with slightly lower numbers of crimes, higher numbers of arrests, slightly lower proportions of vacant and abandoned homes, lower median home sales prices, and lower proportions of students who receive free or reduced price meals at school. Foreclosed students in Washington, DC, however, moved to neighborhoods with a lower number of violent crimes, a slightly higher number of property crimes, and slightly higher proportions of households receiving TANF and food stamps. Expanding the analysis, using

¹⁶ Per 1,000 juveniles.

¹⁵ Per 1,000 residents.

¹⁷ Per 1,000 residents.

¹⁸ Per 1,000 residents.

multivariate regression, Pettit and Comey (2012) find that "students in homes in foreclosure who moved in Baltimore and Washington, D.C., did not end up in significant different quality neighborhoods than other students who moved, with the exception of one neighborhood indicator in Baltimore. [...] Students in foreclosed homes in Baltimore moved to neighborhoods with significant increases in the juvenile arrest rate, controlling for other student and neighborhood characteristics" (p. 28).

Table 15 below presents the characteristics of origin and destination schools for all students and for foreclosed students who moved in Baltimore, in Washington, DC, and in New York City, based on Pettit and Comey (2012).

Table 15: Characteristics of Origin and Destination Schools for All and for Foreclosed Students Who Moved in

	Origin: All Students	Origin: Students in Foreclosed Homes	Destination: All Students	Destination: Students in Foreclosed Homes	Difference: All Students	Difference: Students in Foreclosed Homes
Baltimore ¹⁹						
%Black/African American	92%	93%	91%	91%	-0.6%	-1.9%
% Hispanic/Latino	2%	2%	2%	2%	0.1%	0.1%
%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 Washington, DC²⁰	18,543	374				
% Black/African American	85%	90%	88%	87%	2.7%	-2.7%
% Hispanic/Latino	11%	8%	8%	10%	-2.8%	1.7%
%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				
New York City ²¹						
% Black/African American	31%	50%	32%	47%	1.1%	-3.0%
% Hispanic/Latino	41%	34%	40%	35%	-1.1%	1.0%
% 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				

Source: Pettit and Comey (2012), p. 33, slightly modified by authors.

Table 15 above presents a mixed picture regarding origin and destination schools in the three study communities. While students (of any race and ethnicity) from foreclosed homes move to neighborhoods with a lower proportion of Blacks/African Americans and a lower proportion of free or reduced price

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¹⁹ Grades PK-11

²⁰ Grades PS-11

²¹ Grades 1-7

meal recipients, they move to neighborhoods with a higher proportion of Hispanics/Latinos. In terms of academic achievements, findings were mixed. In Baltimore, students moved to schools that have a slightly higher proportion of students who test proficient or advanced in both reading and math.

In Washington, DC, students moved to schools with a slightly lower proportion of students testing proficient or advanced in reading but with a slightly higher proportion of students testing proficient or advanced in math. In New York City, however, students moved to schools that have a lower proportion of students who test proficient or advanced in both reading and math. These mixed findings raise questions about the impact of the foreclosure crisis on the educational opportunities of children and the implications of educational opportunities on their future opportunities for building wealth. More research should be undertaken for other cities in terms of origin and destination schools for students who moved triggered by a foreclosure.

While Pettit and Comey (2012) find mixed impacts of the foreclosure crisis on children, other studies find a negative impact, for example on academic achievement (Birman et al., 1994; Kerbow et al., 2003; Tucker et al., 1998). Rosengren (2010), for example, finds a positive correlation between a high concentration of REO properties and negative education outcomes, including the high school dropout rate and the proportion of students who failed the statewide standardized math test (see also Comey & Grosz, 2010 and Kachura, 2011).

In a meta-study of the effect of residential mobility on children's health outcomes over their life course, Jelleyman and Spencer (2008) conclude that "high frequency residential change is potentially a useful marker for the clinical risk of behavioral and emotional problems" (p. 584). Issues identified were higher levels of behavioral and emotional problems, increased teenage pregnancy rates, accelerated initiation of illicit drug use, adolescent depression, and reduced continuity of healthcare.

The Impact of the Foreclosure Crisis and the Great Recession on Small Business Financing

For most low- and moderate-income people, building home equity is the most important and typically the only strategy to build wealth (Belsky and Retsinas, 2005). While some build home equity for the long run, others build equity to leverage for other investments. Regarding the former, some build home equity to live rent-free during their retirement; others build home equity to sell their homes to finance their stay in assisted living or a nursing home or to leave wealth behind. Some buyers build home equity as collateral or direct financing for higher education loans for their children or grandchildren (or possibly themselves) while others build home equity as collateral for a loan to start a new business. Somewhat surprisingly, all of these aspects have been under-researched in the recent and distant past due to a scarcity of recent data (see the discussion below). This dearth is especially surprising in the current economic context given the role of housing to finance small businesses and the extensive attention the need to support small businesses has received. Interestingly, there does not seem to be much information on the connection between the foreclosure crisis and its effect on small business financing. More recent data should be collected and more research should be undertaken to close this gap in knowledge.

In the following sections, we focus on the connection between home equity and small business financing. Given the limited data, there are two angles to approach this question: (a) mortgage data and (b) entrepreneurship data.

Regarding mortgage data, the 2001 Residential Finance Survey (RFS), sponsored by The Department of Housing and Urban Development (HUD) and conducted by the U.S. Bureau of the Census, was designed "to provide data about the financing of nonfarm, privately owned, residential properties" (U.S. Bureau of the Census, 2001, n.p.). It is based on mailed questionnaires sent to a sample of property owners and to lenders who held mortgages on the sample properties, based on 50,000 addresses from the 2000 Census. Table 16 below provides a breakdown of the reasons for taking out a home equity line of credit (HELOC), one of the questions in the RFS. In 2001, only two percent of HELOC borrowers took out a HELOC to start a business.

Table 16: Reasons for Taking out a Home Equity Line of Credit by Single-Family Homeowners with a Home Equity Line of Credit

	1991	2001
Make additions, improvements, or repairs to the property	45%	54%
Consolidate debts	26%	21%
Purchase auto or other vehicle	9%	10%
Pay for education or medical expenses	4%	6%
Other types of investments	4%	4%
Investment in other real estate	3%	3%
Other purposes ²²	9%	3%

Source: Cavanaugh (2007) (Figure 1), based on 1991 and 2001 RFS

While there are other proprietary mortgage data sets, such as Lender Processing Services (LPS) and Black Book, neither provides information about whether the loan purpose was to finance a business.

Regarding entrepreneurship data, there are three data sources that provide information of interest. The first data source is the Kauffman Firm Survey (KFS) of the Kauffman Foundation. The second data source is the Panel Study of Entrepreneurial Dynamics (PSED), administered by The University of Michigan and sponsored by the Ewing Marion Kauffman Foundation, the National Science Foundation (NSF), the Small Business Administration (SBA), and the University of Michigan. The third data source is the Small Business and Access to Credit survey, administered and funded by the NFIB (National Federation of Independent Business) Research Foundation. We will discuss these sources of information in detail below, focusing on the connection between home equity and small business financing.

The KFS has been administered since 2004, when the Foundation started sending a survey to a cohort of nearly 5,000 firms. This cohort is tracked annually and asked several hundred questions on a range of topics, including the background of the founders, the sources and amounts of financing, firm strategies and innovations, and outcomes such as sales, profits, and survival (Kauffman Foundation, n.d.). Currently, survey data from 2004 through 2008 are publicly available.

One of the questions related to our research question is "Did you use personal loans [from] a bank to finance the operation $[?]^{n^{23}}$ Table 17 below provides information on responses.

²² Includes response categories not used in 1991: "To start a business" (2 percent); "To purchase other consumer products" (1 percent); "To pay taxes" (1 percent); "To settle a divorce" (1 percent) (Cavanaugh, 2007, p. 1).

²³ The literal question was as follows: "Another way to finance a business is debt financing. Debt is money borrowed that has to be paid back with or without interest. I'm going to ask you about some different types of debt financing you may have used on behalf of [NAME BUSINESS] to finance the operation of the business. For each, please tell me if you used this type at any time during calendar year [2004, 2005, 2006, 2007, 2008]. Did you use personal loans from a bank or other financial institution, such

Table 17: Responses to Question "Did you use personal loans [from] a bank to finance the operation?"

Absolute Number (Proportion)	Response: Yes	Response: No	Total Number of Responses
2004	807	4,067	4,874
	(16.56%)	(83.44%)	(100%)
2005	515	3,464	3,979
	(13.56%)	(87.06%)	(100%)
2006	419	2,986	3,405
	(12.31%)	(87.69%)	(100%)
2007	296	2,629	2,925
	(10.12%)	(89.88%)	(100%)
2008	260	2,354	2,614
	(9.95%)	(90.05%)	(100%)

Source: Kauffman Foundation (n.d.), calculations of totals and proportions undertaken by authors

While Table 17 does not answer whether a home served as collateral, it nevertheless illustrates that the proportions of respondents who used personal loans has decreased from 16.56 percent in 2004 to 9.95 percent in 2008.

The PSED research program was launched to enhance the understanding of how people start businesses, based on nationally representative samples of nascent entrepreneurs. PSED I began with screening in 1998 to 2000, held a cohort of 830, and had three follow-up interviews. PSED II began with screening in 2005/2006 and a cohort size of 2,044, and will have six annual interviews. PSID I had questionnaires in six waves. Wave A contains a questionnaire that has several questions in Section E: Start-Up Finances, for example²⁴:

Question E1: Have financial institutions or other people been asked for funds for this new business, do you expect to for funds in the future [sic], or is outside financial support not relevant for this new business?

Answer Choices E1: (a) yes, (b) no, not yet, expect to ask, (c) no, not relevant

Question E2: In what month and year did you first seek outside funding for this new business? Answer E2: [month/year]

Question E3: Have you received the first outside funding from financial institutions or other people for this new business?

Answer Choices E3: (a) yes, (b) no

Question E4: In what month and year did the first outside funding begin for this new business? Answer E4: [month/year]

Question E5: Has credit with a supplier been established, will credit with a supplier be established, or is this not relevant to the new business?

as a mortgage or home equity loan used for the business?" Source: http://www.kauffman.org/kfs/KFSWiki/Data-Dictionary/Base-Line/f7a_pers_loan_bank_0.aspx

²⁴ Source: http://www.psed.isr.umich.edu/psed/data (Questionnaires: 1. Wave A Questionnaire; questionnaires in Waves B through F are very similar to Wave A). Neither questionnaire contains a question about whether home equity loans were used to establish the business.

Answer Choices E5: (a) yes, (b) no, not yet, expect to ask, (c) no, not relevant

Question E6: In what month and year was supplier credit first established? Answer E6: [month/year]

Finally, the NFIB Research Foundation, "the nation's largest small and independent business advocacy organization" (Dennis, 2011, n.p.), asked The Gallup Organization to conduct the Small Business and Access to Credit survey in late 2011. The sampling frame of small employers was based on files of the Dun & Bradstreet Corporations. A small employer was defined as a "business owner employing no less than one individual in addition to the owner(s) and no more than 250" (Dennis, 2011, p. 73). Based on a stratified random sample, 856 interviews were completed. This survey contained 26 questions with several follow-up questions for some questions, followed by 12 demographic questions. Table 18 below shows select real estate finance characteristics for owned real estate by the interviewed small employers from 2008 to 2011.

The homeownership rate for small employers is disproportionately high compared to the general population, while the proportion of owners who have an underwater mortgage is disproportionately low. While nine percent of employers reported to have used their residence as collateral in 2008, 6 percent used it as collateral in 2009, 7 percent used it in 2010, and 11 percent used it in 2011 (see de Soto (2000) for alternative insights for developing countries). These proportions are almost always higher for business and investment real estate (versus owner-occupied residences). Schweitzer and Shane (2010) discuss a proprietary quarterly survey conducted by Barlow Research which found that in 2007, "20.5 percent of the business owners reported pledging their homes as collateral for their businesses and 18.2 percent said [that] they borrowed against their homes to obtain a personal loan where the proceeds were used to finance a small business" (Schweitzer and Shane, 2010, p. 2). Thus, we conclude that both the business and the investment real estate market and also the residential real estate market have an effect on small business financing.

While Table 18 below presents descriptive statistics with correlations, it would be interesting to undertake future research with inferential statistics that analyze the causation between the foreclosure crisis and small business financing, possibly assisted by interviews.

Table 18: Small Employer Owned Real Estate by Selected Real Estate Finance Characteristic: 2008 to 2011

Characteristic		Reside	ntial		Busin	ess		Invest	ment		All Real E	state
2008	Total	Owned	Mortgage	Total	Owned	Mortgage	Total	Owned	Mortgage	Total	Owned	Mortgage
2009												
2010												
2011												
Own (at least	95%			37%			41%			96%		
one)	93%			37%			39%			95%		
	94%			36%			37%			95%		
	89%			22%			36%			92%		
1 st Mortgage	69%	72%		24%	63%		22%	52%		75%	78%	
	63%	67%		20%	55%		21%	52%		71%	75%	
	61%	65%		19%	63%		18%	49%		68%	71%	
	64%	71%		14%	63%		19%	54%		71%	77%	
2 nd Mortgage	18%	19%	27%	2%	4%	7%	1%	4%	7%	21%	21%	27%
	17%	18%	27%	2%	6%	7%	3%	4%	7%	20%	21%	28%
	16%	17%	26%	1%	4%	7%	2%	5%	9%	17%	18%	25%
	15%	16%	23%	1%	6%	9%	3%	8%	9%	17%	18%	24%

Characteristic		Reside	ntial		Busin	ess		Invest	ment		All Real E	state
2008 2009 2010 2011	Total	Owned	Mortgage									
Upside-Down	8% 9% 6% 14%	9% 10% 7% 16%	13% 15% 10% 22%	1% 3% 1% 2%	4% 2% 4% 11%	6% 6% 6% 17%	3% 3% 3% 4%	6% 6% 8% 11%	12% 12% 15% 15%	11% 13% 8% 18%	11% 14% 9% 20%	14% 19% 12% 26%
Mortgaged for Business Purposes	18% 16% 15% 14%	19% 17% 16% 16%	26% 25% 24% 22%	5% 6% 2% 5%	9% 16% 9% 22%	20% 20% 20% 35%	2% 5% 2% 3%	6% 6% 5% 10%	11% 11% 9% 18%	23% 21% 17% 19%	24% 22% 18% 21%	30% 29% 21% 26%
Used as Collateral	9% 6% 7% 11%	10% 7% 7% 12%	13% 10% 11% 17%	7% 4% 4% 5%	19% 11% 19% 24%	30% 30% 30% 38%	2% 3% 2% 2%	5% 5% 6% 5%	10% 10% 12% 9%	16% 11% 11% 15%	17% 14% 11% 16%	21% 16% 16% 21%
N	690 635 734 737	654 618 693 672	471 416 457 478	690 635 734 737	324 248 324 239	198 135 198 157	690 635 734 737	314 278 310 286	158 168 166 158	690 635 734 734	668 609 708 688	539 472 537 540

Source: Dennis (2012) (Table 9 in Dennis (2012), rearranged by authors)

The Impact of the Foreclosure Crisis and the Great Recession on the Prospects for Wealth Building (Including Homeownership) for Families and Communities of Color

The prospects for wealth building, including homeownership, for families and communities of color will depend not only on the speed of the economic recovery but also on the future of the Government Sponsored Enterprises (GSEs; discussed below) and the definition of the Qualified Residential Mortgage (QRM; see Carr et al. (2011), among others), as homeownership is critical when it comes to building wealth. The wealth disparity between non-Hispanic Whites and people of color is primarily attributable to the substantially higher homeownership rate for the former group, along with the location of those properties. The economic crisis, including the foreclosure crisis, has widened the wealth gap, and plans to restructure the mortgage market will need to factor in affordable homeownership, including affordable homeownership for borrowers of color.

In September 2009, the U.S. Government Accountability Office (GAO) reviewed studies and data, and interviewed housing finance experts and officials from the enterprises, the Federal Housing Finance Agency (FHFA), Departments of the Treasury and the U.S. Department of Housing and Urban Development, the Federal Reserve, lenders, and community groups. They outline the following three options, which generally fall along a continuum with some overlap in key areas:

- "Reconstitute the enterprises as for-profit corporations with government sponsorship but place additional restrictions on them [...];
- Establish the enterprises as government corporations or agencies [...]; and
- Privatize or terminate them. (U.S. Government Accountability Office, 2009, n.p.)

More specifically, the GAO provides a summary of implications of the options to revise the enterprises' structures, given in Table 19 below.

Table 19: Summary of Implications of the Options to Revise the Enterprises' Structures

	Reestablish as Government-Sponsored Enterprises (GSEs)	Establish Government Corporation or Agency	Privatize or Terminate
Ability to provide liquidity and support to mortgage markets	Reconstituting the enterprises as GSEs may provide liquidity and other benefits to mortgage finance during normal economic times. However, as for-profit entities, their capacity to support housing finance during stressful economic periods is open to question.	A government entity, with access to Treasury-issued debt, may be positioned to provide mortgage liquidity during normal and stressful economic periods. But, without a portfolio to hold mortgages, its capacity to do the latter also may be limited. Treasury or the Federal Reserve may need to step in and purchase mortgage assets under such circumstances.	If other financial institutions assumed key enterprise activities such as mortgage purchases and MBS issuance, a liquid mortgage market could be reestablished in normal economic times. But, private mortgage lending has collapsed in the current recession. A federal mortgage insurer could help ensure that private lenders provide mortgage funding in stressful economic periods.
Support housing opportunities for targeted groups	For-profit status and elimination of mortgage portfolios could limit enterprises' capacity to fulfill this objective. But, permitting smaller mortgage portfolios, expanding FHA programs, or providing direct financial assistance to targeted borrowers could be alternatives.	Might be expected to perform this function as a public entity. But, may face challenges implementing a program to purchase mortgages for such groups if they cannot hold these mortgages in portfolio. FHA insurance programs could be expanded as an alternative.	Would eliminate traditional basis (government sponsorship) for previous programs that required enterprises to serve mortgage credit needs of targeted groups. But, a federal mortgage insurer could be required to establish such programs due to its government sponsorship.
Potential safety and soundness concerns	Although additional regulations could minimize risks, safety and soundness concerns may remain as this option would preserve the enterprises' previous status as for-profit corporations with government sponsorship.	May mitigate risk due to lack of profit motive and the elimination of existing mortgage portfolios. However, managing the enterprises' ongoing MBS business still would be complex and risky, and a government entity may lack the staffing and technology to do so effectively.	In one scenario, risks would decrease as mortgage lending would be dispersed among many institutions. But, large institutions that assumed functions such as MBS issuance may be viewed as too big to fail, which could increase risks. A federal mortgage insurer also may not charge premiums that reflect its risks.
Key elements for potential regulatory and oversight structure	Reduce or perhaps eliminate the enterprises' mortgage portfolios, increase capital standards and impose regulations, such as executive compensation limits, and establish new ownership structures, as appropriate. Require financial disclosures to help ensure transparency and provide congressional oversight of the enterprises' and FHFA's performance.	Provide entity with flexibility to hire staff and obtain necessary technology. Establish risksharing arrangements with the private sector, appropriate disclosures of risks and liabilities in the federal budget to help ensure transparency, and robust congressional oversight of operations.	Fragmented U.S. financial regulatory structure would need to be revised, as GAO has identified in previous reports, to help oversee risks of large institutions that may assume enterprise functions or acquire their assets. Oversight structure for a federal mortgage insurer also would need to be established.

Source: U.S. Government Accountability Office (2009)

In December 2010, The Congressional Budget Office (CBO) subsequently discussed three broad approaches for the future of the secondary mortgage market, given the cost to taxpayers of the government takeover of the GSEs and given the structural weaknesses that contributed to the financial problems of the GSEs. Those alternatives could take one of the following forms:

- Hybrid public/private model in which the government would help to ensure a steady supply of
 mortgage financing by providing explicit guarantees on privately issued mortgages or MBSs that
 met certain qualifications;
- Fully public model in which a wholly federal entity would guarantee qualifying mortgages or MBSs; or
- Fully private model in which there would be no special federal backing for the secondary mortgage market (Congressional Budget Office, 2010, p. vii).

Table 20 below illustrates the key features of alternatives for the secondary mortgage market. Table 21 below illustrates the key factors for assessing alternatives for the secondary mortgage market. Both tables address common design issues, such as how to structure and price any federal credit guarantees, whether and how to support affordable housing, and how to structure and regulate the secondary market.

Table 20: Key Features of Alternatives for the Secondary Mortgage Market

	Hybrid Public/Private Model	Fully Federal Agency	Fully Private Market
Existing operating assets of Fannie Mae and Freddie Mac	Handed over to specialized issuers of federally backed MBSs (could be non-profit, cooperative, or private firms), sold to private-label issuers, or liquidated	Used for operations of agency, sold to private-label issuers, or liquidated	Sold to private-label issuers or liquidated
Licenses to issue federally guaranteed MBSs	Under "public-utility model," only a few; under "competitive market-maker model," available to any firm meeting specified criteria	None; operations undertaken by agency	None
Federal guarantees for loans or MBSs	Explicit, possibly covering only catastrophic risks	Explicit	None (phased out)
Private capital's role in secondary market	Absorbs most or all losses, except in cases of unusually large shocks	None on federally guaranteed securities; absorbs all losses on private-label securities	Absorbs all losses
Allowable activities for federally guaranteed securitizers	Under "public-utility model," restricted to issuing MBSs and holding very limited portfolios; under "competitive market- maker model," restricted only enough to limit spillover of risk to government	Issuing guarantees and possibly holding portfolios of mortgages and MBSs	Not applicable
Support for affordable housing	Could occur through terms on federal guarantees, fees on issuers of federally backed MBSs, or government agencies	Could occur through agency	No special role; could occur through government agencies
Role of issuers of private- label MBSs	Serve borrowers whose mortgages do not qualify for federal guarantees	Serve borrowers whose mortgages do not qualify for federal guarantee	Dominant players in secondary market, along with other private financial institutions

Source: Congressional Budget Office (2010)

Table 21: Key Factors for As	sessing Alternatives for the S		
	Hybrid Public/Private Model	Fully Federal Agency	Fully Private Market
Supply of financing for mortgages	Under normal market conditions, the supply of funding for federally backed mortgages would be fairly stable. During periods of market stress, financing could become less available, especially under versions with narrower federal guarantees and more reliance on private capital.	The supply of funding for federally backed mortgages would be fairly stable—both in normal times and during periods of market stress—because uncertainty about the strength of the federal guarantee would be minimized.	The market would be more susceptible to fluctuations in the supply of funding. During periods of acute market stress, funding could become extremely scarce without federal intervention.
Support for affordable housing	Mortgages that satisfied affordable-housing goals could be subsidized through lower federal guarantee fees, with the subsidy cost shown in the budget. Or responsibility could be transferred to a fully federal agency, such as the federal Housing Administration.	Subsidies could be delivered by the agency and would be shown in the federal budget.	Responsibility would be transferred to a fully federal agency, such as the Federal Housing Administration, or subsidies would be discontinued.
Taxpayer's exposure to risk	Intermediaries in the secondary market would bear all credit losses until their capital was exhausted, limiting the credit risk that taxpayers would face. If only a few specialized firms participated in the market, they might receive government support if their solvency was threatened.	Taxpayers would bear the entire credit risk on guaranteed mortgages. Private-label issuers seen as critical to the functioning of the mortgage market might receive government support during periods of acute market stress.	Taxpayers' exposure to credit risk would be very small under normal market conditions. Taxpayers could be exposed to greater risk through federal deposit insurance if banks bore more credit risk. Firms seen as critical to the functioning of the mortgage market might receive government support during periods of acute market stress.
Pricing of federal guarantees	The government could have trouble fully pricing catastrophic risk or setting risk-sensitive prices, which would probably shift some cost to taxpayers.	The government probably has weaker incentives than private guarantors do to charge fees that would fully compensate for the risks associated with guarantees, suggesting that taxpayers would probably bear a cost.	No explicit federal guarantees; however, any implicit federal guarantees that arose would be free to the private issuers of MBSs and hence would entail a cost to taxpayers.
Incentives to control risk taking	The presence of federal guarantees would create an incentive for excessive risk taking. Limiting government guarantees and charging risk-based prices for them would reduce that incentive. In addition, private intermediaries would have an incentive to set risk-based prices and monitor risk taking.	Having the government absorb all credit losses would create a strong incentive for excessive risk taking by originators. The government could counter that incentive by setting risk-based prices for guarantees and by restricting eligibility for guarantees to safer mortgages. Incentives to limit risk taking would probably be weaker than if private capital was in the position to absorb some losses.	Financial intermediaries would have a relatively strong incentive to manage risk, but it would be weakened if their obligations were seen as implicitly guaranteed by the government.

	Hybrid Public/Private Model	Fully Federal Agency	Fully Private Market
Other considerations	Depending on the model implemented, government control over the secondary mortgage market could be greater or less than under the precrisis model. Tensions between public and private purposes might remain, particularly under models with a small number of highly regulated intermediaries. Subsidies could tilt the allocation of capital in the economy too far toward housing and away from other uses.	The government would control a large segment of the capital market. The market would probably be less dynamic, and there would be less incentive for produce innovation. Tensions between public and private purposes would be minimized. Subsidies could tilt the allocation of capital in the economy too far toward housing and away from other uses.	The government would regulate the secondary mortgage market but otherwise not intervene. The market would not rely on the viability of any one firm or business model. Tensions between public and private purposes would be minimized.

Source: Congressional Budget Office (2010)

The Congressional Budget Office (2010) discusses many important and interesting aspects, among them affordable housing which is of special interest to us. Concerns are "whether to continue relying on targets set for firms by regulators, as under the pre-crisis model, or whether to transfer responsibility to fully federal entities, such as the FHA. A related issue is whether support for affordable housing would be paid for through general revenues, fees charged to institutions securitizing federally guaranteed mortgages, or mandates on those institutions to force them to cross-subsidize mortgage guarantees" (Congressional Budget Office, 2010, p. 35).

In February 2011, The Department of the Treasury and the U.S. Department of Housing and Urban Development (2011) outlined three options for the future structure of the GSEs and the Federal Housing Administration. As outlined in their document, the three options are as follows:

- Option 1 proposes a privatized system of housing finance, with government insurance role limited to FHA, USDA, and Department of Veterans' Affairs' assistance for narrowly targeted groups of borrowers. "This option would dramatically reduce the government's role in insuring or guaranteeing mortgages, limiting it to FHA and other programs targeted to credit-worthy lower- and moderate-income borrowers. While the government would continue to provide access for this targeted segment of borrowers, it would leave the vast majority of the mortgage market to the private sector" (p. 27).
- Option 2 proposes a privatized system of housing finance, with assistance from FHA, USDA, and Department of Veterans' Affairs for narrowly targeted groups of borrowers and a guarantee mechanism to scale up during times of crisis. "As in the option above, FHA and other narrowly targeted programs would provide access to mortgage credit for low- and moderate-income borrowers, but the government's overall role in the housing finance system would be dramatically reduced. In this option, however, the government would also develop a backstop mechanism to ensure access to credit during a housing crisis" (p. 28).
- Option 3 proposes a privatized system of housing finance, with FHA, USDA, and Department of Veterans' Affairs providing assistance to low- and moderate-income borrowers and catastrophic reinsurance behind significant private capital. "Under this option, a group of private mortgage guarantor companies would guarantee securities backs by mortgages for which the government would provide reinsurance to the holders to those securities, which would be paid out only if shareholders of the private mortgage guarantors have been entirely wiped out" (p. 29).

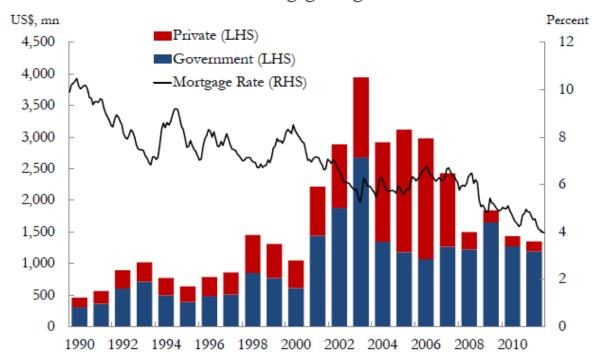
Subsequently, in February 2012, the Federal Housing Finance Agency (FHFA) submitted a strategic plan for the next phase of the conservatorships of Fannie Mae and Freddie Mac (DeMarco, 2012). They justify going forward with the following arguments:

- "The Enterprises' losses are of such magnitude that the companies cannot repay taxpayers in any foreseeable scenario;
- Operational infrastructures at each company are working but require substantial investment to support future business. The question is whether to improve the current infrastructure or to consider this an opportunity to build something new;
- In the absence of other comparable market infrastructure, minimizing future taxpayer losses and ensuring market liquidity and stability requires preserving the Enterprises as working companies [...];
- Although the housing finance system cannot be called healthy, it is stable and functioning, albeit with substantial ongoing government support;
- Congress and the Administration have not reached consensus on how to resolve the
 conservatorships and define a path for housing finance. Legislative proposals have begun to
 emerge, but enactment soon appears unlikely." (DeMarco, 2012, p. 9-10)

Fannie Mae and Freddie Mac guarantee about \$100 billion per month in new mortgage production, ranging from about 75 percent of mortgages (Congressional Budget Office, 2010; De Marco, 2012), over 82 percent of mortgages for homes with up to four units originated (Millstein, 2012), as illustrated in Figures 1 and 2 below, to "some 90 percent of all home mortgage loans" (Mortgage Finance Working Group, 2011, p. 2; Congressional Budget Office, 2010).

Figure 1: Absolute Amount and Proportions of U.S. Residential Mortgage Originations, 1990 to 2010

U.S. Residential Mortgage Originations and Rates

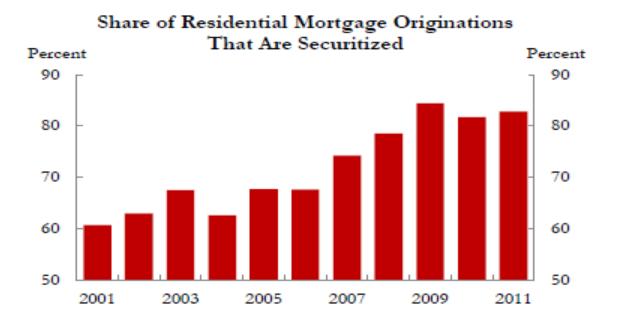


Sources: Federal Reserve Board; Inside Mortgage Finance.

Notes: One-to-four family mortgages. Contract rate on 30-year, fixed-rate conventional home mortgage commitments.

Source: Millstein (2012)

Figure 2: Proportion of Residential Mortgage Originations Securitized, 2001 to 2011



Source: Inside Mortgage Finance.

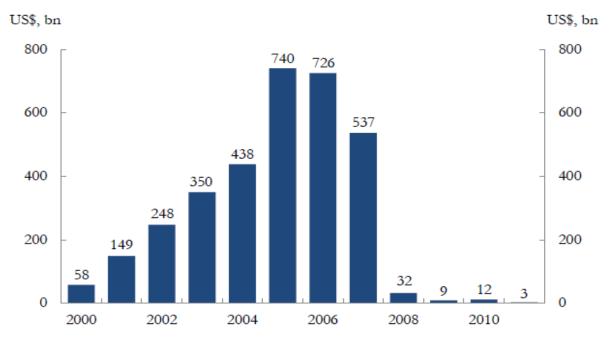
Notes: One-to-four family mortgages.

Source: Millstein (2012)

Over the past few years, commercial banks have retrenched from housing finance, as shown in Figures 3 and 4 below (see also Mortgage Finance Working Group, 2011).

Figure 3: Annual Percentage Change of Real Estate Loans Held by Commercial Banks, 2008 to 2011

Private-Label MBS Issuance



Source: Securities Industry and Pinancial Markets Association.

Source: Millstein (2012)

Real Estate Loans Held by Commercial Banks, Annual Percent Change Percent Percent 0 0 (0.1)-1 -1 -2 -2 -3 -3 -4 -5 -5 (5.6)(5.6)

Figure 4: Amount of Private-Label Mortgage Backed Securities Issued, 2000 to 2010

Source: Federal Reserve Board.

2008

Source: Millstein (2012)

-6

Yet, "no private sector infrastructure exists today that is capable of securitizing the \$100 billion per month in new mortgages being originated. Simply shutting down the Enterprises would drive up interest rates and limit mortgage availability" (DeMarco, 2012, p. 2) as "unlike the banking industry, there are not thousands of potential firms ready to step into the business of mortgage securitization. Indeed, outside of the securitization available through the Government National Mortgage Association (Ginnie Mae) for loans primarily backed by FHA, there is little else in place today to assume the secondary market functions served by the Enterprises" (DeMarco, 2012, p. 9).

2010

2011

DeMarco (2012) identified three strategic goals for the next phase of the conservatorships:

"Build. Build a new infrastructure for the secondary mortgage market.

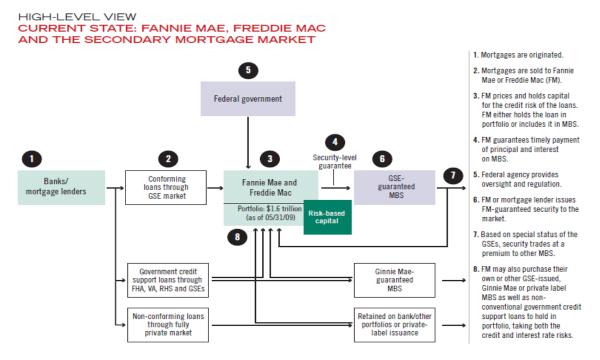
2009

- Contract. Gradually contract the Enterprises' dominant presence in the marketplace while simplifying and shrinking their operations; and
- Maintain. Maintain foreclosure prevention activities and credit availability for new and refinanced mortgages" (DeMarco, 2012, p. 2).

Over the past several years, numerous proposals about the future of the GSEs have been discussed (see Carr et al., 2011; Immergluck, 2011; and Mortgage Finance Working Group, 2009, among many others). The central question has remained whether a government guarantee is essential to a functioning mortgage market, especially for low-income borrowers and borrowers of color. Until recently, the GSEs had a borrowing advantage as they were allowed to issue debt securities at interest rates almost as low as Treasury securities. Then, gradual price increases based on risk and the cost of capital were announced. The Temporary Payroll Tax Cut Continuation Act of 2011 required the FHFA "to increase guarantee fees by at least an average of 10 basis points and further directed that FHFA consider the cost of private capital and the risk of loss in setting guarantee fees" (DeMarco, 2012, p. 15). These developments will most likely impact first-time homeownership, especially by borrowers of color. Not many proposals focus on this issue, however.

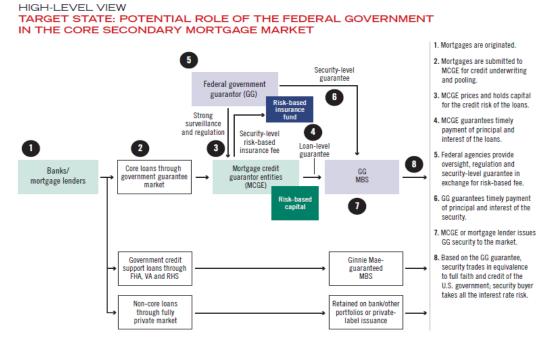
The Mortgage Bankers Association (2009b; see also 2009a) compares and contrasts the current state of the GSEs and the secondary mortgage market with the potential role of the federal government in the core secondary mortgage market, as illustrated in Figures 5 and 6 below.

Figure 5: High-Level View of the Current State: Fannie Mae, Freddie Mac, and the Secondary Mortgage Market



Source: Mortgage Bankers Association (2009b)

Figure 6: High-Level View of the Target State: Potential Role of the Federal Government in the Care Secondary Mortgage Market



Source: Mortgage Bankers Association (2009b)

The two main elements of the MBA proposal are the mortgage credit-guarantor entities (MCGE) and "wrap" (GG) securities guaranteed by the federal government. The MBA suggests that the MCGEs "should be privately owned, mono-line institutions focused solely on the mortgage credit guarantee and securitization business. [...] The number of MCGEs should be based on the goals of a) competition, b) strong and effective regulatory oversight, c) efficiency and scale, d) standardization, e) security volume and liquidity, f) ensuring no one MCGE becomes 'too big to fail' and g) the transition from the current government sponsored entity (GSE) framework. Initially, the number of MCGEs should be either two or three. The regulator would have the ability to increase that number over time, through the granting of charters, as the market develops" (Mortgage Bankers Association, 2009, p. 6). The MBA (2009) suggests that the GG would be responsible for the standardization of mortgage products, indentures, and mortgage documentation for the core mortgage market. "The GG is not intended to support the entire mortgage market, but rather only those products needed to keep the secondary market for core mortgage products liquid and functioning through all environment. There would continue to be key roles for FHA, VA, RHS and Ginnie Mae as well as for the fully private market, particularly as such roles evolve in support of public or social housing policy goals and objectives. FHA, VA, RHS and Ginnie Mae would continue to play critical roles in providing government credit support for affordable housing, while the fully private market would provide finance vehicles for mortgages that fall outside of core product profiles" (Mortgage Bankers Association, 2009, p. 8). The MBA points out risk-based pricing in connection with the MCGEs. This means that those borrowers who do not wish to go through the FHA, the VA, the RHS, and Ginnie Mae might be priced out of the primary market. This might especially affect borrowers of color and communities of color, as shown in the discussion about the Qualified Residential Mortgage (QRM), shown in Carr et al. (2011).

The National Association of Home Builders (NAHB) suggests transitioning "Fannie Mae and Freddie Mac, in an orderly fashion over time, to a new securitization system for conventional mortgages backed by private capital and a privately funded federal mortgage-backed securities insurance fund" (National Association of Home Builders, 2012, p. 1). They also suggest having a federal backstop to provide investors assurance that their principal and interest will be delivered as promised, but this support "should be limited to catastrophic situations where carefully calibrated levels of private capital and insurance reserves are depleted before any taxpayer funds are employed to shore up the market. This would be done by creating a privately funded insurance pool for conventional mortgage-backed securities (MBS) that would be similar to insurance fund that secures savings deposits through the Federal Deposit Insurance Corporation (FDIC)" National Association of Home Builders, 2012, p. 1).

More specifically, Housing Finance Entities (HFEs) would be chartered to purchase mortgages from loan originators and to bundle the loans into securities. The HFEs could be housed inside the infrastructure of the twelve Federal Home Loan Banks (FHL Banks) or could be created out of the infrastructure left behind by Fannie Mae and Freddie Mac. The NAHB suggests that the securitization system should operate under the oversight of a strong independent regulatory agency to ensure all aspects of safety and soundness and that the agency should be governed by a board similar to the body governing the FDIC. While the NAHB proposal is well thought out and fairly detailed, it does not address affordable homeownership, including homeownership by people of color.

Millstein (2012) argues that any responsible transition by the government from the status quo must meet five objectives:

- 1. "Protect the economy
 - A rapid withdrawal of government support for mortgage credit will drive down house prices and destabilize the broader financial system;
- 2. Fulfill the government's promise to holders of Fannie and Freddie MBS and debt securities
 - These are the same investors that fund Treasury debt;
 - We cannot afford to undermine the credibility of the full faith and credit of the United States, given our mounting debt burden and continuing borrowing needs;
- 3. Provide an explicit, appropriately-priced government backstop for qualified mortgage products, not entities
 - The government should regulate financial entities involved in mortgage finance, not underwrite their balance sheet risks;
- 4. Ensure adequate private capital
 - Private mortgage insurers and securitizers must be adequately capitalized to absorb all
 losses in most downturns, protect the government against losses on its backstop, and avoid
 the need for future government bailouts;
- 5. Get the taxpayer's money back
 - Taxpayers should be repaid for supporting the housing market to date and during the transition to a new system." (Millstein, 2012, p. 9)

Based on these five objectives, Millstein (2012) suggests establishing a Federal Mortgage Insurance Corporation (FMIC), which could be born out of the existing Federal Housing Finance Agency and which would ensure stable credit for the housing system and protect taxpayers against loss by (a) establishing standards for qualifying mortgage products and practices, (b) reinsuring mortgage-backed securities (MBS) comprised of mortgages that meet stringent underwriting and disclosure criteria, and (c) supervising participating MBS securitizers and new private MBS insurers for safety, soundness, and capital adequacy. The FMIC would be independent but must be insulated against political interference, similar to the Federal Deposit Insurance Corporation (FDIC). Securitizers and private MBS insurers are first in line to cover losses on a conforming MBS pool.

The FMIC would charge a fee to guarantee incremental shortfalls in payments on the MBS pool and force the securitizer and/or the MBS insurer to hold sufficient capital to cover losses up to the point at which the FMIC's reinsurance attaches. The reinsurance fee would be determined by reference to private markets and adjusted to a smooth transition to the new system. It would address stresses in the financial markets and recoup losses over time, like other successful public insurance programs. Similar to the FDIC Deposit Insurance Fund, fees collected by the FMIC would be placed in a reserve fund that builds over time and could be used to offset losses from any periods in which the reinsurance was underpriced (Millstein, 2012). While Millstein's proposal is very sophisticated, it does not answer the question what would happen to homeownership by people of color.

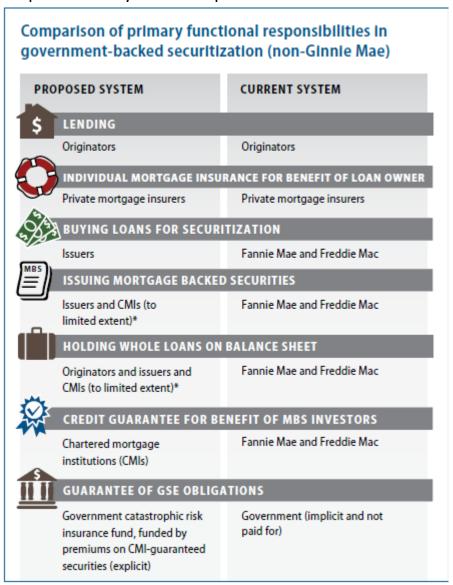
Unlike other proposals discussed above, the Mortgage Finance Working Group (2011; see also Wartell, 2011) focuses not only on revamping the mortgage market but on middle-class and underserved borrowers in particular. The authors of that study think that the new mortgage finance system should be guided by five overarching principles:

- "Liquidity: provide participants in the capital markets with the confidence to deliver a
 reliable supply of capital to ensure access to mortgage credit, every day and in every
 community, through large and small lenders alike;
- Stability: rein in excessive risk taking and promote reasonable products backed by sufficient capital to protect our economy from destructive boom-bust cycles such as the one we are now struggling to overcome, and the ones that used to plague our economy before the reforms of the 1930;
- Transparency and standardization: require underwriting, documentation, and analytical standards that are clear and consistent across the board so consumers, investors, and regulators can accurately assess and price risk, and regulators can hold institutions accountable for maintaining an appropriate level of capital;
- Affordability: ensure access to reasonably priced financing for both homeownership and rental housing;
- Consumer protection: ensure that the system support the long-term best interest of all borrowers and consumers and protects against predatory practices." (Mortgage Finance Working Group, 2011, p. 2-3)

Interestingly, the authors of that study divide the homeownership and rental housing markets into three parts: first, underserved borrowers or tenants, whose housing needs (whether as homeowners or renters) may require some direct government support; second, middle-class borrowers or tenants, whose housing needs require secondary market liquidity and long-term finance though a limited government backstop of the mortgage finance marketplace; and third, higher income and wealthy borrowers and tenants, whose housing needs require government financial intervention in case mortgage markets freeze.

The Mortgage Finance Working Group (2011) proposes a new system that preserves the traditional roles of mortgage originators but moves some of the functions previously provided by Fannie Mae to three new actors: issuers, Chartered Mortgage Institutions (CMIs), and a Catastrophic Risk Insurance Fund. An overview of the new suggested system is provided in Figure 7 below.

Figure 7: Comparison of Primary Functional Responsibilities in Government-Backed Securitization



Source: Mortgage Finance Working Group (2011)

Issuers, private entities instead of Fannie Mae and Freddie Mac, would be buying loans for securitization and issuing mortgage-backed securities. Issuers would purchase credit insurance from the new Chartered Mortgage Institutions for those MBSs and the loans backing them if they meet certain standards. Chartered Mortgage Institutions, also private, would be regulated by a federal agency and would be private investors of mortgage-backed securities, which would result in "a guarantee of timely payment of principal and interest on the securities, typically issued by others, backed by loans eligible for government support through the Catastrophic Risk Insurance Fund" (Mortgage Finance Working Group, 2011, p. 6). The Catastrophic Risk Insurance Fund would be a government-run fund, funded by premiums on the mortgage-backed securities guaranteed by the Chartered Mortgage Institutions. The fund would be explicit and limited, but it would be able to step in in case of financial failure of the Chartered Mortgage Institutions, continuing the timely payment of principal and interest to investors. This fund would be similar to the current Federal Deposit Insurance Corporation's Deposit Insurance Fund.

The Mortgage Finance Working Group (2011) estimates that the cost of a 30-year fixed rate mortgage would probably increase by about 50 basis points, or 0.5 percent. They acknowledge that there will still be underserved borrowers, tenants, and communities. Thus, some government support will be needed, for example though the Federal Housing Administration. The suggested Chartered Mortgage Institutions would have an obligation to provide an equitable outlet for *all* primary market mortgages, not just limited classes of loans, "meeting the standards for the guarantee of well-designed, sustainable loans, rather than serving only a limited segment of the business such as higher-income portions of the market" (Mortgage Finance Working Group, 2011, p. 7).

CONCLUSION

Recently, some have questioned whether homeownership should be a desirable public policy goal (Davis, 2012). For example, Florida (2009 and 2010) argues that U.S. government policies should encourage renting, not buying, and suggests that U.S. housing policy has "created a workforce too often stuck in place, anchored by houses that cannot be profitably sold, at a time when flexibility and mobility are of great importance" (Florida, 2009, p. 15). However, despite some questioning homeownership, evidence (discussed below) shows that it remains an important priority for many Americans.

In mid-May 2012 The Tarrance Group (2012; see also Joint Center for Housing Studies of Harvard University, 2012) surveyed 1,000 registered "likely" voters about their attitudes, among them attitudes about homeownership. Among other questions, they asked how important homeownership is for the respondent personally, using a scale from zero to ten, where zero means "not at all important" and ten means "extremely important." The mean score was 8.6; for 62 percent, homeownership was extremely important, for 24 percent it was very important, for eight percent it was somewhat important, and for six percent it was not important at all. In a follow-up question, the survey administrators asked about whether homeownership is (a) more important, (b) just as important, or (c) less important than it was five years ago. Thirty-three percent stated that homeownership was more important, fifty-one percent answered that it was just as important, and 12 percent that it was less important to them (while four percent were unsure). In another follow-up question with multiple answers the researchers asked those 850 respondents who answered "more important" or "just as important" to the previous question about the single most important reason why homeownership is "most important" or "just as important." In sum, 45 percent stated financial reasons while 44 percent stated personal reasons. With regard to the former, 19 percent stated that homeownership is a better financial choice than renting, 12 percent pointed out the investment or resale value, 10 percent stated ownership, and four percent mentioned the tax break for mortgage interest. With regard to the latter, 19 percent stated that homeownership is a better option for the family, 17 percent stated security and safety, eight percent pointed out privacy, and 12 percent pointed out other reasons.

While in the current day and age the shelter function might have gained in importance over the wealth building function, we believe that the wealth building function might gain in importance again in the near and distant future. Wealth building has been difficult in the recent past: Interest rates for savings products are low and will continue to be low, the stock market has remained volatile and requires sophisticated financial knowledge, and a college degree does not guarantee sustainable employment given the economic crisis in the short run and the economic restructuring in the long run. In 2005, right

at the peak of the house price bubble, Belsky and Retsinas (2005) stated that "for most Americans homeownership constitutes a wealth-building strategy. For lower-income people, it is the only real wealth-building strategy" (Belsky and Retsinas, 2005, p. 9).

Cramer et al. (2012; see also Cramer et al., 2010) point out that the federal budget "continues to allocate a large amount of resources to policies that help families accumulate resources and build wealth. Most of these, however, disproportionately benefit higher-income earners. Missing are proposals that would create new ways to support the upward mobility of those starting on the lower rungs of the latter" (Cramer et al., 2012, p. 3). Exceptions in the realms of savings and investment, retirement security, and homeownership are the Assets for Independence Act, which provides grants to community-based non-profits and government agencies to implement Individual Development Account (IDA) programs; the Volunteer Income Tax Assistance (VITA) program; the proposed Bank on USA Initiative, which would help increase access to affordable and high-quality financial services for the unbanked and under-banked households by seeding local initiatives; the AutoIRA proposal; the HOME Investment Partnerships; housing counseling assistance; the Family Self-Sufficiency Voucher Program; the Federal Housing Administration efforts; anti-foreclosure efforts (e.g., the Home Affordable Modification Program HAMP); and Rural Housing Services.

Shiller (2012a and 2012b) discusses lottery-linked savings, crowd funding, benefit corporations, and participation nonprofit corporations, all of which might be interesting potential wealth building alternatives for some. Nevertheless, we think that low- and middle-income people will continue to invest in homeownership. The foreclosure crisis has brought a financial tsunami to many homeowners in our nation. Given the persistent importance of homeownership, more research should be undertaken on the wealth stripping of homeowners and savers. Further research should also be conducted on successful strategies for creating sustainable homeownership opportunities for low- and moderate-income populations. There are many parts of the United States where homeownership is not only affordable but also comparable to renting in terms of monthly costs (Anacker and Li, n.d.). How many or what segment of low- and moderate-income households do not need subsidies but just need access to sustainable loans? How many may need downpayment assistance and what are the models for downpayment assistance programs? These areas and others warrant further research.

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NCRCPub-201210-2000 • October 2012