BALANCING AFFORDABILITY AND OPPORTUNITY: AN EVALUATION OF AFFORDABLE HOMEOWNERSHIP PROGRAMS WITH LONG-TERM AFFORDABILITY CONTROLS

CROSS-SITE REPORT

Final Report
October 2010

Prepared by:

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Executive Summary

A growing number of local affordable homeownership initiatives allow income-eligible families to purchase homes at below-market prices and, in return for the subsidized purchase price, the owner's potential capital gains from the resale of the home are limited by resale restrictions. These long-term affordable ownership programs are known by different names in different parts of the country, but in recent years the term "Shared Equity Homeownership" has been increasingly used to describe them. By creating a stock of homes that resell for prices that remain within the reach of lower income households, shared equity programs can serve a larger number of families for the same amount of subsidy dollars, when compared to programs in which families are provided grants to purchase their homes and then allowed to pocket these public subsidies and a hundred percent of their property's capital gains when they resell.

Although shared equity homeownership programs have been in place for many years, there are relatively few empirical studies that document their benefits. A major reason for the lack of information about these programs is the difficulty of collecting client-level information about families who purchase homes under such programs, particularly across multiple sites. This study fills such a void. It presents outcomes for seven shared equity programs: the Champlain Housing Trust (CHT), located in Burlington, Vermont; Northern Communities Land Trust (NCLT) in Duluth, Minnesota; Thistle Community Housing in Boulder, Colorado; the Dos Pinos Housing Cooperative in Davis, California; Wildwood Park Towne Houses in Atlanta, Georgia; A Regional Coalition for Housing (ARCH) in eastern King County, Washington, and the San Francisco Citywide Inclusionary Affordable Housing Program. Using client-level data reported by each of the programs, we analyzed the following four issues: preserving affordability, personal wealth creation, security of tenure, mobility.

Our findings, summarized below, show that these shared equity programs are successful in creating homeownership opportunities for lower income families that allow purchasers to accumulate assets, while, at the same time, creating a stock of affordable housing that remains within the financial reach of subsequent lower income homebuyers. Moreover, homeownership among shared equity programs is sustainable: only a very small number of shared equity homeowners lose their home because of foreclosure; and a very high percentage of these low-income, first-time homeowners (over 90 percent in the three programs for which data were available) *remain* homeowners five years after purchasing a shared equity home. Finally, shared equity homeowners are not trapped: they resell their homes with the same frequency and for the same reasons as other homeowners. In the three programs for which we were able to obtain information about the subsequent housing situations of these movers, we found that over two-thirds of them moved into owner-occupied, market-rate housing after reselling their shared equity homes. The following discussion summarizes our key findings detailed in the study.

- *Affordability: Are the programs effective in creating and preserving affordability for low- and moderate-income homebuyers by restricting price appreciation so that homes, upon resale, require a later buyer to earn no more real income than the initial purchaser?*

The median incomes (in 2008 $) of the households purchasing a shared equity home in all seven programs were well below the median family income (MFI) of the surrounding areas in which the programs operated. At the median, the programs sold homes to families between 35 and 73 percent of the HUD-determined area median family income. In addition to serving families earning well below the median income, these programs served a very high share of first-time homebuyers. One site (San Francisco) is limited to first-time homebuyers. Three other programs—NCLT, CHT, and Thistle served primarily first-time homeowners. At Dos Pinos, first-time homeownership rates are lower as many residents move to other units within the co-op as their families change size.

Our analysis began by calculating the change in average real minimum income required to purchase a home, comparing the cost of buying a home when it was initially purchased to the cost of buying that same home when it was resold to another income-eligible household. The largest increase in cost occurred at ARCH and NCLT (4.0 and 1.9 percent per year, respectively). The minimum income required to purchase resold homes at Dos Pinos decreased by 1.6 percent and, for Wildwood, 0.7 percent (i.e., the co-op fee, in constant dollars, declined over time) per year. At the remaining three sites, the cost of buying resold homes increased by no more than 1.1 percent per year. And, a majority of units sold across 6 of the 7 programs had a required real income at resale that was within 10 percent of the initial real required income.

Our analysis then evaluated the gain or loss in affordability for resold homes at each of the study sites by calculating the ratio of the minimum income required to purchase a home to an area's MFI and looking at the change in this ratio between when each home was purchased and sold. Therefore, if the required minimum income for a home is 50 percent of MFI at its initial sale, and then 54 percent at resale, the ratio increased by 4 percentage points.

The median change in this ratio decreased for two sites: Thistle and Dos Pinos. Two sites saw a small change in the ratio: Wildwood (0.3 percentage points) and the Champlain Housing Trust (0.9 percentage points); NCLT saw a modest increase of 1.7 percentage points. The remaining two sites (ARCH and San Francisco) had larger changes in the ratio for resold homes. However, even in communities where some erosion of affordability occurred, homes were resold at prices that remained affordable to buyers well below the area median income, In sum, our analyses of changes to required income (whether measured in absolute or relative terms) reached the same conclusion: resold units across all of the programs have remained affordable to households with incomes well below the area median.

- *Personal Wealth: Are the programs effective in building wealth for individual households, providing opportunities for financial gains that are unavailable to renters?*

In all seven programs the median rate of return realized by resellers ranged between a low of 6.5 percent at Dos Pinos to a high of 59.6 percent at ARCH. The median rate of return for resellers in all programs except for Dos Pinos was greater than the return that sellers would have realized if they had rented a unit and invested their down payment in either the stock market or purchased a 10-year Treasury bond at the time that they purchased their home. Had resellers invested their down payment amount in an S&P 500 index fund, they would have earned a median return ranging from a low of -0.1 percent in Thistle to a high of 10.6 percent in Dos Pinos. A comparable investment in 10-year Treasury bonds would have yielded a return, at the median, between 4.4 percent (in San Francisco) and 7.8 percent (in Dos Pinos).

- *Security of Tenure: Are the programs effective in maintaining homeownership by avoiding delinquency and foreclosure?*

  Although homeowners earn well below median incomes, very few had residential loans that were in delinquency or foreclosure. In the two cooperative programs, no owners are currently delinquent. The other programs ranged from a delinquency rate of 0.4 to 2.7 percent. Looking at foreclosure rates, three programs—Wildwood Park, Dos Pinos, and Thistle—had no homes presently in foreclosure as of the end of 2009. The highest foreclosure rates were in CHT, at 1.4 percent and NCLT, at 1.1 percent. In every program but one, the site's foreclosure rates were below that of their surrounding areas as of 2009. Looking over the life of these programs, the two limited equity cooperatives have never had a foreclosure. Thistle and ARCH had a cumulative foreclosure rate of just 0.6 percent. CHT and NCLT had somewhat higher foreclosure rates—2.8 and 3.0 percent—although in neither program has a home ever been lost from the program's portfolio because of foreclosure. A final measure of how effective these shared equity programs have been in helping low income families not only to attain homeownership but to sustain it is the percentage of buyers who remain homeowners five years after they purchase a home. For the three sites where we have data, over 91 percent of buyers were still homeowners after five years, much higher than the national norm of 50 percent for first-time, low-income homeowners.

- *Mobility: Are program participants able to sell their shared-equity homes and move into other housing and neighborhoods of their choice?*

  It does not appear that the owners of shared equity homes are moving at substantially lower rates than other first-time homebuyers. Annual turnover in the programs ranged from 5.5 percent at CHT to 8.6 percent at Dos Pinos. The median length of tenure for movers in most sites was three to four years, with two sites slightly higher: CHT and Wildwood resellers lived in their home 5.2 and 6.6 years, respectively. Most owners report leaving their homes not due to financial stress, but in response to family, life cycle, and employment changes. In two programs—NCLT and CHT—most movers resettle near the home they are leaving. By contrast, at two programs where housing costs are high in the neighborhoods surrounding their shared equity homes —Dos Pinos and Thistle— resellers tended to move further than the national average. Of the four sites for which we had data about the subsequent housing situations of residents who had sold their shared equity homes, all of them reported a high proportion of movers transitioning into another owner-occupied home. At three of the sites, most of these movers purchased market-rate, owner-occupied housing: 68 percent at CHT; 72 percent at Thistle, and 78 percent at NCLT. At the Dos Pinos cooperative, 54 percent of the movers purchased market-rate, owner-occupied homes, 42 percent shifted to rental housing, and 4 moved in with a family member subsequent to leaving their Dos Pinos home.

The results of our analysis of seven shared equity programs show that they deliver on their dual objective of providing sustainable homeownership that generates wealth-building opportunities for lower income families while maintaining a stock of affordably priced owner-occupied housing. In the wake of the recent foreclosure crisis, some housing market analysts are questioning the benefits of promoting homeownership, particularly for lower income families. But, as the results of this study show, shared equity programs allow low-income families to realize the financial benefits of homeownership with less risk of losing their homes to foreclosure. Therefore, shared equity programs could be an important part of a policy response to promote sustainable homeownership for lower income families in the future.

1. Introduction

Owning a home, traditionally, has been one of the most important ways for American families to gain a secure hold over their housing. It has also been a way to accumulate wealth, especially for lower income households.[1] Moreover, homeowners tend to be more satisfied with their homes and neighborhoods and contribute towards the stability of their communities though increased levels of local volunteer activities.[2] Consequently, there are a wide range of public policies that promote homeownership, particularly among lower income households. While some of these policies provide subsidized mortgages to income-eligible households, many policies rely on innovative mortgage products that allow families with lower incomes to qualify for loans that they otherwise could not afford.[3] These market innovations succeeded in increasing the nation's homeownership rate from 67.5 percent in the Q4 of 2000 to 69.0 percent in the Q4 of 2005.[4] The homeownership rate increased over this time period even though house prices rose, according to the Case/Shiller house price index, by 83 percent.

This increase in homeownership, however, proved not to be sustainable; the homeownership rate declined to 67.1 percent in the Q1 2010.[5] The decline in homeownership is due, in part, to the increased number of foreclosures, many of which result from families no longer being able to pay their mortgages after a combination of an interest rate reset, income loss and declining property values.[6] The mortgage crisis and housing crash has taught us a valuable lesson: that many of our policies implemented to increase homeownership rates, particularly among lower income households, are not sustainable, and may have done more harm than good.

Consequently, it is critical to separate initiatives that promote *sustainable* homeownership, which result in long-term benefits to lower income households and the neighborhoods in which they reside from the failed policies of the past decade. The high costs of housing mean that even entry level homes are frequently priced above what many lower-income families can sustainably afford. For this reason, many affordable homeownership programs provide purchase assistance loans or grants which bring the cost of homeownership within reach of income targeted buyers. While many of these programs are structured as "down payment assistance grants" to homebuyers, they are increasingly providing assistance far beyond the level of a typical down payment. In an environment where many governments are budget constrained, there is an increasing call for the

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[1] Boehm, Thomas P. and Alan M. Schlottmann. 2001. *Housing and Wealth Accumulation: Intergenerational Impacts*. http://www.jchs.harvard.edu/publications/homeownership/liho01-15.pdf

[2] Rohe, William M., Shannon Van Zandt and George McCarthy. 2001. *The Social Benefits and Costs of Homeownership: A Critical Assessment of the Research* http://www.jchs.harvard.edu/publications/homeownership/liho01-12.pdf.

[3] NCB Capital Impact. 2008. *Shared Equity Homeownership A new path to economic opportunity.* http://www.ncbcapitalimpact.org/uploadedFiles/downloads/SEH_Vision10-08.pdf.

[4] U.S. Bureau of the Census. *Housing Vacancies and Homeownership* (CPS/HVS). http://www.census.gov/hhes/www/housing/hvs/historic/index.html.

[5] U.S. Bureau of the Census. 2010. *Residential Vacancies and Homeownership in the First Quarter 2010.* April 26. http://www.census.gov/hhes/www/housing/hvs/qtr110/files/q110press.pdf.

[6] Kiff, John and Vladimir Klyuev. 2009. *Foreclosure Mitigation Efforts in the United States: Approaches and Challenges* http://www.imf.org/external/pubs/ft/spn/2009/spn0902.pdf.

program sponsor to preserve the public investment by maintaining the affordability of the assisted home.

Affordability can be preserved through a very wide range of different legal and financial mechanisms and, complicating matters, these mechanisms themselves are frequently known by different names in different regions of the country. "Subsidy recapture" programs require homebuyers to repay public subsidies when they sell their homes. Some recapture programs require repayment of only the initial principal at resale, while others require repayment of principal along with deferred interest. Others require sellers to repay principal along with a share of any home price appreciation. A different approach to the same problem involves retaining the subsidy in the assisted home and imposing a resale price restriction which enables future buyers to purchase the home at an affordable price. These price restriction programs are known by many names including: Permanently affordable, Long-term Affordable, Limited Equity, Below Market Rate, Moderately Priced Dwelling Units, Deed Restricted, etc. Davis[7] used the term "Shared Equity Homeownership" to refer to the full range of these programs which offer "resale restricted, owner occupied housing", and we adopt that term here.

As discussed below, shared equity homeownership programs provide an alternative approach that supports sustainable homeownership. Although there are different types of these programs, in general shared equity homeownership initiatives allow income-eligible families to purchase homes at below-market prices, thereby reducing the risk that the owner will have negative equity at some point in the future. In return for the subsidized purchase price, the owner's potential capital gains from the resale of the home are limited by resale restrictions,[8] creating a stock of affordable owner-occupied units with an opportunity to accumulate wealth. By creating a stock of homes that resell for prices that remain within the reach of lower income households, shared equity programs can serve a larger number of families for the same amount of subsidy dollars, when compared to programs in which families are provided grants to purchase their homes and then allowed to pocket these public subsidies and a hundred percent of their property's capital gains when they resell. The resale restrictions in shared equity homeownership programs, by contrast, retain these subsidies in the home itself, while limiting a homeowner's gains to something less than 100 percent. By this method, the homes are intended to remain affordable over time, eliminating (or minimizing) the need for additional subsidies to assist subsequent homebuyers.

The three most common models of shared equity homeownership initiatives are community land trusts, limited equity cooperatives and resale-restricted, owner-occupied houses or condominiums with affordability covenants (i.e., deed restrictions) lasting 30 years or longer.[9] Community land trusts provide their residents with the opportunity to own the physical structure of their home – but not the underlying land, which they lease from a local non-profit. This non-profit landowner (i.e., the CLT) either repurchases the homes at a below-market price whenever the present owners

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[7] Davis, John Emmeus. 2006. *Shared Equity Homeownership: The Changing Landscape of Resale-restricted, Owner-occupied Housing.* Montclair, NJ: National Housing Institute.

[8] NCB Capital Impact. 2008.

[9] Davis, 2006.

decide to resell or requires these owners to resell their homes to another income-eligible household for a below-market price determined by a formula embedded in the ground lease. Under the limited equity cooperative model, residents own shares in a cooperative housing corporation. They can resell these shares, but at prices that ensure continued affordability while allowing for modest equity growth. Deed-restricted homes provide lower income families with owner-occupied housing, which they may only resell to another income-eligible homebuyer for a formula-determined, "affordable" price. Covenants restricting the resale of these homes may expire after a certain number of years, or be permanent. Covenants must last for at least thirty years to be considered "shared equity homeownership," under the rule of thumb adopted by most practitioners.

Although shared equity homeownership programs have been in place for many years, there are relatively few empirical studies that document their benefits.[10] A major reason for the lack of information about these programs is the difficulty of collecting client-level information about families who purchase homes under such programs, particularly across multiple sites. This study fills such a void. We analyze data in this report from seven programs to quantify the effects of shared equity homeownership initiatives across different market contexts and varied types of programmatic alternatives. Our hope is that the results of the study will provide practitioners, funders, and policymakers with a much-needed empirical foundation for making decisions about designing, managing, and expanding shared equity homeownership programs.

The remaining sections of this cross-site report are organized as follows. The first section presents an overview of the seven sites. It is followed by a detailed case study analysis of each of the seven sites. After discussing the data and methods employed in this research, the cross-site report introduces the seven sites, their clients, and their local housing markets. We then present analyses that address the following programmatic outcomes:

- Affordability: Are the programs effective in creating and preserving affordability for low- and moderate-income homebuyers?
- Personal Wealth: Are the programs effective in building wealth for individual households, providing opportunities for financial gains that are unavailable to renters?
- Security of Tenure: Are the programs effective in maintaining homeownership by avoiding delinquency and foreclosure?
- Mobility: Are program participants able to sell their shared-equity homes and move into other housing and neighborhoods of their choice?

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[10] For existing studies, see, for example, Davis, John E. and Amy Demetrowitz. 2003. *Permanently Affordable Homeownership: Does the Community Land Trust Deliver on Its Promises*. Burlington, VT: Burlington Community Land Trust; Davis, John E. and Alice Stokes. 2009*. Lands in Trust, Homes that Last*. Burlington, VT: Champlain Housing Trust; and Gent, Cathleen Will Sawyer, John E. Davis, and Alison Weber. 2005. Evaluating *the Benefits of Living in the Burlington Community Land Trust's Rental Housing or Cooperative Housing*. Burlington, VT: Center for Regional Studies.

2. Data and Methods

NCB Capital Impact and the Urban Institute selected a diverse group of programs for study to maximize learning across different geographies, housing markets, and program models. Programs were required to have accumulated a portfolio of at least 60 resale-restricted, owner-occupied homes, to have had at least 40 resales within that portfolio, and to have maintained adequate and accessible records on their homebuyers. This evaluation assessed outcomes for three community land trusts (CLTs): the Champlain Housing Trust, located in Burlington, Vermont, Northern Communities Land Trust in Duluth, Minnesota, and Thistle Community Housing in Boulder, Colorado. We reviewed two limited equity cooperatives (LECs): the Dos Pinos Housing Cooperative in Davis, California, and Wildwood Park Towne Houses in Atlanta, Georgia. Finally, the study included two deed-restricted programs: A Regional Coalition for Housing in eastern King County, Washington, and the San Francisco Citywide Inclusionary Affordable Housing Program.

We calculated client- and program-level outcomes for these seven shared equity homeownership programs using information provided by the sites and created relevant benchmarks for comparisons using yields of 10-year Treasury bonds and stocks, measured by changes to the S&P 500 index. For each site, we developed a data collection protocol, consisting of client-level administrative data, a mobility survey of clients, and a program-level summary. A copy of the protocol can be seen in Appendix A.

The administrators for each of these shared equity homeownership programs were tasked with providing client-level data for every sale on housing prices, incomes, dates of home purchase, mortgage rates and terms, delinquencies and foreclosures, and other factors. Some sites maintained this information as administrative records in easily accessible electronic databases. Other sites undertook a labor-intensive process of searching hard-copy forms and county records to assemble this information. As described in each detailed case study, not every site was able to provide complete information for each element of interest. In some cases we had access to a sample of homeowner records (for example, only those residents who had resold their home), while some sites were not able to provide information about some topics for any residents.

In addition, to get at outcomes not available through administrative records, we designed a short web-based survey of program participants who have moved to answer key questions about the nature of that move. Because of the difficulty in finding residents who sold their homes and moved away from the program, the survey collected information about residents who have moved from the development since 2000. Only four of the seven programs maintain current contact information on their former homeowners, allowing only these programs to conduct the survey.

Finally, using program information and interviews with program staff, each site provided the answers to several program-level questions to assist in our understanding and description of their particular approach to shared equity homeownership.

Before collecting any data, we explained the template and procedures we would be using in a one-on-one webinar with each site. We answered questions staff had about the data collection process as they arose. After receiving the data, we conducted an extensive quality-control process that involved checking for outliers and inconsistencies. This process helped to reduce errors and ensured that variables were consistently defined across sites.

3. Description of the Programs and Their Clients

The seven shared equity homeownership programs described in this report vary considerably with respect to the markets they serve, the homebuyers they target, and the formulas and methods they use in maintaining the affordability of their homes. This section briefly summarizes the programs and their clients.

A Regional Coalition for Housing (ARCH) was created in 1992 through an agreement of several municipalities in eastern King County, Washington to create and preserve the supply of housing for low- and moderate-income households. Through December 2009, ARCH had sold homes to 722 families, including 186 resales. Each of the 15 cities in east King County is a voluntary member of ARCH.

The *Champlain Housing Trust* (CHT), a non-profit organization located in Burlington, Vermont, was created in 2006 in a merger between the Burlington Community Land Trust and Lake Champlain Housing Development Corporation, both of which were founded by the City of Burlington in 1984. By the end of 2009, CHT had acquired a total of 450 resale-restricted, owner-occupied houses and condominiums. Because some of these homes have been resold one or more times without leaving CHT's portfolio, a total of 683 families have been helped to buy a home through Champlain Housing Trust's CLT program.

All homes in the *Dos Pinos Housing Cooperative* (Dos Pinos) were constructed on a 4-acre parcel of land in Davis, California between 1985 and 1986. The smallest shared equity program in the study, this 60-unit limited-equity cooperative had provided homeownership opportunities to 276 families through 2009.

The *Northern Communities Land Trust* (NCLT) in Duluth, Minnesota, started providing homeownership opportunities in the Duluth area to low-and moderate-income families in 1994. A non-profit organization, NCLT had sold homes to 232 families through 2009, including 47 resales, where the same price-restricted home was successively purchased by more than one income-eligible family.

The *San Francisco Citywide Inclusionary Affordable Housing Program* (San Francisco), administered by the Mayor's Office of Housing, is an inclusionary zoning program that requires developers to sell or rent 15 to 20 percent of units in new residential developments at a "below-market-rate" price that is affordable to low- or middle-income households. The program, begun in 1992, currently generates approximately 100 resale-restricted, owner-occupied homes a year. Largest among the sites in this study, the program administers a total homeownership portfolio of over 800 units.

Thistle Community Housing's community land trust (Thistle), began offering homeownership opportunities to low-and moderate-income families in Boulder County, Colorado in 1996. Through December 2009, Thistle had sold homes to 172 families. Included in this total were 69 resales.

Wildwood Park Towne Houses (Wildwood), located in Atlanta, Georgia, was constructed in five phases from 1968 through 1971. This limited equity housing cooperative, serving low-income households, was developed with federal assistance under HUD's Section 236 Interest Reduction Program. The manager for this 268-unit cooperative has information on 140 resales that took place since 1972.

All programs we studied use a formula to determine the maximum price for which its homes may be resold. While these formulas establish only the maximum price a home can sell for, and do not guarantee a homeowner can find a willing buyer at that price, in almost all cases across the seven program, homes are resold for this maximum price. These resale controls are enforced by six of the seven programs by closely monitoring direct seller-to-buyer transfers from one income-eligible resident to the next. Only the Champlain Housing Trust repurchases each home itself when an owner wishes to move and then resells that home for an affordable price to an income-eligible buyer.

The CLTs in our study all calculate the change in a home's appraised value to determine the home's maximum purchase price at resale. NCLT allows sellers to take 30 percent of the market appreciation of the property, while Thistle lets sellers keep 25 percent of the appreciation times their investment share.[11] CHT uses both methods, giving condominium owners 25 percent of their home's appreciation while owners of single family homes receive up to 25 percent of the appreciation times their investment share.

The two LECs use non-real estate based indices to determine purchase price. In its bylaws, Wildwood sets the maximum annual increase in share price for each year. Because of this, when a buyer purchases a share in Wildwood, she knows exactly how much she will be able to sell for (dependant on how long she lives in the home). Dos Pinos allows share prices to increase annually by the prime rate at the beginning of the year.

San Francisco's Citywide Program and ARCH, the deed covenant programs we studied, have each used several different formulas over their histories. In San Francisco, most resellers now use a formula that indexes sales price to the area median income, while most resale prices in ARCH are based on the average of the Seattle metropolitan area's median income and a local real estate index.

In addition to the resale formulas described above, each program allows resellers to increase the purchase price based on any capital improvements made. Resellers in three programs—ARCH, CHT, and NCLT—can increase the purchase price by the full appraised value of the improvement. Thistle and San Francisco's Citywide Program allow resellers to recoup all money spent on the improvement, although San Francisco caps the increase at 7 percent of the initial purchase price. In Dos Pinos, resellers can add the cost of improvements to the resale price of their shares in the first year, but this addition decreases by 10 percent of the cost for each of the next 7 years of ownership; resellers can only increase the sales price by 30 percent of capital improvement costs if they sell after those 7 years. Finally, buyers and sellers of Wildwood's homes can negotiate the value of capital improvements. However, looking across the seven programs, we found no

[11] For example, if a Thistle buyer initially pays $80,000 for a home appraised at $100,000, and the home increases in value to a $150,000 appraisal by resale, the owner can increase the price of the property by 25% x 80% x $50,000 = $10,000. The homeowner may resell her home, therefore, for $90,000.

systematic relationship between capital improvement policies and owners' actual investments in their properties.

To facilitate transactions, four of the sites (NCLT, ARCH, Dos Pinos, and Thistle) maintain waiting lists of interested potential buyers. Only NCLT requires buyers to come from this list. In addition to overseeing these transactions, many sites require, provide, or refer residents to homeownership counseling. Four sites (CHT, San Francisco's Citywide Program, NCLT, and Thistle) require prospective buyers to complete counseling before purchasing a home, and two of these sites (CHT and NCLT) provide the counseling themselves. ARCH requires counseling for those on its optional wait list.

After new residents have purchased a home, only the three CLTs we studied provide optional counseling or classes, including specialized counseling for those in danger of delinquency or foreclosure. Two of these land trusts (CHT and NCLT) also occasionally provide financial assistance to owners who fall behind on their mortgage payments.

The median incomes (in 2008 $) of the households purchasing a shared equity home in all seven programs were well below the median family income of the surrounding areas in which the programs operated (Table 1).[12] This was also true for Dos Pinos, the only program we studied that does not require its homeowners to be income-eligible when buying into the cooperative. The median income of the purchasers of Dos Pinos' shares was 73 percent of HUD-determined median income in Yolo County. The purchasers of shares in the Wildwood Park co-op in Atlanta, by contrast, had an average income that was only 35 percent of Fulton County's median family income. This was probably because the share prices for Wildwood were relatively modest, with the median share price in this co-op selling for $5,500 in 2008 $. In addition, Wildwood's residents could finance some of the share price (the median share loan was for 75 percent of the purchase price) with a loan that typically had a term of five years.

The higher median income of Dos Pinos' residents was due mostly to the higher median price for Dos Pinos' shares. In 2008 $, this purchase price was $18,363, and none of these purchases were financed with a share loan. Dos Pinos' buyers needed to accumulate a relatively large amount of savings (or access to financing from sources other than a private lender), which could explain the reason for that co-op serving higher income families than the other sites. The remaining sites served buyers with incomes that ranged between 45 percent and 60 percent of the area's median family income.

[12] CHT in Burlington and San Francisco restricted sales of their homes to purchasers with an income no more than 100 percent of area median family income, while Thistle and Wildwood Park restricted sales of their program's homes or shares to purchasers with an income no more than 80 percent of the median area family income. The other sites did not restrict the income of purchasers.

Table 1: Summary of Purchasers' Incomes Compared to Median Family Income (in 2008 $)

	ARCH (King County)	Champlain Housing Trust (Burlington)	Citywide Inclusionary Affordable Housing Program (San Fran)	Dos Pinos (Davis)	NCLT (Duluth)	Thistle Homes (Boulder)	Wildwood Park (Atlanta)
Median household income of purchasers	$48,527	$36,660	$59,709	$51,988	$28,213	$38,670	$24,545
HUD 2008 median family income for surrounding metro area	$81,400	$70,100	$94,300	$71,000	$58,900	$85,000	$69,200
Household income of purchasers of shared equity homes as % of (HUD) area median family income	60%	52%	63%	73%	48%	45%	35%
Program income restrictions as percent of HUD median family income	None	100%	100%	None	None	80%	80%

Note: All dollar amounts are in 2008 $

Sources: Authors' calculations of client-level data and HUD median family income

In addition to serving families earning well below the median income, these programs served a very high share of first-time homebuyers. San Francisco's program is limited to first-time homebuyers, so 100 percent of the program's beneficiaries had never before owned a home. Four of the other programs maintained information on this population. First-time homeowners accounted for 85 percent of Thistle's buyers, and about 90 percent of NCLT's and CHT's homebuyers. The share of first-time homebuyers was lower at Dos Pinos (40 percent). Program staff report this is likely the case since many households move from one home in Dos Pinos to another as their family size changes. Significantly, these programs were able to sustain homeownership for most of their buyers even though a large proportion of them were first-time homeowners and many were low-income.

4. Home Prices, Subsidy, and Financing Their Purchase

This section presents information about the sales prices for shared equity homes and analyzes these prices relative to their market value. In addition, this section analyzes the methods used by shared equity homebuyers to finance their purchases.

Sales and appraised prices

The sales prices of homes purchased for the non-co-op programs ranged from a low of $87,600 (in 2008 $) for NCLT homes in Duluth to nearly $300,000 for homes sold in San Francisco. All four programs that had appraisal information reported that homes are sold and resold for prices that are well below market. In San Francisco, the median appraised value of the homes made available to lower income buyers under the city-wide inclusionary housing program was $542,783 (in 2008 $), nearly $270,000 more than the median price for which these homes actually sold. Because of this great difference, the sales prices in San Francisco represent a median of only 48.9 percent of appraised values. The difference in appraised value and sales price in the other three programs that provided this data was less dramatic: $30,258 in Duluth, $37,860 in Burlington, and nearly $51,000 in Boulder; each represent discounts off the appraised value, at median, of more than 25 percent (Table 2).[13]

Table 2: Comparison of Sales Prices and Market Values for Homes Sold under Shared Equity Programs

	ARCH (King County)	Champlain Housing Trust (Burlington)	Citywide Inclusionary Affordable Housing Program (San Fran)	NCLT (Duluth)	Thistle Homes (Boulder)
Median sales price paid by homeowner	$209,656	$104,908	$289,409	$87,615	$127,519
Median appraised value of homes at sale	n/av	$141,626	$542,783	$119,773	$194,689
Median difference between appraised value and sales price	n/av	$37,860	$268,445	$30,258	$50,955
Median sales price as % of appraised value	n/av	74.9	48.9	73.7	72.9
Median home price for surrounding MSA	$381,000	$250,900	$824,300	$157,400	$348,800
Median program home price as % of surrounding MSA	55.0	41.8	35.1	55.7	36.6
Median appraised value of homes at sale as a % of surrounding MSA	n/av	56.4	65.8	76.1	55.8

Note: All dollar amounts are in 2008 $.

Sources: Authors' calculations of client-level data, American Community Survey and FHFA house price index.

The difference between the appraised value and sales price is important because it quantifies the amount of subsidy that is recycled by these shared equity programs, as compared to more traditional homebuyer assistance programs in which families are provided a sizable grant to purchase the home with no provision for protecting that subsidy or preserving affordability on resale. In such a program, each homebuyer would be provided a grant for the difference between the appraised value of the home and the amount that the family can afford. The cost under a shared equity program is the same for the initial purchase of the home: in both programs a home is purchased for an amount that is below its market price. However, in shared equity programs, such homes are resold at a below market price, and so there is no need to provide the buyer of a

[13] As discussed earlier, the purchase price for co-op shares (in 2008 $) was $18,363 for Dos Pinos and $5,524 for Wildwood Park in Atlanta.

resold home with an additional subsidy, as would be required with a subsidy method that provides grants to buyers.

Therefore, the shared equity programs in this study that provided appraised values for their homes show that their programs can serve lower income families and, *at each resale,* require between $40,000 to nearly $300,000 less than a program that would provide grants to families to purchase homes. The overall savings is a function of the number of resales, but the per-unit savings for the programs in this study indicates that the total savings is substantial, and underscores the cost-effective nature of the shared equity approach to promoting homeownership.

Homes sold under the shared equity programs that we studied, based on their appraised value, are within a relatively narrow price range when compared to the median price of all homes sold within the metropolitan statistical area (MSA) in which the program operates. In Duluth, for example, the median appraised value of homes (in 2008 $) sold by NCLT is 76 percent of all homes sold in the MSA. In three of the other sites (Burlington, San Francisco and Boulder) the homes sold had an appraised value of between 56 percent and 66 percent of all homes sold in their respective MSAs. This suggests that shared equity homes have a more modest value to begin with, when compared to the owner-occupied housing in the larger market, probably due to economic exigencies or programmatic priorities that lead the sponsors of shared equity homeownership programs to bring housing into their portfolios that is that is more modestly sized and moderately priced and that is located in less affluent areas of the MSA.

Down payments

One of the challenges for lower income families when considering a home purchase is to have sufficient funds for a down payment. With the exception of the two programs in California (San Francisco and Dos Pinos), shared equity homebuyers were able to purchase their houses, condominiums, or shares with a relatively small down payment, ranging from about $1,100 in Duluth to $6,000 in Boulder (Table 3).

Table 3: Down Payments Made by Shared Equity Homebuyers

	Champlain Housing Trust (Burlington)	Citywide Inclusionary Affordable Housing Program (San Fran)	Dos Pinos (Davis)	NCLT (Duluth)	Thistle Homes (Boulder)	Wildwood Park (Atlanta)
Down payment and closing costs paid by purchaser	$2,749	$40,533	$18,363	$1,075	$6,080	$1,249
Median % down	2.6%	13.1%	100.0%	1.3%	4.8%	24.9%
Household income as % of (HUD) area median family income	52%	63%	73%	48%	45%	35%

Note: All dollar amounts are in 2008 $
Source: Authors' calculations of client-level data

With the exception of Wildwood Park, the shared equity programs in which homebuyers finance a relatively small share of the purchase price served buyers with higher incomes when compared to programs in which homebuyers financed most of the purchase price. The median down payment amount (in 2008 $) in the two California-based programs (San Francisco and Dos Pinos) is at least three times the next largest median down payment amount ($6,080 for Thistle homebuyers). Given that homebuyers in the California programs must make relatively large down payments, it is not surprising that the median incomes for the buyers of shared equity homes in San Francisco (63 percent) and Davis (73 percent) are greater than any of the other sites.

Financing used by homebuyers

Six programs provided information about the mortgages used by buyers to finance their purchases.[14] Despite their low incomes, buyers of shared equity homes were able to secure mortgage financing. Nearly all homebuyers in Burlington, Duluth, King County, and Boulder financed a portion of their purchase with a first-lien mortgage that had a 30-year amortization period. A smaller percentage (71 percent) of buyers in the Wildwood co-op in Atlanta financed their purchase, likely because of the relatively low share price (Table 4).

Table 4: Characteristics of Financing Used by Shared Equity Homebuyers

	ARCH (King County)	Champlain Housing Trust (Burlington)	Citywide Inclusionary Affordable Housing Program (San Fran)	NCLT (Duluth)	Thistle Homes (Boulder)	Wildwood Park (Atlanta)
First-lien						
% With first mortgage	n/av	97.5	n/av	99	98.3%	71.3
Avg. term on first mortgage (Share with 30-year mortgages)	30 (92.3%)	30 (97.6%)	30 (90.0%)	30 yrs (all)	30 yrs (all)	5 yrs
% Of first mortgages that are fixed rate	81.1%	97.6%	83.3%	100.0%	94.7%	n/av
Median interest rate for first mortgage	n/av	5.1	5.9	5.9	6.5	9.5
Median first mortgage amount	$206,881	$102,748	$227,065	$83,102	$114,509	$4,944
Second-liens						
% With 2nd amortizing mortgage	n/av	0.0%	6.9%	0.0%	0.0%	0.0%
Avg. term on second amortizing Mortgage	30 (50%)	n/ap	30 (87.5%)	n/ap	n/ap	n/ap
% Of second amortizing mortgages that are fixed rate	94.5%	n/ap	fixed if known	n/ap	n/ap	n/ap
Median interest rate for second amortizing mortgage	n/av	n/ap	6.0	n/ap	n/ap	n/ap
Median second amortizing mortgage amount	$35,866	n/ap	$9,937	n/ap	n/ap	n/ap
% With non-amortizing mortgage	0.6%	2.8%	11.5%	74.0%	37.2%	0.0%
Median non-amortizing. mortgage amount	$28,736	$16,630	$41,909	$3,000	$3,826	n/ap

Note: All dollar amounts are in 2008 $
Source: Authors' calculations of client-level data

[14] None of the Dos Pinos co-op buyers financed the purchase of their shares with a share loan.

The overwhelming share of first-lien mortgages received by the shared equity homebuyers were fixed-rate mortgages, with median interest rates that ranged from a low of 5.1 percent to a high of 6.5 percent. The share loans in Atlanta, which had a median term of 5 years, had a higher median interest rate of 9.5 percent. This is not surprising, as co-op loans typically carry higher interest rates than mortgages originated for single-family home purchases.

Homebuyers in only two programs (San Francisco and ARCH) financed their purchase with an amortizing second mortgage. Such a mortgage was used by only 7 percent of buyers in San Francisco, and the median amount (in 2008 $) was less than $10,000; the median amount of about $36,000 was higher at ARCH. A greater share of buyers used non-amortizing second mortgages to finance their purchase; these loans would be repaid in whole at resale. Nearly three-quarters of buyers in Duluth, about one-third of buyers in Boulder and nearly 12 percent of buyers in San Francisco used such a mortgage to finance their purchase. The median amount for these loans (in 2008 $) was relatively small (less than $4,000) in Boulder and Duluth, but was nearly $42,000 in San Francisco. In the first two programs, the loans were often used to cover closing costs. But to keep homes affordable to buyers with an income below 100 percent of area median in the high-priced market of San Francisco (the median home in the program sold for $298,000 in 2008 $), some homebuyers needed to receive a non-amortizing second mortgage that was payable when the home was sold.

5. Preserving Affordability for the Units upon Resale

Any shared equity program has two main objectives: provide homebuyers with a means to accumulate wealth while, at the same time, keeping the units affordable for subsequent homebuyers. Higher levels of appreciation realized by a seller (plus any capital improvements credited to the seller) will result in higher prices paid by subsequent buyers. To the extent that these subsequent buyers finance their purchase with mortgages that have the same interest rate as the reseller, and have similar amounts of funds for a down payment, higher resale prices will require that the new buyers have a higher income than the original purchaser of the home.

There are many ways to measure the continuing affordability of renter-occupied or owner-occupied housing, although every method begins with the basic assumption that "housing affordability is a measure of housing costs relative to income."[15] Previous analyses of changes to the affordability of shared equity homes have used the minimum income required to purchase a home as the ratio of the housing cost over the area's median family income (MFI), published by HUD.[16] To the extent that the ratio of the minimum income required to purchase a home relative to the MFI is the same, when a home is initially purchased and when that home is resold, the unit is considered to have maintained its affordability. (We refer to this method as the MFI method.)

This MFI method measures, at two separate points in time, the required minimum income to

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[15] Goodman, Jack. 2001. *Housing Affordability in the United States: Trends, Interpretations, and Outlook.* A Report Prepared for the Millennial Housing Commission, page 3.

[16] See, for example, Davis, John Emmeus and Alice Stoke. 2009. *Lands in Trust, Homes That Last: A Performance Evaluation of the Champlain Housing Trust*. Burlington VT: Champlain Housing Trust.

purchase a given home relative to the MFI. A problem with this methodology is that it does not measure changes to a particular household's income over time; rather, it assumes the incomes of the target population for whom shared equity homes are being kept affordable and to whom these homes are being resold increase at the same rate as the MFI. But, as discussed in an earlier section, the incomes of the families purchasing shared equity homes in all seven programs are well below the area median family income; and the minimum income required to purchase a shared equity home is often lower than the purchasers' actual income. Given uneven income growth for families earning less than the median, using the MFI to calculate affordability may overstate the extent to which homes remain affordable to lower income families because the growth in MFI reflects changes to the types of households living in the area at the two different points in time (initial sale and resale) as well as changes to incomes for households that are present at both time periods.[17]

Despite these drawbacks, the MFI method has two distinct advantages: its sensitivity to local area differences in incomes and family size; and its widespread use by policy analysts in evaluating major housing assistance programs funded by HUD, where eligibility is set by household income relative to median incomes in the local area.[18] As a result, we also analyzed changes to the affordability of resold units, comparing changes in required income *relative* to MFI.

Recognizing the issues associated with the MFI method, we first calculated the *absolute* changes in required real minimum income to purchase a home at resale. This measure establishes the required income growth for a given household to purchase a home at resale, *and so identifies the extent to which a household earning the required minimum income at a given point in time can afford a unit when it is resold*. Consequently, it is not dependent on an area's changes in income distribution or household structure; rather, it provides information about the income growth required for a particular cohort of households to be able to afford a home at resale.

In both of these analyses we calculated the minimum income that was necessary to initially purchase a shared equity home and the minimum income that was necessary when that same home subsequently resold. We assumed that the buyer would finance the purchase with a 30-year, fixed rate mortgage that had an interest rate that was the median interest rate for all buyers. In addition, we assumed that the buyer paid a down payment that was equal to the median down payment share of all homes sold under the program, and further assumed that the buyer would spend no more than 33 percent for his/her income for housing (which included the mortgage payment and any property taxes or co-op fees reported by the program). We used a slightly different methodology to determine the required minimum income for initial and subsequent resales for the LEC programs (Dos Pinos and Wildwood) in which we calculated the minimum income required based on the co-op fees. For the Wildwood co-op in Atlanta, we included the homeowners' payments for share loans (there are no share loans for any Dos Pinos buyers).

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[17] See, for example, Gangl, Markus. 2008. "A Longitudinal Perspective on Income Inequality in the United States and Europe*. Focus*" Vol. 26(1). The author reports, using data from the Panel Study of Income Dynamics, that the income for households within the bottom three income deciles between 1992 and 1997 either remained the same or declined during the five-year period.

[18] Goodman, page 17.

Changes in Absolute Real Required Income

Based on the length of time between the two sales, we calculated the average annual increase in the required minimum income. For example, assume that a home, at its initial sale requires a minimum income (in 2008 $) of $20,000, and, at a resale that takes place 3 years later, requires a minimum income (in 2008 $) of $22,000. The real income at resale is 10 percent greater than at the initial sale, which means that the required minimum income increased by an average of 3.3 percent per year. To the extent that real incomes increased by the same amount for households earning $20,000 at the time of the initial sale, the unit remains affordable to such households.

The results in the table below show that the average real required minimum income increased by about no more than 1.0 percent per year in four of the seven sites. Because monthly co-op fees declined in real terms, the required real minimum income declined for Wildwood and Dos Pinos buyers. The average annual increase in required real minimum income was less than 1 percent for Thistle and San Francisco resale buyers. The required minimum income increased by an average of 1.1 percent per year for Burlington, and by 1.9 percent per year for NCLT and 4.0 percent per year for ARCH homebuyers. In sites with greater cost increases, homebuyers may compensate by devoting a slightly higher share of their income to housing.

With the exception of ARCH in Bellevue, the largest share of resold units had no more than a 10 percent increase in the minimum income required to purchase resold homes, when compared to the minimum income required to purchase the home initially. In Boulder, 96 percent of Thistle's resold homes required a minimum income that was no more than 10 percent of the minimum income required when the reseller purchased the home. The Dos Pinos co-op had a similar pattern. There are a greater share of resold units that had a change in minimum income required that was more than 10 percent for the ARCH, CHT, and NCLT programs.

The extent to which units retained their affordability, given the annual increase in the required minimum income is dependent on income growth. Unfortunately, we do not have changes in incomes, by decile calculated for each of the seven sites that are based on a panel of households in the area. Therefore, we cannot make a definitive conclusion, from the changes in absolute income required, about changes in unit affordability. However, given analyses of changes in income by decile between 1992 and 1997 for a panel of households, it may be that incomes for households with an income in the lower end of the area income distribution had relatively small (if any) increases in annual real incomes. If this is the case, then even small annual changes in real required income may erode affordability.

Table 5: Summary of Changes in Required Minimum Income to Purchase Resold Shared Equity Homes

	Arch* (King County)	Champlain Housing Trust (Burlington)	Citywide Inclusionary Affordable Housing Program (San Fran)	Dos Pinos (Davis)	NCLT (Duluth)	Thistle Homes (Boulder)	Wildwood Park (Atlanta)
Required minimum income (in 2008 $) for initial buyers	$35,548	$29,676	$83,836	$39,464	$22,436	$34,172	$21,011
Mean annual change in real income needed to purchase a home at resale	4.0%	1.1%	0.3%	-1.6%	1.9%	0.5%	-0.7%
Percent of units in which the required real minimum income was within 10% of the initial required real minimum income	31	52	58	67	60	83	61
Percent of units in which required real minimum income declined by ≥ 10% at resale	3	8	16	32	2	13	16
Percent of units in which the required real minimum income increased by ≥ 10% at resale	66	40	26	1	38	4	23
Decile (in 2008) containing the required minimum income (in 2008 $) for a unit's initial purchase	2	2	5	3	2	2	1

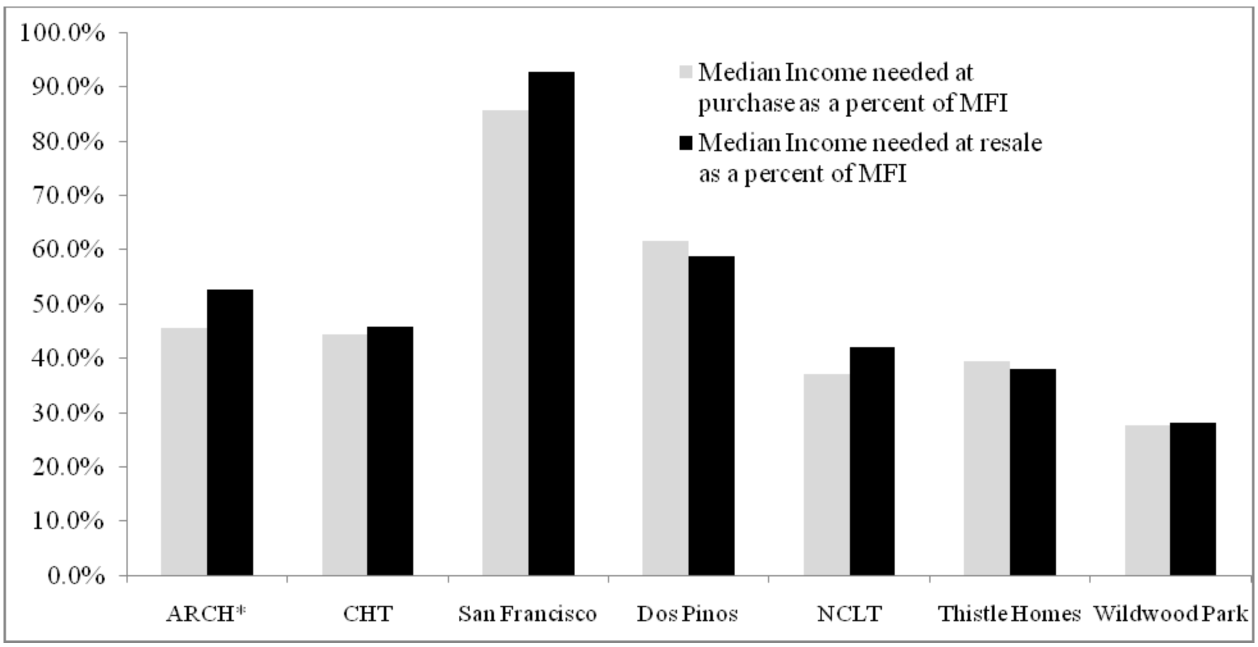
* ARCH did not provide complete information on mortgages. Therefore, reported changes to the required minimum income of ARCH units are based on estimates where a buyer places a 5 percent down payment and finances the remaining purchase with a 30-year, fixed-rate mortgage with a 6.0 percent interest rate.
Sources: Authors' calculations of client-level data; 1999 & Estimated 2008 Decile Distribution of Family Income by Metropolitan Statistical Areas and Non Metropolitan Counties: www.huduser.org/datasets/il/il08/FY2008_Medians.doc.

Analysis of Changes in Relative Required Income

To calculate the *relative* change in required minimum income, we created a ratio of (1) the initial required minimum income and the MFI at the time of the initial sale and (2) the required minimum income and the MFI at resale. The difference in these ratios indicates changes to the required minimum income as a share of MFI. Consider the following example: a home requires a minimum income of $20,000 at the initial sale, and the MFI at the time is $40,000. The required minimum income is 50 percent of MFI. Assume, at the time the unit is resold, that the required minimum income is $30,000, and the MFI is $60,000. In this example, the required minimum income at resale is 50 percent of MFI, which is the same ratio as when the unit was initially sold. The results of our relative analysis of changes to required income is presented below.

The required minimum income at the initial sale (employing the methodology discussed above) for homes that subsequently were resold ranges from a high of 86 percent of MFI in San Francisco to a low of 28 percent of MFI in Atlanta. For resold homes, median difference between the ratio of the required minimum income at resale and the area's MFI was less than 2 percentage points greater than the same ratio at the initial sale in five (Burlington, Dos Pinos, NCLT, Thistle and Wildwood) of the seven sites (Table 6 and Figure 1). This suggests that units, in these programs, retained their affordability at resale.

Figure 1: Changes in required income, as a share of MFI for all resold homes



* ARCH did not provide complete information on mortgages. Therefore, reported changes to the required minimum income of ARCH units are based on estimates where a buyer places a 5 percent down payment and finances the remaining purchase with a 30-year, fixed-rate mortgage with a 6.0 percent interest rate.
Sources: Authors' calculations of client-level data.

The exceptions are for ARCH and San Francisco. The relatively large decline in affordability in ARCH may result from the program's design in which resellers retain a large share of a unit's appreciation. And that program reports that when it became aware many of their units were losing affordability, ARCH created a new resale index (the average of the real estate index and HUD median family income) that the program administrator believes will moderate future price increases. The San Francisco result is a function of a decline in MFI that took place between 2004 and 2007, and so resales that took place during this period showed a loss in affordability relative to the MFI.

Looking at the distribution of changes to the ratio for all sales, over 90 percent of all resales in five sites had changes to the ratio that was no more than 10 percentage points. In the other two sites

(ARCH and San Francisco), more than one-third of homes resold had a change to the ratio that was more than 10 percentage points (Table 6).

Table 6: Summary of Changes to Affordability for Shared Equity Homes

	ARCH* (King County)	Champlain Housing Trust (Burlington)	Citywide Inclusionary Affordable Housing Program (San Fran)	Dos Pinos (Davis)	NCLT (Duluth)	Thistle Homes (Boulder)	Wildwood Park (Atlanta)
Median Income needed at purchase as a percent of MFI	45.7%	44.4%	85.6%	61.6%	37.2%	39.4%	27.7%
Median Income needed at resale as a percent of MFI	52.6%	45.9%	92.9%	58.7%	42.1%	38.1%	28.2%
Median percentage point change in income needed as a percent of AMI, resale – purchase	5.2	0.9	6.7	-5.1	1.7	-1.2	0.3
Percent of resales in which the minimum income (as a share of MFI) needed to buy a home varied by less than 10 percentage points	64%	93%	62%	79%	89%	96%	95%
Percent of resales in which the minimum income (as a share of MFI) needed to buy a home declined by ≥ 10 percentage points	1%	2%	4%	21%	2%	3%	2.5%
Percent of resales in which the minimum income (as a share of MFI) needed to buy a home increased by ≥ 10 percentage points	35%	5%	34%	0%	9%	1%	2.5%

* ARCH did not provide complete information on mortgages. Therefore, reported changes to the cost of ARCH units are based on estimates where a buyer places a 5 percent down payment and finances the remaining purchase with a 30-year, fixed-rate mortgage with a 6.0 percent interest rate.
Note: The median percentage point difference is calculated by taking the median of all of the calculated changes in income relative to the area's MFI. Therefore, the reported median difference is not the same as taking the difference between the median value of the required income at the initial sale and the required income at resale.
Source: Authors' calculations of client-level data.

The results from the analysis of changes in required income relative to area MFI are similar to the findings from the analysis of changes to absolute income. Units in the two cooperatives (Wildwood and Dos Pinos) and Thistle gained in affordability over time, whereas CHT's units had a modest decline in affordability; ARCH and NCLT units had relatively larger declines in affordability. In one site (San Francisco), the MFI analysis showed a large decline in affordability because many of the sales coincided with a time period in which MFIs declined. We believe, however, that San Francisco's findings of changes to required *absolute* income more accurately reflect the extent to which that program's homes remained affordable over time. The reason is that the absolute changes to the affordability of units sold by the program are not overly influenced by changes to a relatively small number of years' MFIs. It is important to note that in all of these programs, the minimum real income required to purchase a shared equity home stayed well below the area median. Therefore, even for programs in which resold units lost some of their affordability, resold homes still remained within the reach of low-income households.

6. Wealth Creation

This section analyzes the proceeds realized by shared equity homeowners when they resell their units and compares the return on their investment in a shared equity unit to earnings that could have been realized by them through renting and investing their down payments in either the stock market or the bond market.

Appreciation and total proceeds realized by sellers

Resellers' proceeds come from the share of the appreciation that they are allowed to retain, given the program's restrictions, the recovery of their original down payment, and the "forced savings" they realize on resale, resulting from principal payments they have made on all the mortgages used to finance the purchase of a house, condominium, or co-op share, or recouping costs from capital improvements. These components generated substantial amounts of proceeds for shared equity program participants.

The appreciation (in 2008 $) realized by sellers ranged considerably across the sites—and also, as explored below, within sites. At the low end, the median owner in the Wildwood co-op realized just over $2,000 when she resold. In four more sites—CHT, Dos Pinos, NCLT and Thistle—the median reseller realized roughly between four and eight thousand dollars of appreciation. In San Francisco, where housing prices are considerably higher, the median reseller realized $17,501 in appreciation. The median reseller in the ARCH program—which has more generous resale formulas—realized $43,000 in appreciation (Table 7).

In addition to the homeowners' share of appreciation, the proceeds realized from the payment of a homeowner's mortgage or share loan accounted for one-third and two-thirds of the total proceeds pocketed by resellers. The principal payments made by resellers during their tenure act as a forced savings program with owners recouping these savings at resale. Given average tenures of 3 to 6 years in most sites, these savings were relatively modest (although not insubstantial) because fixed-rate mortgages have relatively small principal payments in their first few years. Forced savings in the programs fell within a narrow band, ranging from $2,420 at the median in NCLT to $3,951 in San Francisco. Alone among the seven sites, the homebuyers at Dos Pinos did not receive share loans, so they did not accumulate wealth through amortization over the course of their occupancy in this limited equity cooperative. Additionally, some programs allowed owners to receive cash-out refinance loans during occupancy, but relatively few homeowners who resold their units had taken advantage of this opportunity, and, some resellers received a credit for capital improvements that they made to their units during their tenure.

Table 7: Summary of Appreciation Realized at Resale by Shared Equity Program Homeowners

	ARCH (King County)	Champlain Housing Trust (Burlington)	Citywide Inclusionary Affordable Housing Program (San Fran)	Dos Pinos (Davis)	NCLT (Duluth)	Thistle Homes (Boulder)	Wildwood Park (Atlanta)
Median total proceeds	n/av	$17,501	$70,495	$19,585	$7,989	$13,043	$6,277
Median appreciation realized by seller	$42,524	$6,578	$17,321	$4,171	$4,297	$8,107	$2,015
Median total of principal paid on mortgages (forced savings) and recovery of down payment plus closing costs)	n/av	$6,027	$45,706	$18,363	$4,523	$8,567	$3,700
Median down payment and closing costs	n/av	$2,749	$40,533	$18,363	$1,075	$6,080	$1,249
Median amount of principal paid on mortgages (forced savings) reseller's tenure	n/av	$3,051	$3,951	n/ap	$2,420	$3,065	$2,564
% who cash out refinance	n/av	2.8%	n/av	n/ap	2.1%	17.4%	0.0%
Median cash-out refinance amount for resellers who had such a refinance loan	n/av	$12,716	n/av	n/ap	$10,862	$3,462	n/ap

Note: All dollar amounts are in 2008 $.
Source: Authors' calculations of client-level data.

Rate of return realized by shared equity resellers

Shared equity homebuyers, as discussed above, realized a significant amount of proceeds when they resold their units. This section analyzes the annualized rate of return that was realized by resellers, based upon the amount of appreciation that they received at resale relative to the amount of their original investment in purchasing their home (down payment plus closing costs). To determine the return, we calculated the internal rate of return (IRR), which is the interest rate (r) that yields a net present value of $0 for the following equation:

$$\frac{ICO_0}{(1+r)^0} = \sum_{t=1}^{n} \frac{ACF_t}{(1+r)^t} + \frac{EPR_n}{(1+r)^n}$$

Where:

ICO_0 = Initial cost to the owner (includes down payment plus initial fees), expressed as a negative number;

ACF_t = Annual cash flows in year t, which is the imputed rent of the unit minus after tax mortgage and insurance payments; and

EPR_n = End of period return in time n when the home is sold, which is the sales proceeds realized by the homeowner, less unpaid principal balances of all mortgages outstanding as of the time of the sale.

To add simplicity to the analysis, we assume that the rent paid by the owner, if he/she chose to rent the purchased home, would have been the same as the after-tax cost of owning a home. As a result, the annual cash flows are $0, and the IRR is calculated only using the ICO and EPR.

This assumption, then, means that we do not include any differences between monthly mortgage payments or co-op loan and fees and the market rent for a comparable unit within the local MSA when calculating IRR. Other studies of LEC housing, for example, have included this difference when calculating potential return.[19] Including that savings assumes that the only option available to buyers is to rent a comparably priced market-rate unit in the locality, and that the buyer could afford such a unit. Because we do not know buyers' willingness (or ability) to pay for housing, we cannot assume that they are saving the difference in the mortgage or co-op payments and market rents to include in a calculation of financial returns. Therefore, we exclude this potential financial benefit from our calculations.[20] There are other benefits and costs to homeownership that we have also excluded from our analysis. Benefits include the deduction of house and mortgage interest paid from income tax liabilities, any homebuyer tax credits, and stabilization of housing payments (for those with fixed rate mortgages). Added costs include maintenance costs, realtor fees, and other transfer and transaction costs.

In all programs the median rate of return realized by resellers was at least 6.5 percent, and was as high as 60.0 percent (Table 8). The rate of return is, in part, affected by the appreciation realized by the seller, and this appreciation is a function of the method used by each program to calculate allowable appreciation and the changes in the housing market or index used to calculate allowable appreciation. ARCH has the highest IRR across all of the programs because there was significant appreciation in the local market and because homebuyers under the program are permitted to retain much of the appreciation that is calculated. CHT in Burlington, NCLT in Duluth and Thistle in Boulder allow resellers to retain a portion (either 25 percent or 30 percent) of their homes' appreciation, which is calculated by changes to the appraised value of homes during the time the reseller lived in the property. Because these programs allow resellers to retain a much smaller share of the appreciation, when compared to ARCH, resellers under these programs have a lower IRR.

Holding other factors constant, a lower down payment results in a higher IRR, because the appreciation is realized on a smaller investment. Some of the difference in the median returns for sellers in a program are due to differences in the down payments made by homebuyers in the programs: Thistle's homebuyers had a median down payment (in 2008 $) of $6,080, compared to

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[19] See, for example, Thompson, David. 2004 "Dos Pinos Housing Cooperative in Davis, California from 1986 to 2005: The Long-Term Value of Cooperative Homeownership versus Rental." *2004 Cooperative Housing Journal:* pp.5-9.

[20] For some sites, for example, NCLT, the median total monthly payment for all owners is close to the median gross rent in the surrounding city. Other sites, like Thistle, have median total monthly payments that are less than median gross rents, while San Francisco has monthly payments that exceed local median rents.

$2,749 for CHT's buyers and $1,075 for NCLT homebuyers. Resellers in Atlanta's Wildwood co-op earned a median IRR of 14 percent, in part because share buyers could leverage their transaction with a share loan. This contrasts with the other LEC in our study, Dos Pinos, in which none of its purchasers used a share loan to finance their purchase, thereby reducing the amount of leverage and IRR for its co-op shareholders.

Table 8: Rates of Return Realized by Shared Equity Homebuyers

	ARCH* (King County)	Champlain Housing Trust (Burlington)	Citywide Inclusionary Affordable Housing Program (San Fran)	Dos Pinos (Davis)	NCLT (Duluth)	Thistle Homes (Boulder)	Wildwood Park (Atlanta)
Program IRR	59.6%	30.8%	11.3%	6.5%	39.0%	22.1%	14.1%
S&P 500 Index Fund IRR	9.4%	8.5%	3.2%	10.6%	2.8%	-0.1%	7.8%
10-year Treasury Bonds IRR	6.0%	6.0%	4.4%	7.8%	4.7%	5.9%	5.7%
Traditional grant program IRR	n/av	61.1%	31.0%	n/ap	109.0%	75.5%	n/ap

* ARCH did not provide information on mortgages. Therefore, reported IRR for ARCH units is based on estimates where a buyer places a 5 percent down payment and finances the remaining purchase with a 30-year, fixed-rate mortgage with a 6.0 percent interest rate.
Sources: Authors' calculations of client-level data; Treasury data: http://www.ustreas.gov/offices/domestic-finance/debt-management/interest-rate/yield_historical_main.shtml; S&P 500 data: (http://www.irrationalexuberance.com/.

The lower IRR for San Francisco partly results from the formula that it used to calculate appreciation for homes purchased prior to June, 2007. Some of the units in San Francisco, upon resale, were priced taking into account interest rates at the time that the unit was resold. The formula calculated the mortgage that a family could afford, given interest rates and a targeted household income set at 100 percent of area median. Therefore, maximum allowable home prices, at resale, moved inversely with interest rates: if the interest rate at the time of resale was higher than when it was purchased, then the resale price would be lower than the initial purchase price (holding changes in income constant). Given this formula, resale prices for a number of sellers were below the initial price paid, and the program's median IRR was 11.3 percent, even though home prices in San Francisco had increased by nearly 10 percent annually between 2000 and 2007.

The median rate of return for resellers in all programs except for Dos Pinos was greater than the return that sellers would have realized if they had rented a unit and invested their down payment in either the stock market or purchased a 10-year Treasury bond at the time that they purchased their home. Had resellers invested their down payment amount in an S&P 500 index fund, they would have earned a median return ranging from a low of -0.1 percent in Thistle to a high of 10.6

percent in Dos Pinos. A comparable investment in 10-year Treasury bonds would have yielded a return, at the median, between 4.4 percent (in San Francisco) and 7.8 percent (in Dos Pinos).[21]

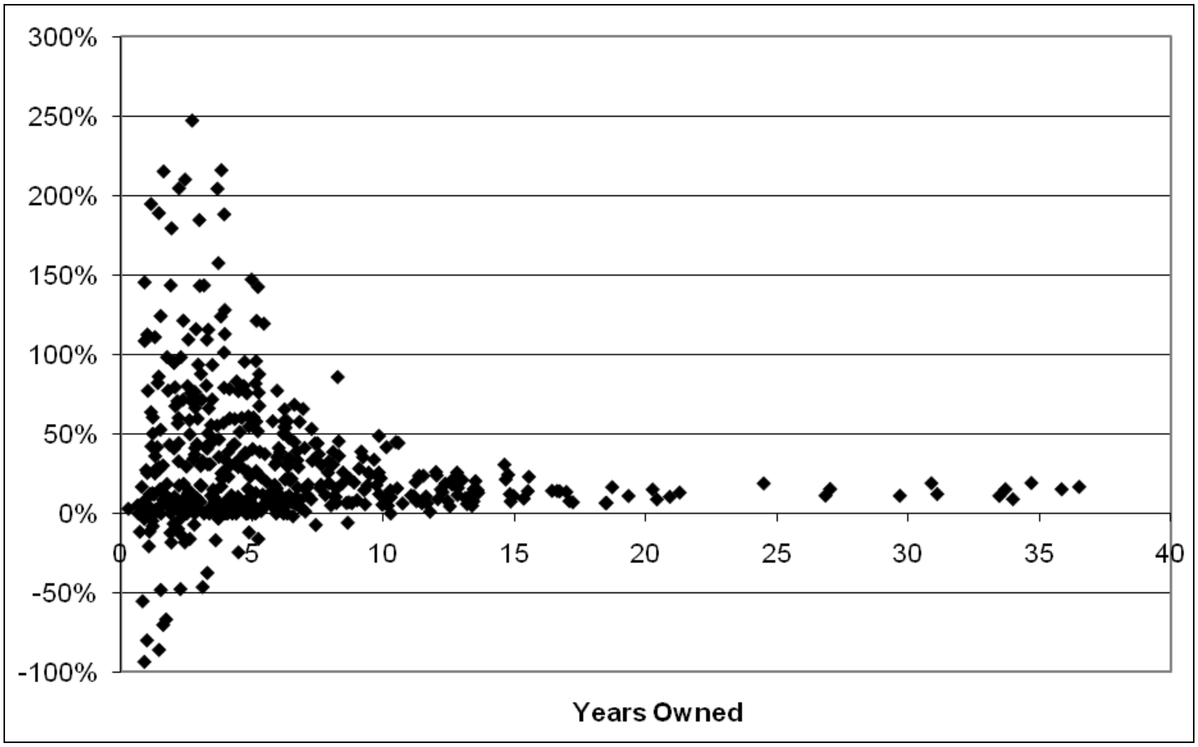
In addition to comparing the returns realized by shared equity homeowners to stock and bond investments, we also calculated the return on investment that resellers would have realized if they had been allowed to retain 100 percent of their unit's appreciation. This measure provides an estimate of the return that the resellers could have earned under an alternative method of subsidizing their purchase: one in which they receive a grant for the difference between their purchase price and the appraised value of the property and are then allowed to pocket all of this subsidy and all of the capital gains upon resale.

Because resellers retained only a portion of their units' appreciation, the IRRs that could have been realized if they could retain all of the appreciation would have been much greater (between 2 and 6 times as great) than the median IRR actually realized by these resellers. But, allowing resellers to retain greater shares of the appreciation (and so realizing higher IRRs) would have increased resale prices and, therefore, the minimum income required to purchase the home at resale, thereby potentially eroding affordability.

The median IRRs earned by resellers provide a summary statistic of returns realized by homebuyers under the shared equity programs. Although the median IRRs indicate that these homebuyers realized very good returns, not every reseller earned a positive return on his/her investment. As indicated in the following figure, resellers who sold their homes relatively soon (within 3-4 years) after purchasing their unit had a wide range of returns.

[21] We assume that resellers would hold their 10-year Treasury bonds until maturity, and so did not calculate any gains or losses that would have resulted from selling their bonds at the time that the owners sold their homes.

Figure 2: IRR and Tenure Length for Resellers Across all Shared Equity Programs



Source: Authors' calculations of client-level data.

The reason for this relationship is that home prices can swing wildly over a relatively short period of time, providing for some owners a very large gain, but for others, a large decline in value and, as a result, a negative IRR. The volatility of IRRs realized by shared equity program resellers declines as the length or tenure increases, as housing markets, over time show more stable rates of appreciation.

Tradeoff between return and affordability

Balancing the two competing objectives of building wealth and maintaining affordability is a challenge for any shared equity program. All of the programs studied in this report use appreciation formulas that allow units to be resold to buyers with incomes that are similar to the initial buyer, while providing a positive IRR for the sellers of these homes.

But, there are patterns across the sites that demonstrate how approaches that increase the rate of return can decrease affordability, escalating the minimum income required to purchase homes at resale. ARCH and NCLT, for example, allow resellers to retain the highest share of appreciation among the sites. ARCH's resellers were allowed to keep a large share of their unit's appreciation (calculated using a local house price index), while NCLT allowed resellers to keep 30 percent of a unit's total appreciation. Due to these policies, the real minimum real income required to purchase homes at resale increased by 1.9 percent per year for NCLT homebuyers and by 4.0 percent per year for ARCH homebuyers.

Thistle and CHT resellers are allowed retain 25 percent of a unit's appreciation, but that amount is reduced by the ratio of the price of the home when purchased divided by the market value of the home. Assume, for example, that a home with that was appraised at $100,000 was purchased for $80,000. For such a home, the reseller would receive 80 percent of the unit's appreciation times 25 percent when resold. These policies, which reduce the amount of appreciation that can be realized by a seller, reduce each program's IRRs, but they also reduce the rate of increase in the real minimum income required to purchase a home over time. The two co-op programs, by keeping co-op fees low in real terms, have had smaller changes in the minimum income required to purchase a share over time (assuming that the purchaser can afford to purchase the share by having funds available or by receiving a share loan). (See Table 9)

There are factors, however, that influence program outcomes that are beyond any designer's control. Thistle and CHT, for example, have very similar policies to calculate a reseller's maximum allowable appreciation. Moreover, changes in house prices in the two programs' metropolitan areas were about the same. Yet, the yearly required increase in minimum income to afford a resold unit is greater for CHT than in Thistle. The reason is that taxes and insurance costs, in real terms declined in Boulder, but increased in Burlington and that capital improvement reimbursements were also higher there. As a result, the minimum income required to purchase a home increased for CHT buyers, and remained the same for Thistle buyers.

Programs, however, have discretion in selecting the formula they will use in setting the amount of appreciation that a reseller will retain. This decision, in turn, will affect the affordability of the units over time, when holding other factors constant. Sites face delicate decisions in establishing a shared equity program that allows resellers to earn a satisfactory return on their investment while still preserving affordability over time. The ARCH program, by allowing resellers to realize a large share of the appreciation provides very good returns to their homebuyers (the median IRR is nearly 60 percent), but 2/3 of resold units require a real minimum income that is at least 10 percent greater than the initial purchaser. Alternatively, San Francisco's program uses a formula to establish resale prices that limits appreciation amounts so that resold units are affordable to families earning 100 percent of area median. As a result, the median IRR earned by resellers is 11.3 percent, but the required minimum income increased by only 0.3 percent per year between initial and subsequent resales.

Shared equity programs can achieve a balance between a reasonable return and lasting affordability, even in strongly appreciating markets. Finding this balance may sometimes require a program's to adjust its formula, as was done in San Francisco, in response to market conditions so that purchasers can realize returns that exceed those in alternative investments, but at the same time ensure that lower income families can afford to remain purchasers over time.

Table 9: Summary of Financial Outcomes for Shared Equity Programs

	ARCH* (King County)	Champlain Housing Trust (Burlington)	Citywide Inclusionary Affordable Housing Program (San Fran)	Dos Pinos (Davis)	NCLT (Duluth)	Thistle Homes (Boulder)	Wildwood Park (Atlanta)
Formula setting the resale price and maximum increase in equity that a seller can realize when transferring an ownership interest	4 methods: Real Estate Index; HUD Med. Inc.; Average of above; 1.125%/quarter	Condos: 25% of appreciation; Single family homes: 25% of appreciation times the percentage of the property's total value initially purchased by the homeowner	3 methods: CPI index; median income buyer pays 33% of income; AMI index	Increases by prime rate	30% of market appreciation	25% of appreciation times the percentage of the property's total value initially purchased by the homeowner	Preset dollar appreciation amount per year; appreciation increases periodically
Down payment and closing costs amount paid	n/av	$2,749	$40,533	$18,363	$1,075	$6,080	$1,249
Median % down	5.0%	2.6%	13.1%	100.0%	1.3%	4.8%	24.9%
Real change in annual minimum income required at resale	4.0%	1.1%	0.3%	-1.6%	1.9%	0.5%	-0.7%
Appreciation realized by seller	$42,524	$6,578	$17,321	$4,171	$4,297	$8,107	$2,015
Median length of tenure (in years)	3.3	5.2	4.2	4.0	3.3	3.4	6.6
Program IRR	59.6%	30.8%	11.3%	6.5%	39.0%	22.1%	14.1%

* ARCH did not provide information on mortgages. Therefore, reported IRR and changes to the affordability of ARCH units are based on estimates where a buyer places a 5 percent down payment and finances the remaining purchase with a 30-year, fixed-rate mortgage with a 6.0 percent interest rate.
Sources: Client-level data and program description

7. Security of Tenure

In the current economic environment, when so many low-income homeowners have lost their homes to foreclosure, security of tenure is an important outcome against which to judge shared equity programs. As a result of the mortgage meltdown, some policymakers have begun questioning the wisdom of programs that expand homeownership opportunities to lower income families. We investigated whether these programs better positioned their homebuyers in mortgages that were not high cost, and whether these buyers were better able to retain their homes, avoiding foreclosure and the intermediate step of delinquency.

High-cost loans (also referred to as subprime loans) often contain features that increase the likelihood of borrower default. Some high-cost loans allow borrowers to make payments that are less than the amount required under a fully amortizing loan. In addition, many subprime loans are originated with low teaser rates that reset after a given period of time; borrowers oftentimes cannot afford payments with the new interest rate. The percentage of a homeownership program's beneficiaries who have financed their homes using subprime loans is a leading indicator of the likelihood of future delinquency and foreclosure.

Across the four non-cooperative sites where buyers took out mortgages and for which we have data,[22] not a single borrower had a first mortgage with prepayment penalties. In these sites (CHT, San Francisco, NCLT, and Thistle), a very low share of loans were high cost, defined as having an interest rate more than 300 basis points above a comparable term yield. These sites range from a low of 0.4 percent of first liens that were high cost in NCLT to 2.3 percent in San Francisco (Table 10). Each of these four programs operated in housing markets where high-cost loans were more prevalent. At the low end, 4.3 percent of all mortgages on one to four family homes in Boulder, CO between 2004 and 2006 were high cost, according to data from the Home Mortgage Disclosure Act (HMDA); nearly 15 percent of these home loans in the Duluth area were high cost.[23]

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[22] Wildwood provided data on share loans. We do not include these loans in our high-cost loan calculation because co-op loans had much shorter terms (5 years), and are not as common as single-family mortgages.

[23] http://www.foreclosure-response.org/assets/hmda_08/. HMDA, which includes both lower and upper income buyers, defines high-cost loans as first-lien mortgages with an APR that is at least 300 basis points above the comparable term Treasury yield. We apply a similar definition to these home loans. Where available, we used yields on 30-year Treasury securities. This information is not available from February 2002 to February 2006. The U.S. Department of Treasury provides, for those years, the 20-year Treasury security yield, which we use as an estimate for the 30-year yield. See http://www.ustreas.gov/offices/domestic-finance/debt-management/interest-rate/yield_historical_main.shtml and http://www.ustreas.gov/offices/domestic-finance/debt-management/interest-rate/ltcompositeindex.shtml. HMDA high cost loans are calculated using the Treasury yield on the 15th of a given month when the interest rate was determined. (Any interest rate determined before the 15th of a month is calculated using the previous month's yield.) See Robert Avery, Kenneth Brevoort, and Glenn Canner. 2006. Higher-Priced Home Lending and the 2005 HMDA Data. For Thistle, we do not have the date the interest rate was determined, so we use the purchase date.

Table 10: High Cost Mortgages for Shared Equity Programs

	ARCH (King County)	Champlain Housing Trust (Burlington)	Citywide Inclusionary Affordable Housing Program (San Fran)	Dos Pinos (Davis)	NCLT (Duluth)	Thistle Homes (Boulder)	Wildwood Park (Atlanta)
% Prepayment penalties	n/av	0.0%	0.0%	n/ap	0.0%	0.0%	0.0%
% High cost loans	n/av	1.4%	2.3%	n/ap	0.4%	1.2%	n/ap
% High cost loans in surrounding area	n/ap	6.7%	6.8%	n/ap	14.9%	4.3%	n/ap

Source: Authors' calculations of client-level data.

Using client-level data, we calculated the share of current mortgage loans on homes that are seriously delinquent—that is, more than 90 days late on their mortgage payment. Very few homes are currently seriously delinquent. In the two cooperative programs—Dos Pinos and Wildwood—no owners are currently delinquent on their share loan (in the case of Wildwood) or their monthly coop fees (for both sites). The other programs ranged from a delinquency rate of 0.4 to 2.7 percent (Table 11). In four of the sites, the program's delinquency rate is below the similar rate for the county as a whole—ARCH, Dos Pinos, Thistle, and Wildwood. [24] Two sites, CHT and NCLT, saw slightly higher rates of delinquency; these rates are roughly equivalent to the delinquency rate in the surrounding area. In these latter two programs with somewhat higher delinquency rates, it is worth noting, borrowers were the most highly leveraged: the median down payment was only 1.3 percent of the home's purchase price in NCLT and only 2.6 percent in CHT.

In addition, we calculated the share of all mortgages on homes (current or not) that had ever been seriously delinquent. The programs ranged from a low of 0.0 percent homes ever seriously delinquent at Wildwood to a high of 5.2 percent at NCLT. By comparison, 15.0 percent of FHA-insured loans originated in 2004 had been delinquent at some point by 2008.[25]

[24] The county delinquency rates are reported by TransUnion and including upper income buyers. We accessed these data through the Federal Reserve Bank of New York. http://data.newyorkfed.org/creditconditions/

[25] Cumulative delinquency rates are not available. The FHA figures are nationwide. We calculated this figure from data at http://portal.hud.gov/fha/investment/5087-N-04_DPA_Pub_6-11-08.pdf.

Table 11: Security of Tenure for Shared Equity Programs

	ARCH (King County)	Champlain Housing Trust (Burlington)	Citywide Inclusionary Affordable Housing Program (San Fran)	Dos Pinos (Davis)	NCLT (Duluth)	Thistle Homes (Boulder)	Wildwood Park (Atlanta)
% Currently seriously delinquent	0.4%	1.6%	n/av	0.0%	2.7%	1.0%	0.0%
% Currently seriously delinquent in county	3.8%	1.4%	n/ap	6.6%	2.5%	2.0%	8.3%
% Ever seriously delinquent	0.6%	3.5%	n/av	0.4%	5.2%	2.3%	0.0%
% Currently in foreclosure	0.4%	0.5%	n/av	0.0%	1.1%	0.0%	0.0%
% Currently in foreclosure in county	1.2%	1.0%	n/ap	3.4%	4.4%	1.1%	5.6%
% Ever in foreclosure	0.6%	2.2%	n/av	0.0%	3.0%	0.6%	0.0%
Number of units lost from program due to foreclosure	1	0	0	0	0	1	0
Number of units bought out of REO or deed-in-lieu	1	10	0	0	3	0	0
% Remain homeowners after five years	n/av	91.8	n/av	n/av	95.0%	91.2%	n/av

Source: Authors' calculations of client-level data.

Losing a home to foreclosure is a wrenching event for an owner, who ends up losing a place to live and any equity she has invested in the property. But a foreclosed home is also a setback for the program. In the event of foreclosure, a shared equity program risks losing the property from its portfolio, with the accompanying loss of all public subsidies that have been invested in the property and all restrictions on occupancy and affordability.

Three programs—Wildwood Park, Dos Pinos, and Thistle—had no homes presently in foreclosure as of the end of 2009 and the highest foreclosure rate was NCLT at 1.1 percent.[26]. In every program, the site's foreclosure rates were below that of their surrounding areas as of 2009. [27]

Over these programs' histories, the two LECs have never had a foreclosure. Thistle and ARCH's cumulative foreclosure rate is just 0.6 percent—just 1 Thistle home and 4 ARCH homes have

[26] Note that this refers to homes where lenders have initiated the foreclosure process, not where a foreclosure has been completed.

[27] http://www.huduser.org/portal/datasets/nsp_foreclosure_data.html

gone into foreclosure. At Thistle, the home that entered foreclosure was lost from its portfolio. At ARCH, 2 of the 4 homes are still in foreclosure, one was purchased by the program out of foreclosure, and 1 was lost from the ARCH's portfolio. CHT and NCLT had somewhat higher cumulative foreclosure rates—2.2 and 3.0 percent. In Duluth, 2 of the 7 homes that have entered foreclosure were cured, while another 2 are currently in the foreclosure process and may yet be cured; the program purchased the remaining three out of REO to prevent losing the homes. Of the 15 CHT homes that have entered foreclosure, 2 are currently in foreclosure and three foreclosures have been cured, with the homeowner able to keep her home. Seven homeowners have lost their homes due to a completed foreclosure, and three more had their homes purchased by CHT so that their lender could not complete a foreclosure process. For the seven foreclosures completed, CHT bought back the home through a REO sale; the other 3 homes were resold to the existing owner. Cumulative foreclosure rates in the seven sites are well below national cumulative foreclosure rates:2.3 percent of FHA-insured home loans originated in 1998 were in foreclosure after four years[28]; in 2008, 4.2 percent of FHA-insured home loans originated in 2004 were in foreclosure[29]. Additionally, most sites achieved a low foreclosure rate compared to the rate among all FHA-insured homes while serving a clientele having a much lower income than the average household purchasing an FHA-insured home.

A final measure of how effective the shared equity programs have been in not only helping low income families to *attain* homeownership but to *sustain* it is the percentage of buyers who remain homeowners five years after they purchase a home. We counted a buyer as a continued homeowner if, after five years, she remains in her original shared equity home, or has moved into another owner-occupied market-rate or shared-equity home. We only have data from three of the seven sites, but in all three, over 90 percent of buyers were still homeowners after five years. This is an impressive rate, considering that all were low-income and almost were all first-time homeowners. By comparison, previous studies have found that roughly half of all low-income homebuyers fail to remain homeowners five years after acquiring a home.[30]

8. Mobility Findings

Families move frequently. According to the American Community Survey, in 2008, about 13 percent of the U.S. population moved to a new address, though rates are higher for renters than homeowners. High rates of mobility nationally raise key questions for shared equity homeownership programs. Does the purchase of a shared equity home limit mobility? Are families reluctant to sell their homes because the housing market has outpaced their appreciation? Or conversely, do some types of shared equity homeownership result in fewer moves, promoting cohesive communities? To inform these questions, we assessed the rates at which participants

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[28] http://www.gao.gov/new.items/d02773.pdf.

[29] http://portal.hud.gov/fha/investment/5087-N-04_DPA_Pub_6-11-08.pdf.

[30] Herbert, Chris and Belsky, Eric. "The Homeownership Experience of Low-income and Minority Households: A Review and Synthesis of the Literature." *Cityscape* 10 (2), 2008; and http://frpo.org/Document/Topics&Issues/Renting%20vs.%20Owning/Achieving%20American%20Dream%20Katz%20Reid.pdf.

moved and their average length of tenure. We also conducted a survey of movers to get at their motivations for moving, the destination of their move, and the type of home they moved into.

It does not appear that the owners of shared equity homes are moving at substantially lower rates than other first-time homebuyers. [31] All sites saw average mobility rates within a fairly narrow range. At the low end, CHT saw 5.5 percent of their homes turn over annually (Table 12). Thistle and ARCH had annual mobility rates of 6.9 percent and Wildwood at 7.3 percent. The final two sites saw 1 in 12 homes resell a year (8.4 percent at NCLT and 8.6 percent in Dos Pinos).

A different way to look at this same information is to calculate the length of tenure for families who move. Across the life of these programs, the median length of tenure for movers in most sites was three to four years. Two sites were slightly higher; CHT and Wildwood resellers lived in their home 5.2 and 6.6 years, respectively. Looking both at the percentage of homeowners who moved annually and their length of tenure, we do not see evidence that homeowners in the programs were stuck in place.

Research has established that some families move because of positive changes in a family's circumstances, such as buying a bigger home to fit a growing family or moving to be close to a new job.[32] But mobility can also be a symptom of instability and insecurity. To gain a better understanding of why shared equity buyers moved and what their housing outcomes were, we conducted a short web-based survey of movers.[33]

Of those who responded, most movers from the Thistle program reported they left for family reasons, followed by housing or neighborhood reasons, and job reasons (see Table 12).[34] At both NCLT and Thistle, the most frequently cited reason for moving was a change in martial status. This was confirmed in discussions with program staff, who stated that many households in program were female-headed, and several of these women moved after getting married. CHT movers cited housing and neighborhood reasons as the primary drivers in their decision to move, while Dos Pinos movers referenced job related reasons. Except for CHT, where a number of families moved because they wanted a better house or apartment, relatively few movers left for what may be considered negative reasons (wanting cheaper housing, a better home, or a better neighborhood). These responses paint a picture of most owners leaving their homes not in

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[31] Comparison data from the National Association of Home Builders: http://www.nahb.org/generic.aspx?sectionID=734&genericContentID=110770&print=true. Note that comparison data can only be calculated for those with information on whether they are first-time homebuyers.

[32] "Residential Mobility and Neighborhood Change: New Evidence and Implication for Community Initiatives." Claudia Coulton, Brett Theodos, and Margery A. Turner.

[33] Three programs—ARCH, the San Francisco City Inclusionary Affordable Housing Program, and Wildwood—were not able to conduct mobility surveys as they do not maintain contact information for residents who have left the program.

[34] Family reasons include: change in martial status, establish own household, or other family reason. Job reasons include: new job or job transfer, to look for work or lost job, to be closer to work/easier commute, retired, or other job-related reason. Housing and neighborhood reasons include: wanted to own home, not rent, wanted new or better house/ apartment, wanted better neighborhood/less crime, wanted cheaper housing, or other housing reason. Other reasons include: to attend or leave college, change of climate, health reasons, or a natural disaster.

financial stress or reluctantly, but in response to family, life cycle, and employment changes.

Table 12: Mobility for Shared Equity Programs

	ARCH (King County)	Champlain Housing Trust (Burlington)	Citywide Inclusionary Affordable Housing Program (San Fran)	Dos Pinos (Davis)	NCLT (Duluth)	Thistle Homes (Boulder)	Wildwood Park (Atlanta)
Annual average move rate	6.9	5.5	n/av	8.6	8.4 (after '04)	6.9%	7.3
Median length of tenure (years)	3.3	5.2	4.2	4.0	3.3	3.4	6.6
Main reason for moving							
% Family reason	n/av	27%	n/av	36%	39%	53%	n/av
% Job reason	n/av	14%	n/av	30%	25%	16%	n/av
% Housing and neighborhood reason	n/av	42%	n/av	36%	25%	21%	n/av
% Remaining within same county	n/av	61%	n/av	40%	67%	48.7%	n/av
% Moving to owner-occupied, market rate housing	n/av	68%	n/av	54%	78%	71.8%	n/av

Sources: Survey of shared equity program resellers and Current Population Survey

Nationally, most movers resettle near the home they are leaving. We found this to also be the case for two of the programs—NCLT and CHT—where roughly 2 out of 3 movers stayed in the same county. Resellers from the two programs with high surrounding housing costs, Dos Pinos and Thistle, tended to move further than the national average. Just 40 percent of Dos Pinos resellers and 49 percent of Thistle movers stayed within the same county. However, most of those who moved out of a shared equity home stayed within the same state.

Finally, we asked movers about the tenure of housing they moved into after reselling their home. This measure is an important outcome of residential and economic mobility. Of the sites for which we had data, three had a high proportion of movers report transitioning into another owner-occupied home. Of these, most purchased market-rate housing: 68 percent of CHT's movers, 72 percent of Thistle's movers, and 78 percent of NCLT's movers did so. With proceeds, at the median, of nearly $19,600, Dos Pinos movers had accumulated funds for a moderate down payment on their next home. However, a sizable share of movers, 42 percent, shifted to rental housing subsequent to leaving their Dos Pinos home.

9. Conclusion

Shared equity programs have been promoted as a cost-effective method to help low-income families build wealth through sustainable homeownership, while at the same time providing a permanent supply of units that remain affordable over time. The shared equity programs analyzed in this study support these claims: these programs sold homes and cooperative units to families with incomes ranging from a low of 35 percent of MFI to 73 percent of MFI. Moreover, the income of buyers remained relatively low, when compared to MFI for all of the years in which programs sold their homes.

The shared equity programs delivered on their goal of helping lower income families build wealth: families realized sizable proceeds when selling their homes: from $6,300 for Wildwood resellers to $70,000 for program participants in San Francisco. Moreover, because most homebuyers purchased their units with a relatively small down payment, the internal rates of return across all programs but one outpaced the gains that resellers would have earned had they invested their down payments in stocks or bonds. By accumulating wealth, many of the purchasers of shared equity homes are able to acquire market-rate owner-occupied homes. Moreover, shared equity programs, by recycling subsidies, offer a less expensive method of supporting homeownership than initiatives that provide grants to families to purchase market-rate homes.

Shared equity programs not only help families accumulate wealth, but for 5 of the 7 the programs studies in this report, increases to the real income required to purchase a unit at resale were, on average, less than 1.1 percent per year. Therefore, to the extent that lower income families' incomes increased at a rate of about 1 percent per year, units retained their affordability over time, thereby creating opportunities for subsequent lower income families to generate wealth. Moreover, the change in the required minimum income, as a proportion of MFI, required at resale was less than 1 percentage point for 4 of 7 programs. By this measure, units remained affordable to the extent that lower income families' incomes increased at the same rate as the area MFI. It is important to note that in all of the programs, the minimum required income to purchase homes is well below the area median. Therefore, even for programs in which resold units lost some of their affordability, resold homes remain within reach of low-income households.

Given the current foreclosure crisis, which reduced homeownership rates, shared equity programs stand out for the extent to which buyers are able to stay current on their mortgages and remain in their homes until they wish to sell. Although homeowners earn well below median incomes, very few had their loan go into foreclosure. In large part, the low foreclosure rate reflects the type of loans received by homebuyers: most purchase loans are 30-year, fixed-rate mortgages. Rather than use high-cost loans, homebuyers finance their purchases with mortgages or share loans that are underwritten with standards that allow for sustainable homeownership over time. For the three sites where we have data, over 90 percent of buyers were still homeowners after five years, much higher than comparable first-time homeowners.

It does not appear that limits on the equity that shared equity programs place on their resident members limit mobility. The owners of shared equity homes are moving at comparable rates to other first-time homebuyers. Most owners report leaving their homes not in financial stress or reluctantly, but in response to family, life cycle, and employment changes. In two programs—

NCLT and CHT—most movers resettle near the home they are leaving. But resellers from the two programs with high surrounding housing costs—Dos Pinos and Thistle—tended to move further than the national average. Of the sites for which we had data, three had a high proportion of movers report transitioning into another owner-occupied home.

The outcomes are not related to the type of shared equity model (community land trust, deed restriction or co-op). Rather, within each type of approach, decisions regarding the resale formula used to calculate allowable appreciation and conditions in the local housing market affect outcomes much more than the particular model of shared equity homeownership.

This study analyzed seven shared equity programs: there are a many more such programs operating throughout the country. Of final note, the data elements used in this study can be collected by all shared equity homeownership programs using the data protocols presented in the appendix. The sites analyzed in this report had to dedicate resources to input data into the collection protocol. To reduce these costs in the future, program staff should collect these data elements for all initial and subsequent resales, on a routine basis and in electronic form. This would allow programs to monitor their own performance with respect to their objectives of promoting sustainable homeownership opportunities and would allow outside researchers to measure the performance of these programs over time.