

SHARED EQUITY HOMEOWNERSHIP EVALUATION: CASE STUDY OF CHAMPLAIN HOUSING TRUST

Final Report

October 2010

Prepared by:



The Urban Institute

2100 M Street, NW • Washington, DC 20037

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I. Introduction

This case study analyzes outcomes for the Champlain Housing Trust (CHT), which started providing homeownership opportunities in Burlington, Vermont to low- and moderate-income families in 1984. CHT expanded its service area to all of Chittenden County in 1987, and Franklin and Grand Isle Counties in 2001. Through December 2009, CHT had sold homes to 683 families. Included in this total were 233 resales, where the same price-restricted home was successively purchased by more than one income-eligible family. Using client-level data provided by CHT, we present analyses that address the following four research topics:

1. **Affordability:** Is the program effective in creating and preserving affordability for low- and/or moderate-income homebuyers?
2. **Personal Wealth:** Is the program effective in building wealth for individual households, providing opportunities for financial gains that are unavailable to renters?
3. **Security of Tenure:** Is the program effective in maintaining high levels of owner-occupancy for its participants?
4. **Mobility:** Are program participants able to sell their shared-equity homes and move into other housing and neighborhoods of their choice?

In the following section, we describe CHT's program, including the method it uses to calculate the allowable amount of appreciation that can be realized by sellers and the amount of capital investment that can be recaptured by sellers.

II. Program Description

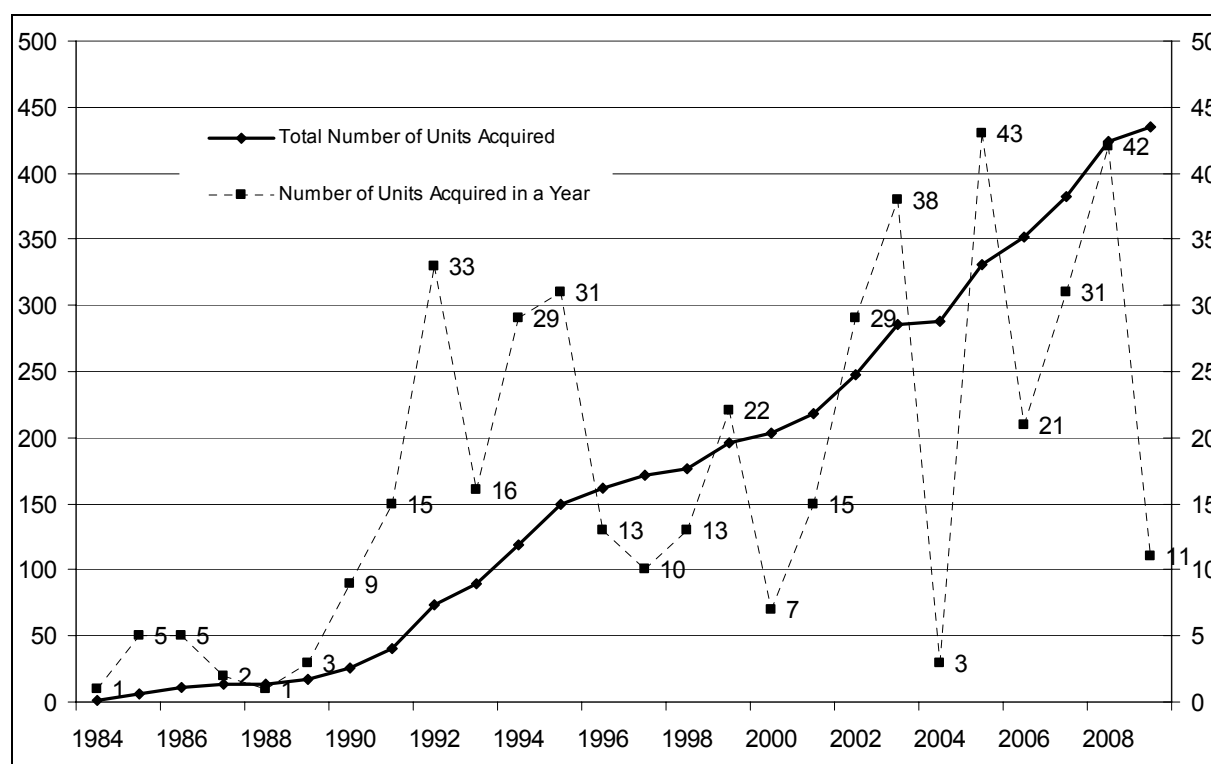
The Champlain Housing Trust (a 501(c)(3) nonprofit organization) was created in 2006 in a merger between the Burlington Community Land Trust and Lake Champlain Housing Development Corporation, both of which were founded with assistance from the City of Burlington in 1984.¹ CHT is a community land trust (CLT), and provides affordable homeownership and rental options throughout the three northwest counties of Vermont. Through their shared equity program, CHT sells homes to families whose income is no more than the HUD median family income (based on the size of the household). Most of its resale-restricted homes have been sold to families earning less than 80 percent of median. CHT's homeownership portfolio is made up of approximately 60 percent condominiums, and 40 percent single family houses, including a handful of duplexes and mobile homes. Almost all of the program's homes have between one and three bedrooms. Of the 435 resale-restricted, owner-occupied homes currently in CHT's portfolio, about 130 are new construction built mainly between 2003 and 2007 by CHT or developed in partnership with private, for-profit developers.

¹ For previous analyses of CHT's program see Davis, John Emmeus and Amy Demetrowitz, *Permanently Affordable Homeownership: Does the Community Land Trust Deliver on Its Promises?* (2003) and John Emmeus Davis and Alice Stokes, *Lands in Trust, Homes That Last: A Performance Evaluation of the Champlain Housing Trust* (2009), available at <http://www.champlainhousingtrust.org>.

The rest were existing homes, many of which were built over 50 years ago and have significant ongoing maintenance needs. A majority of these existing homes were added to the portfolio through a “buyer-driven” model: qualified buyers shop for a home on the open market and bring the home into the portfolio with the help of a grant from CHT. About 40 percent of CHT’s resale-restricted, owner-occupied homes are located inside of Burlington’s city limits. The others are located in the inner-ring suburbs surrounding Burlington and in communities scattered throughout Chittenden, Franklin and Grand Isle counties.

During its first eight years, CHT built a modest portfolio of 41 homes, mostly single-family detached houses. Around 1992, CHT began a period of more rapid growth, increasing its holdings of resale-restricted houses and condominiums by an average of about 23 units per year (Figure 1). By the end of 2009, CHT had amassed a homeownership portfolio of 435 units. Because some of these homes have been resold one or more times without leaving CHT’s portfolio, a total of 683 low-income families have been helped to buy a home through Champlain Housing Trust’s CLT program.²

Figure 1: Number of Homeownership Units Acquired by Year and Cumulative Number of Such Units Acquired by CHT, 1984–2009



Source: CHT data.

CHT sets a price for resales via a formula embedded in either a ground lease (for single family homes) or a housing subsidy covenant (for condominiums). Under CHT’s program, the resale

² Between 1984 and 2009, CHT allowed 15 condominiums to leave its portfolio of resale-restricted, owner-occupied housing, mainly due to issues of marketability. Only in two of these cases was there loss of some of the subsidy that had helped to make these condominiums affordable in the first place.

price of condominiums increases by 25 percent of any increase in a condo's appraised market value, while the resale price of single family homes increases by the portion of the property's total value (land and building) that the seller actually purchased when first buying her house, times 25 percent of any increase in market appreciation on the property (land and building).³ For example, if an owner buys a single family home for \$100,000 that was appraised at \$200,000 (a 50 percent share of the property's value) and the home appreciates to \$300,000, the owner may sell the home for $\$100,000 + [50\% \times 25\% \times (\$300,000 - \$200,000)] = \$112,500$.⁴ To determine the market appreciation, an appraisal is done at the time of original purchase, and a new appraisal is done at time of resale.

In addition to sharing in appreciation not due to any capital improvements made by the homeowner, resellers receive a credit worth 100 percent of the market value of any qualified post-purchase capital improvements that are approved by CHT and that make a significant change to the home. The amount that is added to the seller's proceeds is determined by an appraisal that is done at the time the capital improvement is made.⁵

CHT's homebuyers participate in an income verification process which ensures that their household income is below the median income level, and that the household can afford a mortgage on the home they hope to buy. CHT provides prospective homebuyers with a list of lenders who are willing and able to underwrite CLT mortgage loans. In addition, applicants have to attend a day-long homebuyer education class based on the NeighborWorks America curriculum—which includes topics such as advantages and disadvantages of homeownership, credit, working with a lender, attorney, home inspector, and delinquency prevention, and plus local information. The next step is one-on-one counseling provided by CHT, which focuses on the special terms and conditions of owning a resale-restricted home and includes the creation of an action plan for successful homeownership.

After purchase, CHT buyers can attend workshops on issues such as energy efficiency and home maintenance, and can meet with a housing counselor on any issues or problems they have. CHT also does outreach and intervention for homeowners facing delinquency or foreclosure.

CHT purchases every home that is offered for resale by one of its homeowners. CHT buys and resells the home in the same transaction. CHT markets the home, selects eligible buyers, helps to resolve any maintenance issues, and coordinates closing. An owner who intends to resell her CHT home must notify CHT, whose staff then work with the seller throughout the process. Eligible buyers are picked, following CHT's selection criteria, from a list of customers who have

³ CHT collects a fee of up to 6 percent of the current appraised value when a home is resold, plus a transaction fee of \$1,000. The remainder of the appreciation remains in the home to preserve affordability. Any fees collected by CHT at resale to cover a portion of its own costs of providing services to its homes and homeowners are added to the price that is charged to the subsequent homebuyer.

⁴ Starting July 2010, CHT will increase the return available for single family homes to mirror the affordability restrictions for condominiums: resellers will receive 25 percent of any increase in a home's appraised market value. This change will have the effect of increasing return for these owners and decrease affordability for subsequent home purchasers.

⁵ Approximately a quarter of CHT's homeowners receive a capital improvements credit on resale.

completed CHT's homebuyer education course and whose income has been verified as being below 100 percent of median, adjusted for household size.

III. Summary of CHT Sales and Homebuyers

The sale and resale of the Champlain Housing Trust's homes served 683 families between 1984 and 2009. There have been 233 resales during the 26 years that this CLT program has operated, representing 34.1 percent of all sales. CHT was only able to supply detailed information on 165 units that had resold at least once between 1984 and 2009 (involving 398 total sales). Except where otherwise noted, this analysis includes only data on the 398 sales of units involved in resales, which CHT staff indicated were representative of all sales.⁶

As detailed in the following table, the median sales price paid by homebuyers (in 2008 \$) was \$104,908, compared to a median appraised value of \$141,626 for these homes. Owners paid a median of 2.6 percent upfront as down payment. The median difference in the price paid by the buyer and the appraised value of the home, expressed in 2008 dollars, was \$37,860 (Table 1).

Table 1: Selected Characteristics of CHT Homes and Homebuyers

Number of units in CHT homeownership portfolio as of December 31, 2009	435
Number of price-restricted resales: 1984-2009	233
Total number of sales: 1984–2009	683
Median sales price paid by homeowner (in 2008 \$)	\$104,908
Median appraised value of homes at sale (in 2008 \$)	\$141,626
Median difference between appraised value and sales price (in 2008 \$)	\$37,860
Median down payment and closing costs paid by seller (in 2008 \$)	\$2,749
Median household income of purchasers (in 2008 \$)	\$36,660
Percentage of buyers who are first-time homebuyers	92.1 percent

Source: Authors' analysis of CHT client-level data

The ability to purchase homes at well below-market prices (the median sales price for a resale restricted home was 74 percent of the median appraised value for these homes) provided homeownership opportunities to lower income households. CHT's homebuyers had a median

⁶ We also received information on 11 other sales in which the buyer's mortgage was seriously delinquent or went into foreclosure during the time period, which we used in our analysis of Security of Tenure; they are not used in other analysis because they may skew the results.

household income (in 2008 \$) of \$36,660. As detailed in our affordability analyses, this is 52.3 percent of the surrounding metropolitan area's 2008 median family income of \$70,100.⁷ CHT homes made it possible for many families to become homeowners for the first time, as 92.1 percent of CHT buyers were first-time homeowners.

IV. Findings

In this section we present our analyses that address each of the four research topics: lasting affordability, personal wealth, security of tenure, and mobility.

1. Affordability

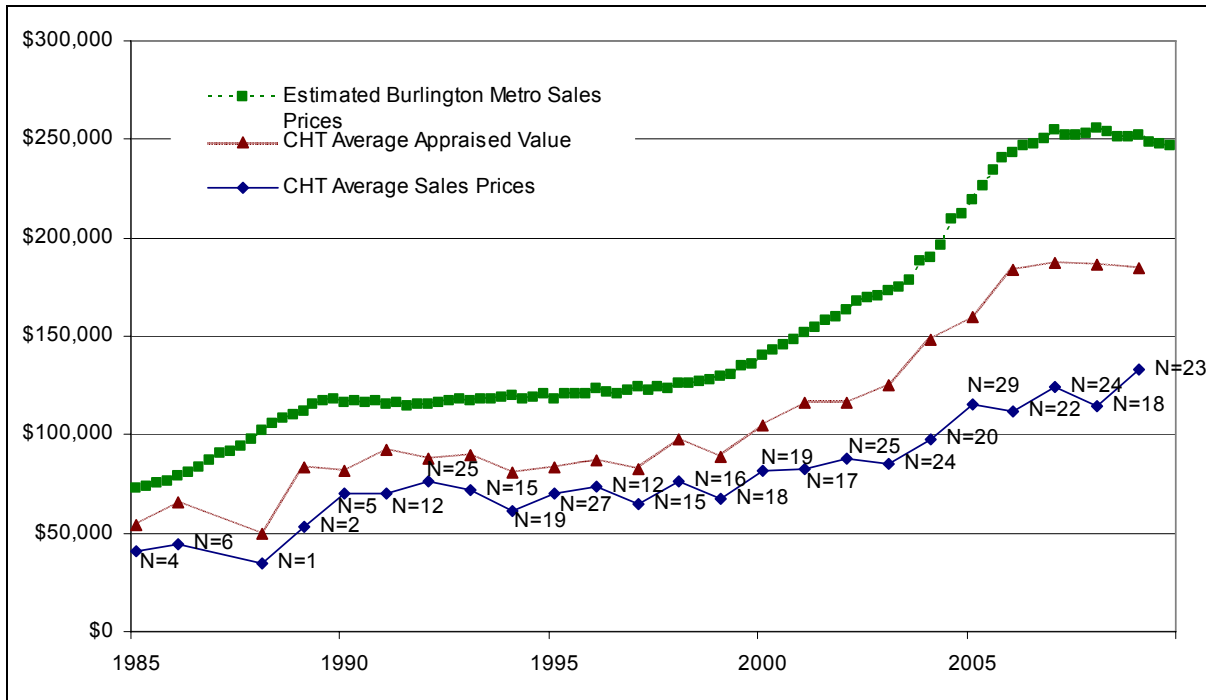
A primary purpose of any shared equity homeownership program is to provide affordably priced homes that continue to be affordable for lower income families across multiple resales. Meeting this objective is more challenging in a market where house prices are rapidly appreciating. Home prices increased by about 60 percent between the first quarter of 1985 and the fourth quarter of 1991 in the Burlington metropolitan area, and again by about 80 percent between the first quarter of 2000 and the fourth quarter of 2008, as measured by the Federal Housing Finance Agency's (FHFA) house price index. Home prices between 1992 and 1999 remained relatively flat. The median price in the Burlington metro area for detached homes in 2008 was \$250,900. Applying FHFA's index to this price, we estimate that median prices (in nominal dollars) for detached homes increased from about \$140,159 in the first quarter of 2000 to a level at the end of 2009 of about \$247,080.⁸ During this time, median home prices in CHT's portfolio of resale-restricted homes remained well below Burlington metro averages; the appraised values of these same homes for all years is between the actual CHT sales price and the area median. Figure 2 shows median prices in the Burlington area, compared to the appraised values and actual sales prices for all CHT homes sold between 1985 and 2009.

Annual price increases for all homes in the Burlington metropolitan area were generally between 5 and 15 percent between 1986 and 1990 and again between 2000 and 2006. In other times, increases have generally been between 0 and 5 percent, and have been negative in 2009 (Figure 3).

⁷ Burlington is located in the Burlington-South Burlington, VT MSA. See the HUD-defined median family income here: http://www.huduser.org/portal/datasets/il/il08/vt_fy2008.pdf. This number differs from the median household income in Chittenden County, VT (where Burlington is located) of \$61,230. These data from the Economic Research Service are derived from Bureau of Labor Statistics Local Area Unemployment Statistics data. See <http://www.ers.usda.gov/Data/Unemployment/>.

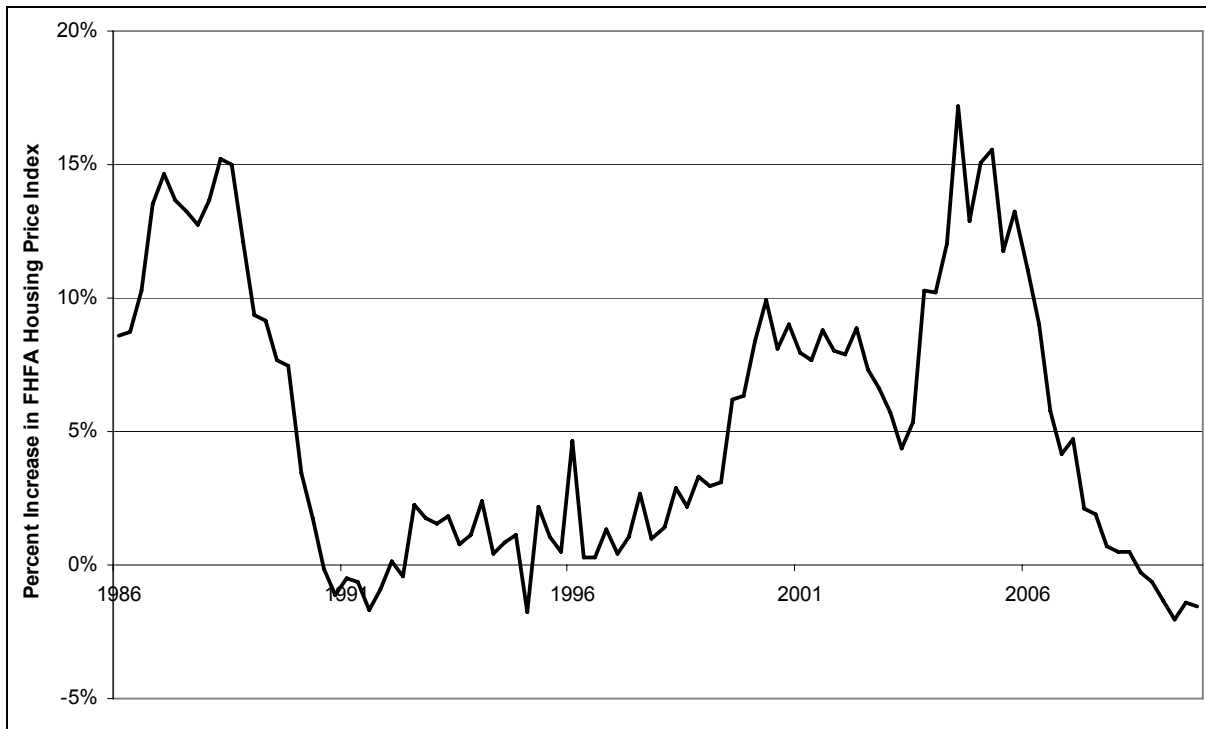
⁸ Data are taken from the 2008 American Community Survey.

Figure 2: Estimated Median House Prices in the Burlington MSA, Compared to Appraised Values and Sales Prices of CHT Homes: 1985–2009



Sources: FHFA House Price Index, American Communities Survey, and authors' analysis of CHT client-level data.

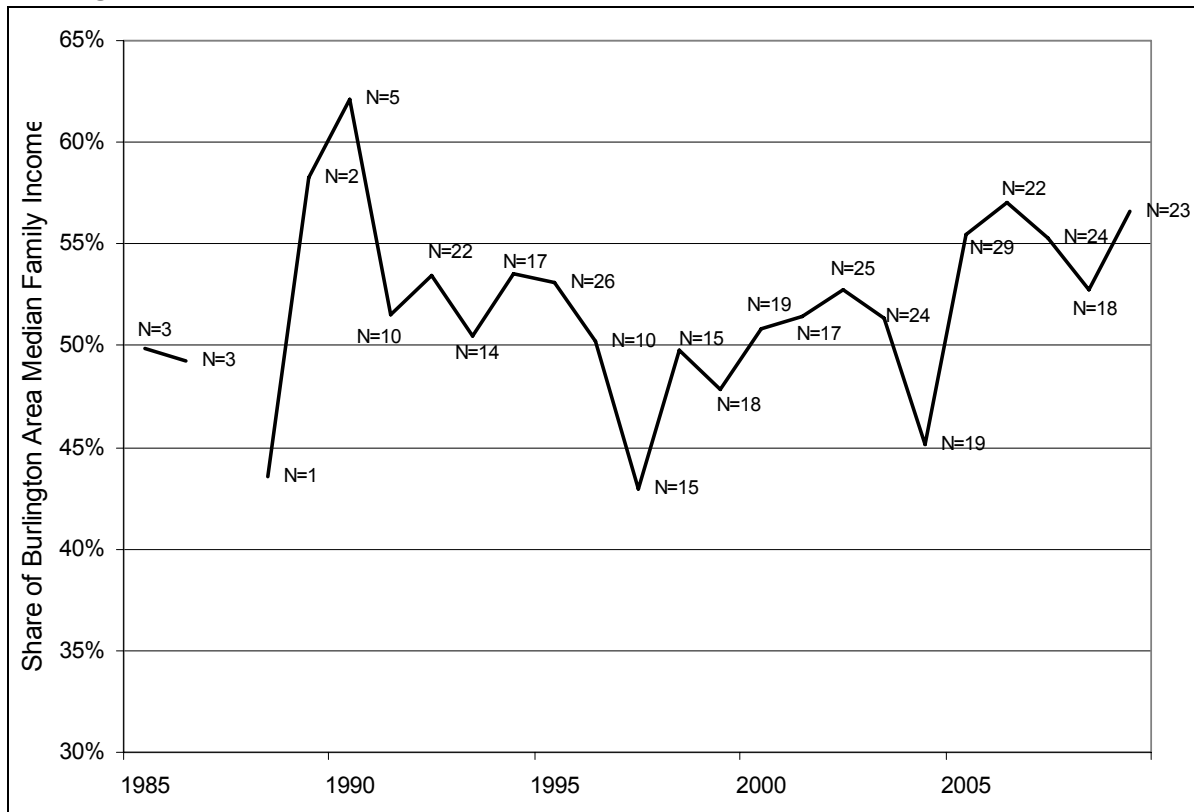
Figure 3: Year-by-Year Percentage Change in House Prices in the Burlington, VT Metropolitan Area: 1986–2009



Source: FHFA House Price Index

While the overall U.S. housing market slumped dramatically from its high in mid-2006⁹, house prices in the Burlington metropolitan area did not reach their peak until the first quarter of 2008, and have only declined by about 3 percent since that peak. CHT homes saw considerable price appreciation during this same period (since CHT’s resale formula is pegged to the rise in market values). Despite a significant run-up in prices, this CLT program still was able to sell its homes to low-income buyers. The real median income of all CHT homebuyers was 52.3 percent of the Burlington metropolitan area’s median family income in 2008. The income of CHT homebuyers when compared to the median family income for the MSA remained relatively constant between 1985 and 2009, when nearly all of the program’s homes were sold (see Figure 4). In any given year, the median real household income for these CHT homebuyers, as a share of the county’s real median, ranged from a low of 42.9 percent (in 1997) to a high of 62.1 percent (in 1990). In most years, the median household income of CHT homebuyers, as a share of Burlington area median family income, varied in a relatively narrow range of between 49 and 56 percent.

Figure 4: Median HH Income of CHT Homebuyers Relative to Median Family Income for Burlington Metropolitan Area, 1985–2009



N=number of sales with income data in a given year.

Source: Authors’ analysis of CHT client-level data.

Note: there were no sales in 1987.

⁹ According to information reported in the Case/Schiller index of house prices, on average home prices in the 20 largest U.S. metro areas declined by 27 percent between July 2006 and December 2008.

One of the major objectives of a shared equity homeownership program like CHT's is to ensure that the price of any homes that are resold will remain permanently affordable for successive generations of lower income homebuyers. The key question is whether or not the home remains affordable to the next buyer. 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."¹⁰ Previous analyses of changes to the affordability of shared equity homes have used the minimum income required to purchase a home as the indicator of the housing *cost* and the area's median family income (MFI), published by HUD.¹¹ 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 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 earlier, the incomes of the families purchasing CHT homes 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.¹²

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.¹³ As a result, we 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,

¹⁰Goodman, Jack. 2001. *Housing Affordability in the United States: Trends, Interpretations, and Outlook*. A Report Prepared for the Millennial Housing Commission, page 3.

¹¹ 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.

¹² 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.

¹³ Goodman, page 17.

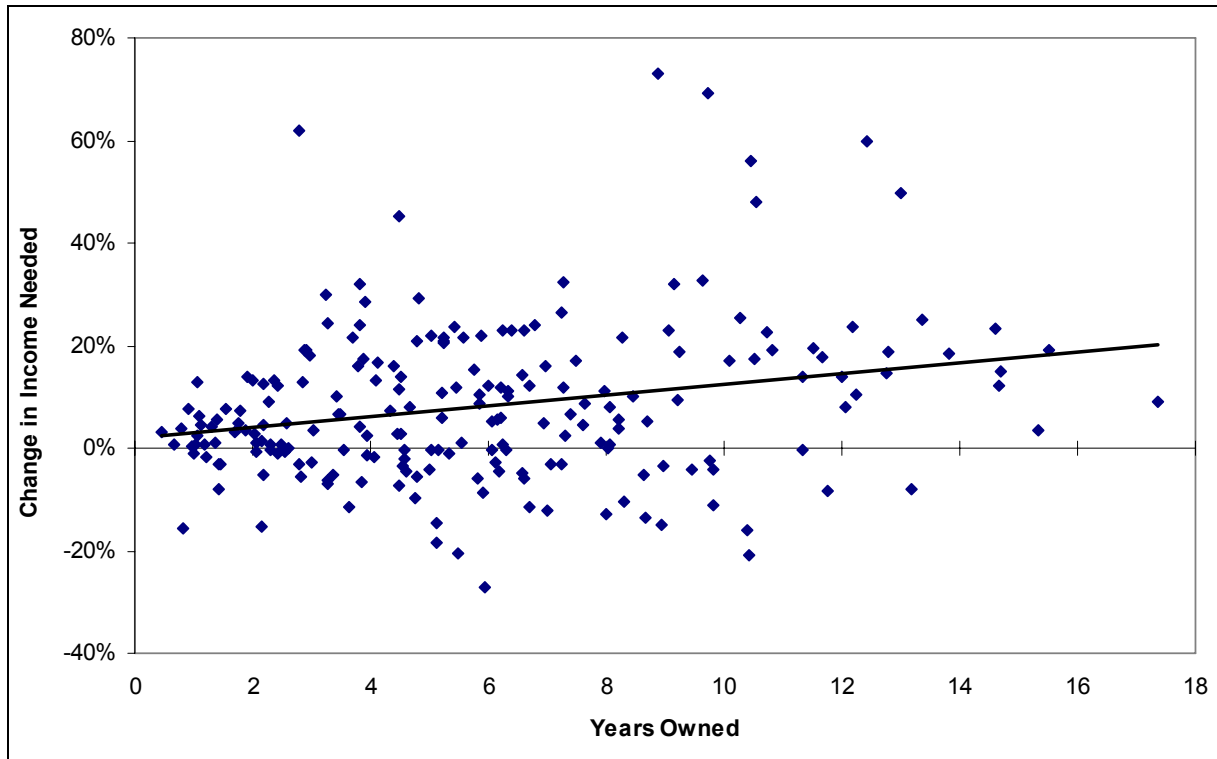
and so identifies the extent to which *the same* household earning the required minimum income at a given point in time can afford a unit when it is resold. Consequently, it is not dependent on an area's changes in income distribution or household structure; rather, it provides information about the income growth required for a particular cohort of households to be able to afford a home at resale.

Starting with the absolute measure, we calculated the real income required for the initial purchase and subsequent resale of the shared equity homes, assuming 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).

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 requires a minimum income (in 2008 \$) of \$20,000 at the initial sale, 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. Using this methodology, we calculated that the real required minimum income increased between units' initial and subsequent resale by 1.1 percent per year. Given this relatively modest change in required real income, it is not surprising that 60 percent of CHT's resold homes required a minimum income that was not more than 10 percent larger (in real terms) than the income required for the initial sale.

In addition, we ran a regression in which the percentage change in required minimum income was the dependent variable and length of tenure was the explanatory variable. The parameter estimate from this regression indicates the percentage change in the minimum income (in real \$), by year, that is required to purchase the home. An increase in tenure of one year is associated with a 1.0 percentage point increase in income needed to purchase a CHT home. This increase is statistically significant (at the .01 level).

Figure 5: Changes in Income Needed vs. Years Owned for CHT Homes

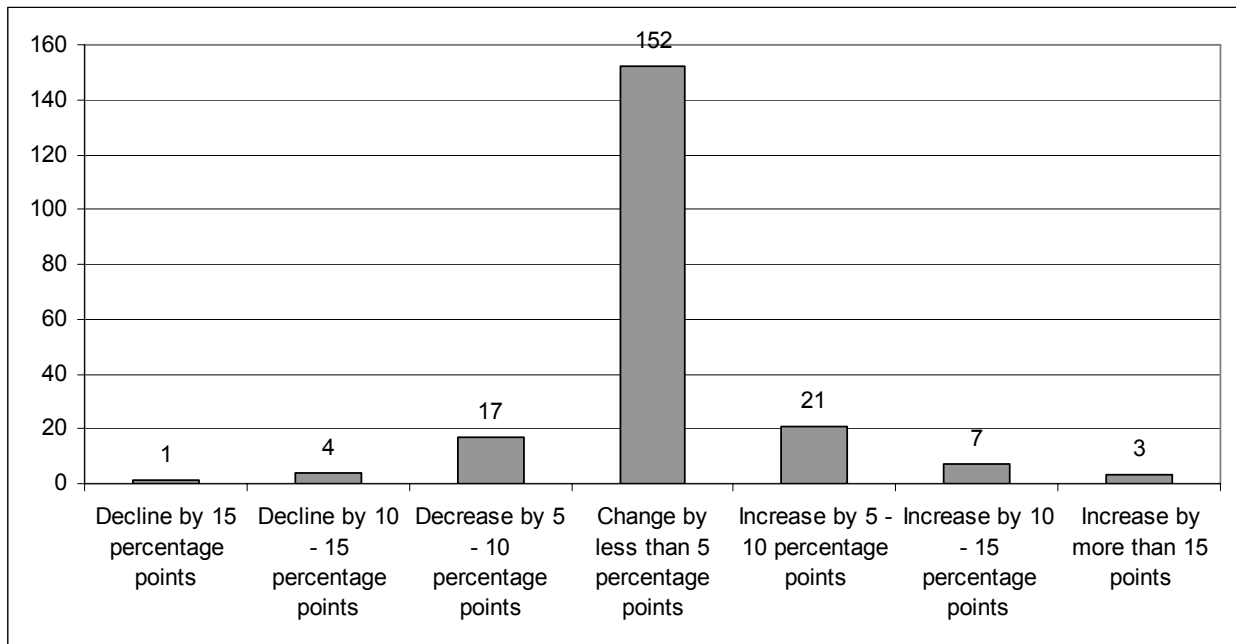


Source: Authors' analysis of CHT client-level data.

Note: An increase in tenure of one year is associated with a 1.0 percentage point increase in income needed. This is significant at the .01 level.

Turning to the relative measure, the median minimum income required to purchase a CHT home that was subsequently resold was 44.4 percent of the area MFI. These homes, when resold, required a median minimum income that was 45.9 percent of area MFI. The median difference between these two ratios for all of the units resold by CHT was 0.9 percentage points, which indicates that units retained their affordability between the time they were initially sold and then resold. As shown in the following figure, about 85 percent of resales had the required minimum income, as a share of area MFI, increase by less than 5 percentage points.

Figure 6: Percentage Point Change in Income (as a share of Median Family Income) Needed for CHT Homes, Initial Purchase vs. Later Resale



Source: Authors' analysis of CHT client-level data.

Note: We assume that one-third of income is paid in principal, interest, taxes, insurance, and fees, with a 5.1% 30-year fixed-rate mortgage and a 3 percent down payment.

2. Personal Wealth

Shared equity homeownership programs attempt to balance providing owners with an opportunity to accumulate wealth while maintaining the affordability of the units for subsequent purchasers. As detailed in the previous section, many homes in CHT's program retained their affordability, even in a housing market that saw steady price appreciation in the last decade. By allowing their homeowners to retain up to 25 percent of the appreciation on their property, CHT's resellers earned a median internal rate of return of 30.8 percent on their initial investment of about \$3,000.¹⁴ This rate of return realized by most CHT home resellers far exceeded the returns that those resellers would have earned if they had rented their unit¹⁵ and invested what

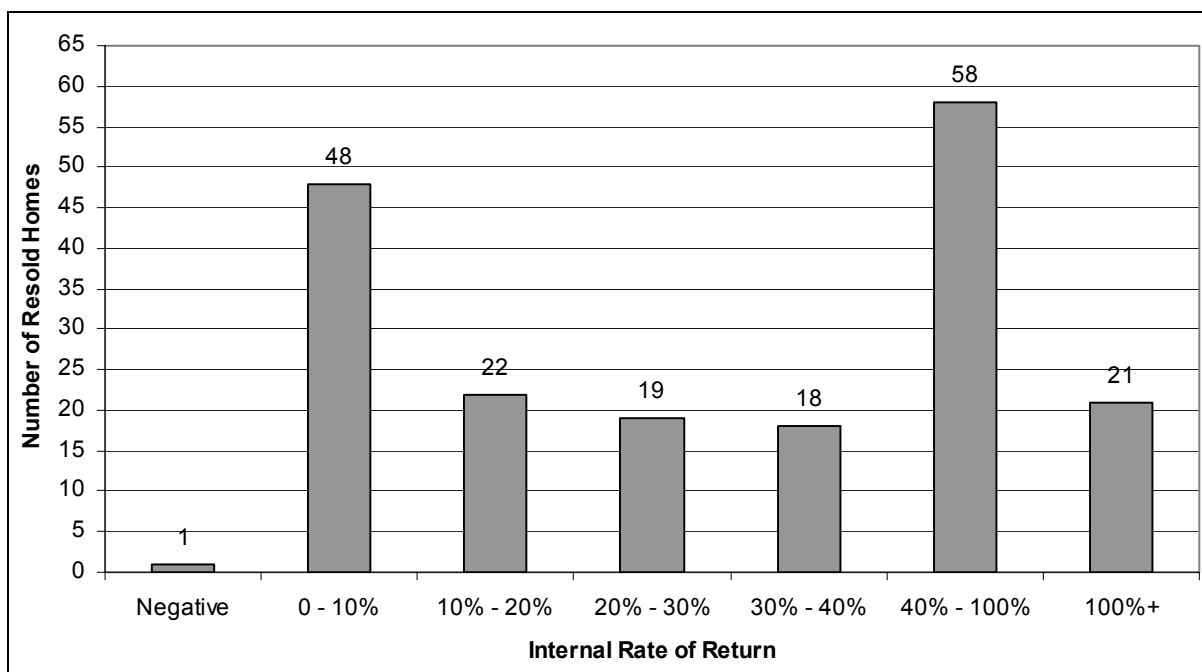
¹⁴ IRR is $[(\text{effective appreciation} + \text{his or her down payment}) / \text{his or her down payment}]^{(1/\text{yrs_owned})} - 1$. We define effective appreciation as the lesser of (seller's realized appreciation + capital improvements) and (seller's proceeds at resale + capital improvements + cash-out refinancing - principal paid).

¹⁵ 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. This simplifying assumption may underestimate the benefit: the median total monthly payment for all CHT owners in 2008 dollars is \$888. The median gross rent in 2008 in the Burlington Metropolitan Area was \$968 (source: 2008 American Community Survey). 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

they had paid as a down payment in stocks or bonds. Had CHT resellers invested their down payment in an S&P 500 index fund, they would have earned a median return of 8.5 percent. A comparable investment in 10-year Treasury bonds would have yielded a 6.0 percent median return.¹⁶

While most CHT owners saw high rates of return, a quarter (24.6 percent) of CHT homeowners with an IRR calculated would have seen a higher return with either stocks or bonds, and about a quarter (26.2 percent) realized returns of under 10 percent. On the other hand, 2 in 5 resellers (42.2 percent) saw internal rates of returns above 40 percent, and 11.1 percent saw rates of return of over 100 percent (see Figure 7). Note that residents with short tenures have greater variability in IRR; because of this, many resellers with very high and very low rates returns actually had fairly low effective appreciation in dollar terms.

Figure 7: Rates of Return for Resold Homes in CHT



Note: Internal rate of return does not include 38 sales with missing data or 8 sales with \$0 down payment.

Source: Authors' analysis of CHT client-level data.

In addition to their share of appreciation, resellers received the entire principal amount that they had paid on their first-lien mortgage (including their down payment), and those homeowners who made qualified post-purchase improvements also received 100 percent of the market value added by those improvements. Eleven resellers removed equity from their homes before resale

fixed rate mortgages). Added costs include maintenance costs, realtor fees, and other transfer and transaction costs.

¹⁶ We assume that CHT 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 CHT homes.

by refinancing their original mortgages. The median value of the equity removed through cash-out refinancing by these owners was \$12,716. In addition, eleven purchasers in our sample had to repay non-amortizing second-lien mortgages at resale; these mortgages had a median value of \$16,630. The 60 homeowners who made capital improvements and sold their home were credited a median of \$5,435. Thirty-seven CHT owners in our sample also received down payment assistance grants, worth a median of \$9,764 that they did not need to pay back. As a result, sellers walked away from the closing table with a median of \$17,501 after they resold their home (see Table 2).

Table 2: Summary Characteristics of CHT Purchase Transactions

Median purchase price of all home buyers (in 2008 \$)	\$104,908
Share of purchasers who received first-lien mortgages, among those with mortgage information	99.5 percent (388 out of 390 homebuyers)
Median first-lien mortgage among those with a mortgage (in 2008 \$)	\$102,748
Share of first-lien mortgages with fixed interest rates	96.9 percent
Median initial interest rate on first-lien mortgages	5.1 percent
Share of first-lien mortgages with a term of 30 years	97.6 percent
Median down payment and closing costs paid by purchasers at closing (in 2008 \$)	\$2,749
Median percent of sales price paid in down payment	2.6 percent
Share of all purchasers who received non-amortizing second-lien mortgage, among those with mortgage information	2.8 percent (11 out of 390 homebuyers)
Median non-amortizing second-lien mortgage amount for purchasers who received such a mortgage (in 2008 \$)	\$16,630
Number of purchasers who received a down payment assistance grant	37 homebuyers
Median down payment assistance grant, among those who received such a grant (in 2008 \$)	\$9,764
Median principal paid on home by resellers (including down payment and closing costs) (in 2008 \$)	\$6,027
Share of resellers who removed equity from their homes through refinancing	4.7 percent (11 out of 233 resellers)
Median forced savings - principal paid on mortgages other than down payment (in 2008 \$)	\$3,051
Median cash removed through refinancing by resellers who refinanced (in 2008 \$)	\$12,716
Median proceeds realized by resellers (in 2008 \$)	\$17,501
Median appreciation realized by resellers (in 2008 \$)	\$6,578
Number of resellers with capital improvements	60 resellers
Median capital improvements among those with	\$5,435

information (in 2008 \$)**Median Internal Rate of Return Earned by resellers****30.8 percent**

Source: Authors' analysis of CHT client-level data.

The shared equity model used by CHT provides a subsidy by pricing its homes at about \$40,000 below their appraised value and then passing along that lower price to subsequent homebuyers at resale. An alternative method for subsidizing homeownership would have been to provide this subsidy directly to CHT homebuyers, who could have used it to purchase the same homes, but without any restrictions on the amount of appreciation they could realize upon resale. We performed an analysis to compare these two approaches.

For the direct subsidy-to-homeowner grant program, we assumed that: (1) homebuyers would make the same down payment as they did when purchasing the home under the shared equity program; (2) the price charged by those who resold their homes was equal to the appraised value of their homes at the time of resale; and (3) the homeowner would pocket the entirety of both the initial subsidy and all market appreciation at the home's resale. The median appreciation for resold units (in 2008 \$) was \$16,093. Given their down payments, which averaged about \$3,000, these sellers would have realized a median internal rate of return of 61.1 percent.

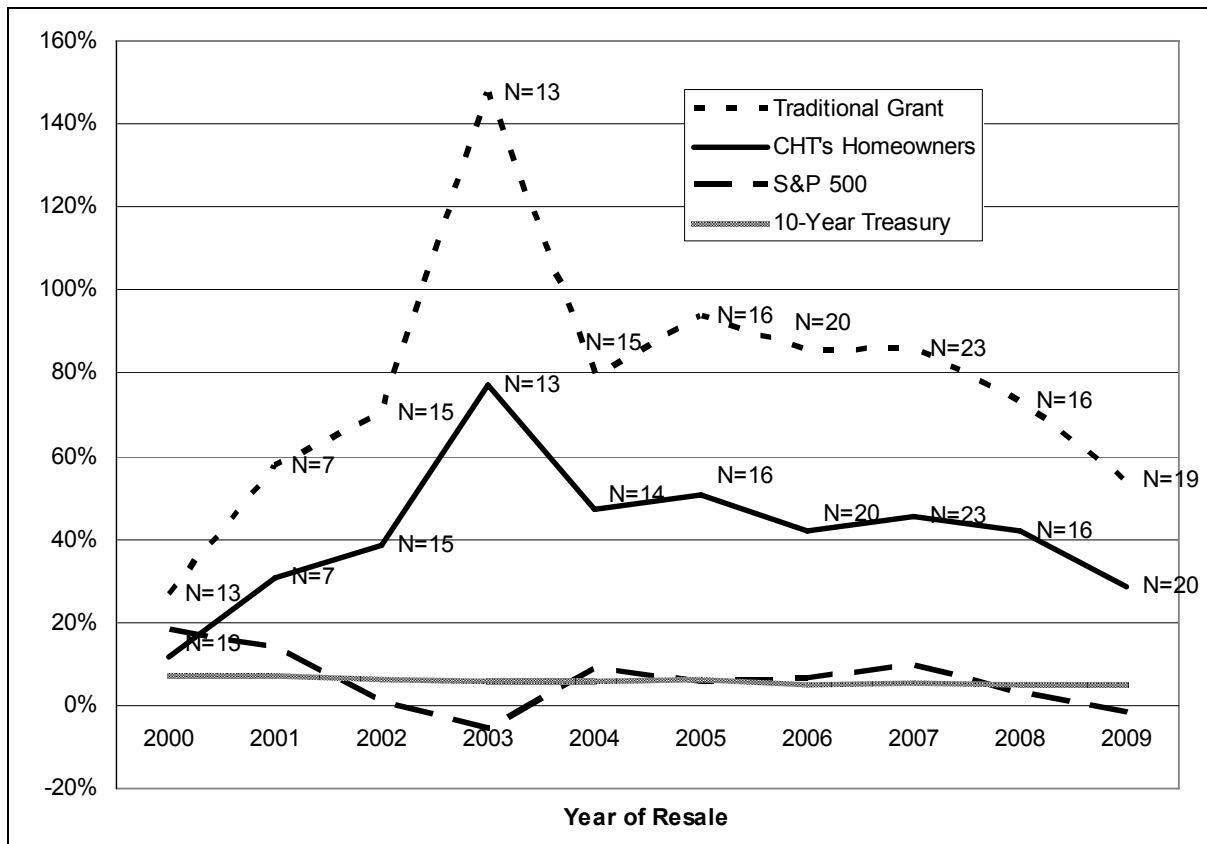
The respective rates of return for CHT's program, for the traditional grant program, and for stocks and bonds vary greatly depending on the year. Most of CHT's resales (75.1 percent) occurred in 2000 or after. Focusing on this period, where CHT has a sufficient number of resales to allow for a year-by-year analysis, the median IRR under the CHTs program ranged from a high of 77.3 percent among those who resold in 2003 to a low of 11.7 percent in 2000 (Figure 8). CHT owners who resold their homes in 2003 earned especially high returns because they happened to have lower down payments than other resellers. (The average length of tenure among CHT's homeowners has varied little, ranging from 4 and 7 years since the mid-1990s.)

Returns to renters from investing in the stock or bond markets varied little over this time. The median internal rate of return for CHT's resellers in all but one of the ten years was greater than the return they would have realized in the stock market, and was always greater than the return they would have realized from investing in a 10-year Treasury bond.

As expected, the returns earned by CHT's homeowners would have been even higher if they had purchased their home with a grant and had been allowed to resell their homes on the open market, with no restriction on the amount of appreciation they could claim.

Resellers in a grant program would have earned returns up to 70 percentage points higher than under CHT's program had they resold in 2003. In others years, however, this gap in the rate of return between the CHT and grant programs narrowed, as returns fell for both.

Figure 8: Comparison of Median Rates of Return for Alternative Investments



Note: Differences in the number of transactions used to calculate internal rate of return for a traditional grant and the CHT program result from some homes having an appraised value depreciate by more than the down payment—we are able to include these homes in the traditional grant program (where this does not occur), but not the actual program (where it does). It is impossible to compute an internal rate of return in such a circumstance.

Source: Authors' analysis of CHT 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/>)

We do not compare owners' actual returns to IRRs that would have been achieved had an owner purchased a market-rate home. It is unlikely that an owner could have afforded one, given that the median price in Burlington, in 2008, for such units was \$250,900 according to the ACS. Assuming that a member had sufficient funds for a 3 percent down payment, the monthly share loan payment would have been \$1,459, assuming a 30-year fixed rate loan at 6.0 percent. This payment would require an annual income of over \$52,000, well higher than actual median income of approximately \$36,660 for Burlington homebuyers.

Allowing homeowners to realize *all* of their home's market appreciation (and the initial subsidy), the more traditional method of subsidizing homeownership, would have had major repercussions for the affordability of the resold homes and the total cost of the program. Any shared equity program must balance the competing goals of providing an opportunity for homebuyers to earn a fair return on their investment, retaining the affordability of the assisted units for subsequent purchasers of modest means, and minimize the public cost of subsidizing (and re-subsidizing) these homes.

Using information about CHT's sales and resales, we modeled the trade-off between affordability and the homeowner's return for a hypothetical home (holding subsidy levels constant). The following figure shows the internal rate of return earned by an owner under the following assumptions: (1) the owner lives in her/his house for 5.2 years (the median for CHT resellers); (2) s/he has a \$2,749 down payment (median amount for all CHT buyers); (3) s/he purchases a home appraised at \$141,626 (the median appraisal of homes purchased by CHT homebuyers) for \$104,908; and (4) the home appreciates by \$37,860 (the median increase for CHT resold homes).

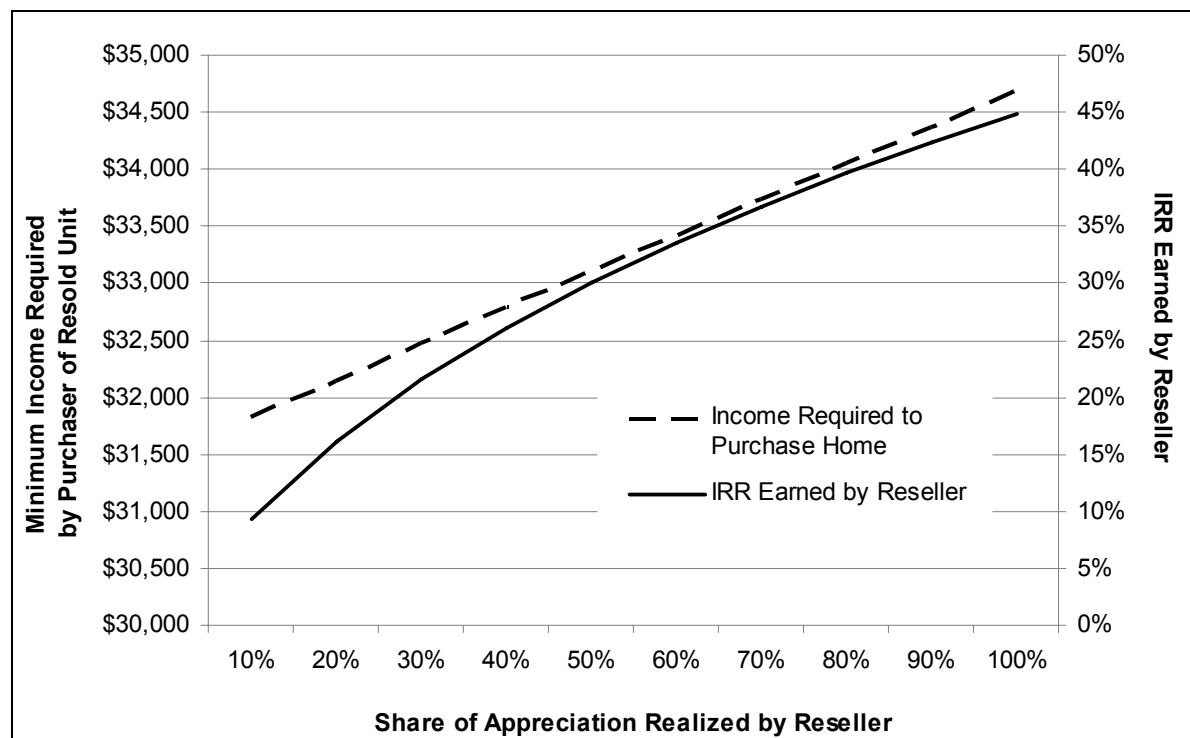
Not surprisingly, allowing a reseller to realize a greater share of a home's appreciation would significantly increase his/her internal rate of return. In our hypothetical example, allowing the homeowner to retain 20 percent of the market appreciation (which likely approximates the average level for CHT's program¹⁷) yields a 29.0 percent rate of return, which is similar to the median rate of return (30.8 percent) that was actually earned by all CHT resellers. The rate of return would be 18.1 percent if the resellers were only allowed to keep 10 percent of their appreciation, but would be as high as 67.8 percent if resellers could keep all of their appreciation (Figure 8).

By allowing resellers to retain a greater share of their home's appreciation, however, the home at resale would have had a higher price, with the new buyer paying the reseller for the appreciated value which the latter was allowed to remove from the home. We calculated the minimum income required to make a house payment that included a 30-year fixed mortgage with an interest rate of 5.1 percent for \$2,749 less than the purchase price, assuming that this payment was 33 percent of the purchaser's gross monthly income.¹⁸ Assuming a program model where only 10 percent of the appreciation is realized by the reseller, a household with an income of \$32,263 could afford to purchase that home from the reseller. If the reseller is allowed to retain 100 percent of the appreciation, however, then the purchaser would need a minimum income of nearly \$38,990, or 17 percent more than what the purchaser would need, had the reseller retained only 10 percent of the appreciation (Figure 9). Thus, as the share of appreciation realized by the reseller increases, the income required by the buyer goes up and affordability declines.

¹⁷ See Program Description section for a discussion of the actual calculation of sales price for CHT homes.

¹⁸ The interest rate and loan term are the same as the median rate and term for all CHT homebuyers in our sample.

Figure 9: Analysis of the Internal Rate of Return and Minimum Required Income to Purchase a Hypothetical Resold CHT Unit



Source: Authors' analysis of CHT client-level data.

By keeping some of the public subsidy into the home and by limiting the amount of appreciation that a reseller is allowed to keep, CHT's shared equity program ensures that the home can be resold to lower income families without the need for additional subsidies. CHT, with its current portfolio of 435 units, has provided ownership opportunities for 683 households. Therefore, the subsidy (the difference between the initial cost of purchasing the unit and the price paid by the initial buyer of that home) is retained and recycled in the home, allowing another family to purchase the same home at a below-market price.

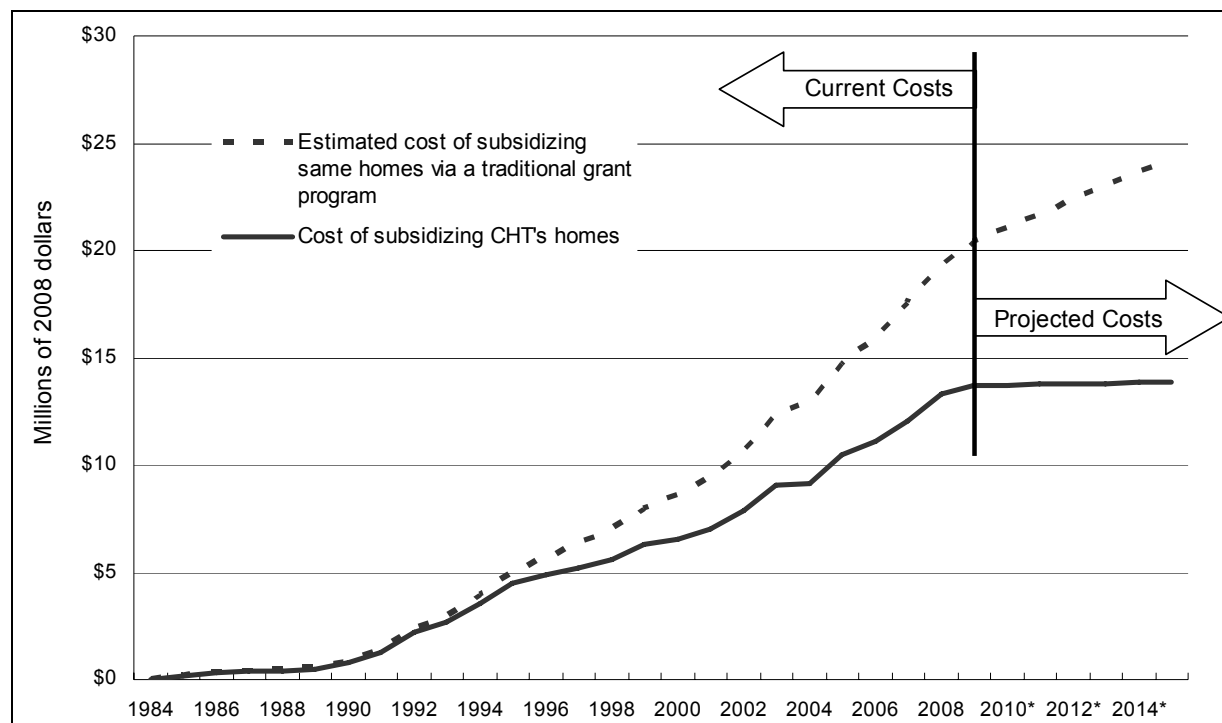
This would not have happened in a direct subsidy-to-homeowner program, under which the recipient could resell his/her home at an unrestricted, market price, pocketing both the subsidy and 100 percent of the appreciation at resale. A program providing grants directly to the homebuyers with no resale restrictions would have been able to serve 233 fewer households than the 683 households served by CHT. Conversely, to serve the same number of households as CHT, a direct subsidy-to-homeowner program would also have cost the public much more, a cost differential that increases as resale volume increases.

We calculated the approximate cost of CHT's program by assuming that the homes not in our sample are similar to those we could analyze. Based on this assumption, the total cost for CHT's program, through 2009 (in 2008 \$) was \$13.7 million. We define total cost as the difference between the appraised value of the 450 homes purchased or constructed by CHT, compared to the price paid by the initial purchaser. It also includes any funds used to rehabilitate homes before resale (which was done on 4 CHT homes); and any grants provided

by the program to later purchasers. An important clarification is that while \$13.7 million is the total value of the subsidy necessary for CHT to provide these homes at reduced prices, it is not necessarily the case that this is the value of what the program contributed toward this effort. Costs can be borne by developers (as is the case with inclusionary zoning), the shared equity program, other federal, state, or local public programs, or private individuals, lenders, or corporations making monetary or in-kind donations.

The cost of a traditional grant program would include the above costs, plus the difference between the appraised value of a home and the price paid by the buyer for all resales, rather than just for the 450 initial sales. With no restrictions on resale, in other words, a traditional subsidy-to-homeowner grant program would need subsidies for an additional 233 homes to match the number of low-income homebuyers served by CHT. We estimate the total cost to-date (in 2008 \$), for this traditional program would have been \$20.4 million, or \$6.7 million more than the actual cost of CHT's shared equity program. This differential will continue to grow as resale volume increases. Assuming there are about 22 resales per year between 2010 and 2015 (the average number of resales between 2007 and 2009), the cost of the traditional grant program by the end of 2015 would be \$24.3 million, compared to \$13.9 million for the shared equity program (see Figure 10).

Figure 10: Cumulative Cost of Subsidizing Homebuyers, CHT Versus a Traditional Grant Program



Note: All values are estimated based on the assumption that the resale sample is representative of the rest of the sales. 2010–2015 reflect projected costs. All costs do not include the difference between total development costs and appraised values for resold properties

Source: Authors' analysis of CHT client-level data.

3. Security of Tenure

In the current economic environment, where 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 housing mortgage meltdown, some policymakers are questioning the wisdom of programs that expand homeownership opportunities to lower income families. We investigated whether CHT better positioned its homebuyers in mortgages that were not high cost, and whether these buyers were 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, therefore, is a leading indicator of the likelihood of future delinquency and foreclosure.

Almost all of CHT's buyers (99.5 percent) took out a first mortgage to pay for their homes. Most of them received 30-year fixed-rate mortgages (2.4 percent had 33-year mortgages from USDA Rural Development; another 2.4 percent had adjustable-rate mortgages). The median interest rate for all first-lien mortgages at origination was 5.1 percent, ranging from a low of 0.0 percent (which was the initial rate for one loan) to a high of 10.3 percent. In addition, a small number of homebuyers (2.8 percent) received non-amortizing, no-interest second mortgages worth a median of \$16,630.

None of the first mortgages on CHT homes had prepayment penalties and just 1.4 percent of loans for which the mortgage rate was known were high cost, defined as having an interest rate more than 300 basis points above a comparable term yield. By comparison, 6.7 percent of all mortgages on one to four family homes closed in Chittenden County, VT between 2004 and 2006 were high-cost, according to data from the Home Mortgage Disclosure Act (HMDA).¹⁹ 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 CHT home loans.²⁰

¹⁹ http://www.foreclosure-response.org/assets/hmda_08/hmda_state_VT_11_2009_Novice.xls

²⁰ 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 CHT, we do not have the date the interest rate was determined, so we use the purchase date.

Using CHT's client-level data, we calculated the percentage of all current CHT homeowners (not just those in our limited sample) who are seriously delinquent—that is, more than 90 days late on their mortgage payment. Seven of CHT's 435 households are seriously delinquent (1.6 percent) at present. This is approximately equal to the delinquency rate for Chittenden County as a whole. As reported by TransUnion, 1.4 percent of all homeowners in the County—including upper income buyers—were more than 90 days late in paying their mortgage as of the fourth quarter of 2009.²¹

In addition, we calculated the share of all mortgages on CHT homeowners (current or not) that had ever been seriously delinquent. Twenty-four of the 683 homeowners fell into this category (3.5 percent). By comparison, 15.0 percent of FHA-insured loans originated in 2004 had been delinquent at some point by 2008.²²

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 Land Trust. In the event of foreclosure, CHT risks losing the property from its portfolio, with the accompanying loss of all restrictions on occupancy and affordability.

Two of CHT's 435 homes (0.5 percent) were in foreclosure as of December 2009. This figure is half the low foreclosure rate for Chittenden County as a whole, which stood at 1.0 percent in December 2009.²³ Over CHT's 26-year history, 15 CHT homes have entered the foreclosure process (2.2 percent). This is similar to national cumulative foreclosure rates: 2.3 percent of FHA-insured home loans originated in 1998 were in foreclosure after four years²⁴; in 2008, 4.2 percent of FHA-insured home loans originated in 2004 were in foreclosure.²⁵ It should be noted that CHT has achieved a foreclosure rate comparable 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. Of the 15 CHT homes that have entered foreclosure, 2 are currently in foreclosure and 3 foreclosures have been cured. 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.

CHT takes various efforts to support homeowners who encounter financial hardship. The program works with partner lenders to find a solution through a modification or forbearance, refers homeowners to other legal and social service resources which could help them, offer counseling to help homeowners develop a budget and plan to solve delinquencies. In addition,

²¹ We accessed these data through the Federal Reserve Bank of New York.
<http://data.newyorkfed.org/creditconditions/>

²² Cumulative delinquency rates are not available for Chittenden County. 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.

²³ Data are available from HUD at http://www.huduser.org/portal/datasets/nsp_foreclosure_data.html. Vermont data is available at http://www.huduser.org/portal/datasets/excel/VT_foreclosure.zip

²⁴ <http://www.gao.gov/new.items/d02773.pdf>

²⁵ http://portal.hud.gov/fha/investment/5087-N-04_DPA_Pub_6-11-08.pdf

CHT often enter repayment agreements for arrearages owed to the program. Under certain circumstances, CHT offers zero percent delinquency loans to help homeowners pay a one-time default. If it becomes clear that a homeowner can no longer afford to maintain her home, CHT works with the owner to resell it.

A final measure of how effective CHT has 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 CHT home. We counted a buyer as a continued homeowner if, after five years, she remains in her original CHT home, or has moved into another owner-occupied market-rate or shared-equity home. Extrapolating first-time homebuyer rates to the homes not in our sample, we estimate that 91.8 percent of first-time buyers who bought a CHT home more than five years ago (and for whom we have mobility information) were still homeowners after five years. This is an impressive rate, considering that all were low-income and almost all were 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.²⁶

4. Mobility

Families move frequently. According to the American Community Survey, in 2008, about 13 percent of the U.S. population moved to a new address, although 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 CHT participants 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.

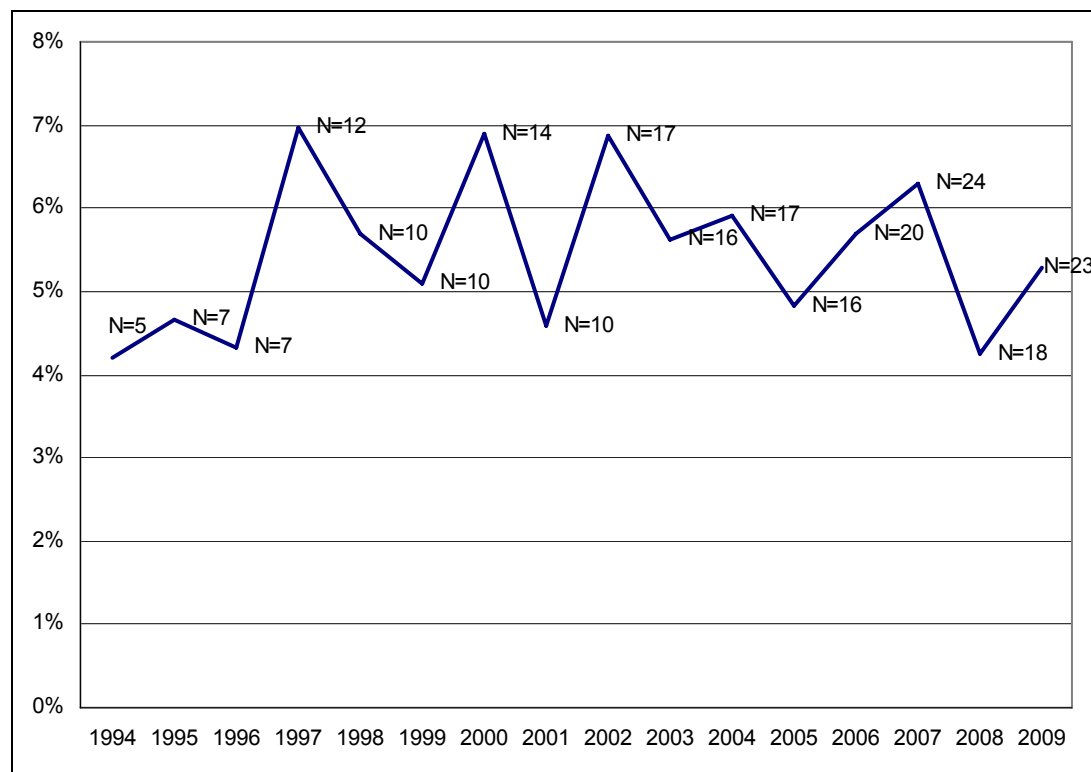
Of the 683 owners who purchased homes under the CHT program since its inception, 233 (34.1 percent) sold their home and moved by the point of data collection in 2009. During a comparable time period and assuming that all buyers were as likely as those in the sample to be first-time homebuyers, we would have expected 33.0 percent nationally to have sold their homes and moved.²⁷ It does not appear, therefore, that CHT homebuyers are moving at substantially lower rates than other first-time homebuyers. Just 7 of CHT's homeowners moved prior to 1994. From 1994 to 2009, an average of 5.5 percent of owners moved each year. As shown in Figure 11, the percentage of households that moved between these years was mostly

²⁶ 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>.

²⁷ Comparison data from the National Association of Home Builders: <http://www.nahb.org/generic.aspx?sectionID=734&genericContentID=110770&print=true>

between 4 and 7 percent of all households.

Figure 11: Number and Percentage of CHT Homeowners Moving Each Year



Source: Authors' analysis of CHT client-level data and program-level data.

A different way to look at this same information is to calculate the length of tenure for families who move. Across the 26-year life of CHT's program, the median length of tenure for movers was 5.2 years, which changed little over the life of the program. Looking both at the percentage of CHT homeowners who moved and their length of tenure, we do not see evidence that homeowners in the CHT program 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. But mobility can also be a symptom of instability and insecurity. To gain a better understanding of why CHT buyers moved and what their housing outcomes were, we used results of a mobility survey conducted by CHT when homeowners resold their units. We were provided data for 168 of the 233 residents who left CHT. Four CHT residents died while in their CHT home.

Of those who responded, the most common reason for moving reported by CHT movers was a housing and neighborhood reason (71 of 168), followed by a family reason (46 movers), and job reasons (23 movers); finally, 28 movers left for other reasons (see Table 3).²⁸ The most

²⁸ Answers were categorized from initial answers into family, job, housing/neighborhood, and other reasons by CHT staff. 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. Family reasons include: change in marital status, establish own household, or other

frequently cited reason for moving was that the respondent wanted a better home/apartment, reported by 55 movers, followed by a change in marital status by 36 movers. Fifty-six movers left for what may be considered negative reasons (wanting cheaper housing, a better home, or a better neighborhood). Overall, the reasons given by CHT movers closely match national averages in 2008, which are included to provide context in Table 3. We used data from the Current Population Survey that we restrict to more closely resemble the CHT homebuyers.²⁹

Table 3: Main Reason for Moving, CHT and Nation

	CHT Movers (N)	CHT Movers (%)	Movers Nationwide (%)
Family reason	46	27	28
Job reason	23	14	19
Housing and neighborhood reason	71	42	43
Other reason	28	17	10
Total	168	100	100

Note: Data missing for 61 CHT movers (all survey nonrespondents). Nationwide figures include movers age 18 and over, who are not claimed as a dependant, with household incomes ranging from \$15,000 to \$50,000.

Source: Authors' analysis of CHT mobility survey. National data from the Current Population Survey Annual Social and Economic Supplement, 2009 release.

Nationally, most movers resettle near the home they are leaving. We found this to also be the case for CHT movers; they were more likely than the national average to move out of state, but this may be due to Vermont's small size. Sixty-one percent of them stayed within the same county (99 of 163), though most of those moved out of their previous city (75 of 99). Nineteen CHT movers left their county, but stayed within Vermont, and 45 households moved out of state. These figures may show a lower likelihood for local moves than nationwide estimates (Table 4).

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. Other reasons include: to attend or leave college, change of climate, health reasons, or a natural disaster.

²⁹ Figures include movers age 18 and over, who are not claimed as a dependant, with household incomes ranging from \$15,000 to \$50,000. These figures include both renters and homeowners, however.

Table 4: Destination of Movers, CHT and Nation

	CHT Movers (N)	CHT Movers (%)	Movers Nationwide (%)
Within same county	99	61	68
Another county, but same state	19	12	17
Different state or country	45	28	15
Total	163	100	100

Note: Data missing for 66 CHT movers (61 survey nonrespondents, 5 item nonrespondents). Nationwide figures include movers age 18 and over, who are not claimed as a dependant, with household incomes ranging from \$15,000 to \$50,000.

Source: Authors' analysis of CHT mobility survey. National data from the Current Population Survey Annual Social and Economic Supplement, 2009 release.

Finally, we asked movers about the tenure of housing they moved into after reselling their CHT home. This measure is an important outcome of residential and economic mobility. The majority of movers reported transitioning into another owner-occupied home (107 of 149). Of these, most purchased market-rate housing. With proceeds, at the median, of just over \$17,500, these movers had accumulated funds for a moderate down payment on their next home. Additionally, as several CHT homeowners moved after changes in marital status, they may have benefited from increased household earnings. Twenty-eight percent of movers (42 of 149) shifted to rental housing subsequent to leaving their CHT home.

Table 5: Type of New Unit for CHT Movers

	CHT Movers (N)	CHT Movers (%)
Owner-occupied, market rate housing	101	68
Owner-occupied, restricted resale housing	6	4
Rental housing	42	28
Total	149	100

Note: Data missing for 84 CHT movers (61 survey nonrespondents, 19 item nonrespondents). Rental housing includes at least 2 residents in subsidized rental housing.

Source: Authors' analysis of CHT mobility survey.

V. Conclusion

This case study analyzes the Champlain Housing Trust's program of providing homeownership opportunities to low-and moderate income families. Of the 683 families who purchased CHT homes, 92.1 percent for whom we have information were first-time homebuyers. Despite restrictions on the appreciation that they could realize upon resale, CHT homebuyers who sold their home realized a median internal rate of return of 30.8 percent. This high average meant that most resellers saw returns well above what they would have earned if they placed their down payment in either the stock or bond market: 75.4 percent had higher returns than they would have seen in either. A high percentage of resellers (68%) invested their earnings in purchasing another house or condominium, stepping into market-rate homeownership for the first time.

Although CHT homeowners, on average earn 52.3 percent of the HUD median family income in Burlington, only 2 of CHT's current 435 homeowners (0.5 percent) had a mortgage in foreclosure. This is a foreclosure rate that is half that of the surrounding region's. Rather than using high-cost loans, CHT's homebuyers financed their purchases with mortgages that are underwritten with standards that allow for sustainable homeownership over time. In total, 15 homes (2.2 percent) have entered the foreclosure process, and 7 of 683 homeowners (1.0 percent) have lost their home to a completed foreclosure.

Despite a significant run-up in area home prices, the CHT program still was able to sell its homes to low-income buyers. CHT's program has seen little erosion of affordability. The income required to purchase an CHT home (as a share of area MFI) increased by 0.9 percentage points between purchase and resale; the absolute income required to purchase an CHT home at resale increased by an average of 1.1 percent per year, indicating little change in units' affordability between their initial and subsequent resale.

Given the recent foreclosure crisis, the program managed by CHT provides a potential model for increasing homeownership opportunities to families who may not be able to afford market rate homes, and does so in a manner that promotes wealth creation without placing these buyers at an undue risk of losing their homes.