

Limited Appreciation, Transformative Wealth

Designing affordable homeownership programs that generate real wealth - one generation after another

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ABSTRACT: Wide spread homeownership virtually transformed a generation of working class families into an asset owning stable middle class. This unique opportunity to generate wealth with low risk was the direct result of a broad set of programs, policies and institutions, established in the 1930 with the explicit goal of creating the exact kind of “ownership society” that has since developed. But not everyone has been able to take advantage of this unparalleled avenue to wealth. A growing set of public programs attempt to broaden the reach of homeownership but designers of these programs face some hard choices. Among them is the decision about how to handle the resale of assisted homes. Should homeowners who benefited from large public subsidies be allowed to retain all of the appreciation in the value of those homes? The debate over this decision generally focuses on whether limiting appreciation is necessary to maintain affordability and whether such limits are fair to buyers. This paper argues that, as counterintuitive as it may seem, limited equity resale price restrictions may be one of the most effective tools available to encourage wealth creation for low-income families. Compared with other investment options available to low-income households, limited equity homeownership offers an unparalleled opportunity to generate life-altering levels of wealth. In fact, when the relative risks are taken into account, limited equity ownership may offer many families greater returns than traditional homeownership. And because these homes remain affordable they can facilitate this kind of wealth creation for one generation after another.

Part I: The Trade Off Between Wealth Creation And Affordability

Homeownership has become an important part of American life but, as home prices have skyrocketed in recent years, it has become increasingly difficult for many families to afford to buy homes. In response, local, state and even the Federal government have developed a range of programs to help families buy homes. As prices rise, however, the

administrators of these programs face an increasingly difficult choice. Managers of programs that provide homebuyers with public subsidy have to decide what happens to that public investment when those families sell. When \$10,000 in public money was enough to help a low-income family move into ownership, it was common for programs to simply require repayment of this subsidy. As prices have risen, the amount of subsidy needed to families buy the same houses has risen and, program managers have seen that the funds that they recapture in this way are not enough to help another family into the same house. It now takes more than \$100,000 in assistance in many parts of the country and more and more policymakers have decided that the only way to preserve the value of these subsidy funds is to require homeowners to limit the resale price of their homes to a level that will be affordable to future low-income buyers. But while this type of ‘limited equity homeownership’ solves the problem of needing to provide ever growing levels of public subsidy just to keep the same homes affordable, it inevitably provokes a debate about asset building. Is it fair to ask homeowners to limit their profits on the sale of their home? Is it fair to let homeowners earn enormous windfalls as a result of public assistance?

Given the controversy, it seems worth asking the question: how do limited equity homeownership programs compare as asset building mechanisms? Do they offer a means for low-income families to accumulate meaningful wealth? How do the returns available in these programs compare with market rate ownership? How do the returns compare with other asset building and investment options available to low-income families?

Everyone seems to have a strong personal sense of what is fair. Some people feel that it is wrong to let lucky homebuyers “walk off” with public funds that could help more buyers. Others feel that it is wrong to impose any kind of limit on people’s equity (or even expect a share of it) and that those who do are not offering “real” homeownership. Of course, any family with the means to buy a home without public subsidy should prefer to buy one which allowed them to accumulate unlimited equity, but, for most low-income families, the chance to control their own homes, have stable housing costs, and possibly take advantage of the mortgage interest deduction is sufficient motive to buy a home even

when their ability to profit from price appreciation is strictly limited. It is appropriate and, increasingly necessary, for public programs that help low or moderate-income families into homeownership to limit the “windfall” to assisted buyers in order to insure that limited public funds can serve as many families as possible.

But this need to preserve public subsidies cannot be the whole story. If our only goal is to produce stable affordable housing that preserves public subsidy, affordable *rental* housing is a more effective tool. Affordable rental housing can provide safe and secure housing that provides families with predictable and stable housing costs. It is clear that this kind of stability has an enormous impact on people’s lives, especially the lives of children. But, for some reason, there continues to be a demand for homeownership.

We cannot develop effective homeownership programs without acknowledging that wealth creation is the reason for much of the enthusiasm for homeownership. Wealth Creation is a good part of the reason that we have programs that subsidize ownership, and wealth creation is the kind of outcome that rightly justifies public expenditure. It may not be the only reason for these programs, or even the primary one in every case, but it is an appropriate goal and it is, in truth, a motivating force behind most local homeownership programs. As much as we need to protect and maximize the impact of public subsidies, there is very little reason to support homeownership programs if they cannot generate real, life altering, wealth for the families that participate.

How Much Is Enough?

In the context of housing policy, it is not quite enough to be for or against wealth creation. Rather than choosing between maintaining affordability and offering homeowners an opportunity for wealth creation, the challenge is to balance the two goals. This becomes a detailed program design challenge. If we want to develop programs that balance these two seemingly conflicting goals, the first step will be to decide how much wealth people who buy homes with public subsidies should receive. Most would agree that if you buy at just the right time in just the right place, you can make unreasonable amounts of money through homeownership and even advocates for unlimited wealth

creation don't think that every family needs to become fabulously rich through the process. If wealth creation is a goal, we have to decide how much wealth is enough.

Wealth is not just about money. It is a means to freedom, and opportunity and a wider range of life choices and, perhaps most importantly, the ability to take risks without worrying that your whole life will fall apart if you go without pay for a few months. Income is what you use to **get by** day by day; assets are what help you **get ahead**¹. Affordable rental housing provides a way to stabilize people's lives. Homeownership, on the other hand, has proven to be a fairly reliable way to help people get ahead – to improve not just their options but also those of their children and grandchildren - because it builds the kind of wealth that gives kids a head start and changes the choices that they can make. “Affordable” homeownership must aspire to the same kind of lasting impact. If it doesn't help families get ahead and put their kids on a different path, than it may not be worth doing.

When we use the word “wealth” we generally think of the very rich and, before the Second World War, it was only the rich that had significant assets to leave to their offspring. But now, thanks largely to widespread homeownership, middle class families frequently have significant “wealth” which they can leave to their children, and perhaps more importantly, tap into before they die to help their children get ahead.

Thomas Shapiro in *The Hidden Cost of Being African American* describes how differences in family assets completely change the life opportunities for children. He uses the term “Transformative Assets” to refer to the kinds of assets that really change people's lives and the outcomes for their children. He is not talking about trust fund babies who have the kind of family money that means that they never have to work; he describes how gifts or “loans” of \$20,000 to \$50,000 from parents to their children can make the difference in the education, housing and career options of middle class families. He profiles families with nearly identical educational backgrounds, professional achievements and annual incomes and shows how those that receive relatively small

¹ Melvin L. Oliver and Thomas M. Shapiro, *Black Wealth/White Wealth*, Routledge, New York, NY 1995.

“advances on the inheritance” end up with their kids in better schools, taking more career risks that frequently result in greater pay later and owning more valuable homes which in turn appreciate faster.

In the wake Shapiro’s earlier book with Melvin Oliver *Black Wealth/ White Wealth* and Michael Sheridan’s *Assets and the Poor*, there has arisen a small cottage industry of “asset building” programs designed to help low-wealth families and individuals build the kinds of assets that are likely to stabilize and improve their lives. The centerpiece of this movement is the Individual Development Account (IDA). IDAs are matched savings accounts where participants are encouraged to save money for education, homeownership or for a small business and their savings are then matched with donated money (sometimes by as much as 4-to-1). IDAs are popular across the political spectrum: Conservatives love them because they promote “personal responsibility” while liberals appreciate them because they offer the poor a chance to build assets that would otherwise be far beyond their means.

But to put IDAs in context, every program has a limit on the level of match money available to any participant, which means that the total value of the “asset” that someone can save for is fairly limited. Many programs are capped at less than \$10,000. This is not enough to start a well-capitalized business in America. College costs more than this for most students. And while \$10,000 may be enough for a downpayment on a home, in much of the country, people with incomes low enough to qualify for an IDA program often cannot come close to affording a home even with a \$10,000 downpayment. They may need \$75,000 or \$100,000 or more to bring the cost of a starter home down to the level where they can afford the mortgage payments. IDA programs simply do not offer the opportunity to build *that kind* of wealth. While the research seems to conclusively prove that wealth changes people’s lives, that it leads to better outcomes for families and children, it is far from clear that IDA programs generate enough wealth to make the same kind of difference.

By contrast, limited equity homeownership programs, the same ones that are criticized for not allowing wealth creation, regularly offer families who would otherwise spend their entire lives renting, a means to build \$50,000 to \$150,000 in equity over a 10 to 15 year period. These families are frequently able to buy these homes with little or no money down and monthly payments that are no more than 30% of household monthly income. A recent study of limited equity homeowners in Burlington Vermont² showed that 75% were able to move into unrestricted (and unsubsidized) market homeownership when they sold their limited equity home even while limited resale prices made the homes they left affordable to families who were, on average, lower income than the initial buyers! That is to say that the limited equity homes served successfully as stepping stones, bridging the gap between renting and homeownership and, because they remain permanently affordable, they can be expected to continue to perform this service for one generation of owners after another. When we think about asset building as an anti poverty strategy, this is the kind of wealth creation we need to be looking for. Rather than providing a lottery in which a very limited number of lucky families are able to buy homes and cash in on unlimited windfall appreciation, well designed limited equity homeownership programs offer a stable and sustainable mechanism to provide *limited*, but nonetheless life altering, wealth creation to *unlimited* numbers of families over the long term.

But too often policymakers fall into the trap of thinking that limiting appreciation has to mean housing programs that offer homebuyers no real wealth creation. Both critics and advocates for permanent affordability regularly overlook the very real equity building that happens in most limited equity ownership programs. All permanently affordable homeownership programs generate assets for the homeowners. Some do a much better job than others. If we embrace wealth creation as a goal while still acknowledging the need to preserve and maximize the impact of public subsidies, we can begin the work of designing programs that do a better job in both respects.

² Permanently Affordable Homeownership: Does the Community Land Trust Deliver on Its Promises?
John Emmeus Davis and Amy Demetrowitz, Burlington Community Land Trust, 2004
(<http://www.bclt.net/pdf/summary.pdf>)

Part II: The Details Matter: Designing for Balance

For several years now I have been teaching a daylong workshop about designing affordable homeownership programs entitled: “Affordable homeownership: Balancing wealth creation and affordability.” I ask participants to describe the mechanisms that their public agency or nonprofit organization uses to preserve public subsidy invested in private homes and we place them along a continuum. Programs that allow windfall profits to the sellers without recovering public subsidies fall at one end while those that protect subsidies flawlessly even when that means little return (or even losses) to outgoing homeowners define the other extreme. Most programs, of course, fall somewhere between these two extremes. Surprisingly, most workshop participants, people who often have decades of experience with these programs, find it difficult to say where in the middle their programs fall. The details, it turns out, matter quiet a lot. An approach that does a fine job of preserving subsidy when interest rates are steady, may fail miserably when they are rising.

In order to compare these very different approaches, I developed a spreadsheet that allows us to model each individual program and then compare more than one side-by-side in terms of (a) the return to homeowners over a given time period and (b) the relative affordability of the unit to future buyers. The spreadsheet allows comparison under different assumptions about future interest rates and rates of inflation. The results are often surprising, even to the people responsible for managing the programs being modeled. Some programs do a wonderful job of preserving affordability regardless of interest rates or home price inflation but only by forcing homeowners to sell at a loss under certain circumstances (in some cases even when the housing market as a whole has been rising). Others insure a market return to the owners but only manage to preserve affordability so long as housing prices aren’t rising too quickly. Some approaches manage to balance between the two goals much better than others.

The only way to really understand these tradeoffs is to look at the numbers closely. While there are hundreds of distinctly different approaches to preserving affordability, a close comparison of a few of the most common approaches makes it clear how programs that look similar under some economic circumstances can perform very differently under different circumstances and highlights some of the program design choices that most influence the effectiveness of any program at maintaining ongoing affordability and generating wealth for homeowners. The three alternatives described below each limit a homeowner's equity in slightly different ways; each uses a different formula to calculate the equity that a seller will receive. They are presented alongside a market rate transaction for comparison.

1. Shared Equity: Many local governments protect their subsidy in single-family homes by making shared equity loans. Subsidy is provided in the form of a loan with no monthly repayment obligation. Repayment is deferred until the time of sale at which point the homeowner is expected to sell their home at the maximum market value and repay the government subsidy and to provide the public lender with a share of the appreciation in the home's value. While the specific share of appreciation owed varies from one program to another, I have set up this analysis with an equity share that is calculated based on the percentage of the initial purchase price that was funded with the public sector loan. For example, if a starter home costs \$300,000 and local government provides a \$120,000 loan, the government has provided 40% of the purchase price and would expect to receive 40% of any appreciation at resale. In order to compare the results with other approaches, we assume that both the initial principal and the recaptured appreciation are reinvested in a new deferred loan made available to a subsequent low-income buyer of the *same house*. If the new second loan amount is insufficient to make the house affordable, we calculate the loss of affordability and the additional subsidy that would need to be invested to maintain the initial affordability³.

³ The loss or gain of affordability is expressed in terms of percentage points relative to the AMI – i.e. if a home that was affordable to 80% of AMI is now affordable to 85% of AMI buyers there has been a 5 percentage point loss of affordability.

2. Affordable Housing Cost: Rather than requiring a share of appreciation, many programs limit the total appreciation by imposing a *resale price restriction*. One approach, which has become common in California as a result of its inclusion in State Redevelopment Law, involves limiting the price to the exact level that will make the unit affordable to a hypothetical buyer at the target income level at the time of sale. This approach works backwards from the current tax rates, and likely insurance costs, etc. to calculate the monthly funds a buyer spending a given percentage of their income can afford to spend on their mortgage payment and then, given the current interest rate, calculates the loan amount that that payment will support. This loan amount plus 5% for a modest downpayment produces the maximum “affordable” resale price.

3. AMI Index: The AMI index formula calculates the maximum resale price based on the percentage change in the Area Median Income (AMI) over the time since the homeowner purchased their house. Thus if the AMI rises at 3% per year, the maximum resale price will rise at 3% per year also. While the Affordable Housing Cost formula produces precise affordability regardless of changes in interest rates, the AMI index produces “approximate” affordability; units remain affordable forever to the same general income group but the exact income level required to afford a home rises and falls along with interest rates.

4. Market: For the sake of comparison, I have also evaluated the returns to buyers of an unrestricted home that happened to be priced at the affordable level. It is important to consider that, for the most part, in the markets where these programs are offered, there simply are no market rate homes available for sale at prices affordable to low-income buyers. For example, rather than buying a \$300,000 unit with assistance of \$120,000 in public subsidy, our homebuyers would need to find a home available with no assistance for a market price of \$180,000⁴. In some cases, buyers may be able to achieve this feat by relocating to the suburban fringe and in others by simply buying substandard housing.

⁴ Keep in mind that this analysis is not comparing the returns that a market buyer of a \$300,000 home would realize, which would clearly be much greater. While there are subsidy programs that forgive the public investment over time and allow buyers to retain all of the appreciation, these programs are increasingly rare in markets where required subsidies are large and, clearly, these programs will offer superior wealth creation because they involve the outright gift of public resources to private individuals.

However, comparable homes will typically not be available in the same geographic area at prices anywhere approaching the “affordable” price. In places where low-income buyers have unrestricted market rate options, large buyer subsidies are generally not necessary, and therefore neither are resale price restrictions. So, while the “unrestricted market” appreciation is calculated for each of the scenarios below, it represents an unattainable hypothetical in most cases; it provides a point of reference but not necessarily a real alternative.

Initial Affordability:

In order to compare these very different approaches, I set up a hypothetical project. Imagine a new construction project in which a 3-bedroom unit costs \$300,000 to build (including all construction and soft costs and developer fees, etc.). Imagine also that, in order to make the unit affordable, a local government has agreed to provide \$120,000 in subsidy. Now, imagine that at the time that these units come up for sale, the Area Median Income for a family of 4 is \$64,000 and the current interest rate on a 30-year loan is 6.5%.

Project Summary:

Total Development Cost: \$300,000
Subsidy: \$120,000
Initial AMI: \$64,000
Downpayment: 3%
Initial Interest Rate: 6.5%

With the shared equity loan, the subsidy takes the form of a \$120,000 loan to the buyer with no payments until sale; the buyer puts \$9,000 down (3% of \$300,000) and borrows \$171,000 at 6.5% interest. With the AMI and AHC approaches the \$120,000 subsidy reduces the purchase price to \$180,000, the buyer puts 3% of that amount down (\$5,400) and borrows \$174,600 from the bank. Either way the buyer pays about \$1,100 per month in loan payments each month. We frequently define “affordability” by saying that

someone can “afford” their housing as long as they pay no more than 35% of their income for their housing costs including mortgage, taxes and insurance. Taxes and insurance vary quite a lot from project to project but for simplicity assume that someone who pays 35% of their income for all of these costs will typically be spending about 26% of their income for just their mortgage⁵. \$1,100 is 26% of \$4,231. Someone earning that much (\$50,769 per year) could “afford” a \$1,100 monthly mortgage payment. For a family of four, \$50,769 would be 80% of the area median income. Regardless of how we structure the subsidy, \$120,000 in subsidy will make our units affordable to families earning 80% of AMI.

Six Scenarios:

At some point or another in the design of any homeownership subsidy program, someone will produce a chart that projects the resale price and/or ongoing affordability of the home at some point in the future. These charts always involve making certain guesses about what the trends in housing prices, incomes and interest rates will be over time. But of course we really have no idea what the future will look like. The differences between different approaches can be understood as differences in who receives the benefit when things come out better than projected and who holds the risk when they turn out worse. Market housing offers all of the benefit to homeowners who also face most of the risk of declining prices⁶. Limited equity housing reduces the homeowner’s opportunity to “hit the jackpot” but may also reduce their exposure to losses due to housing price declines. On the other hand, the specifics of the design of any resale formula will introduce new risks for the homeowner. To evaluate the effectiveness of a given approach at generating wealth for the homeowners, we can’t just look at one set of assumptions, we have to understand how the owner’s equity is influenced by changes in interest rates, median incomes and housing market prices. The only way to get a complete picture of the trade-offs involved in each of these different approaches is to watch how they perform under

⁵ Changing this percentage will change the % of AMI that our unit is affordable to but won’t change the relative performance of any of the models studied.

⁶ When prices drop beyond the point where the homeowner has lost all of their equity, further losses are generally passed off to the bank.

changing assumptions. In order to do that, I have developed a set of scenarios that each represent a different economic environment, some hypothetical and some based on real historical situations.

1. Static: Housing prices and incomes are growing at the same low price
2. Modest Growth: Housing prices growing faster than incomes, interest rates stable
3. Price Spike: Housing costs are rising rapidly, incomes rising more slowly
4. Housing Bust: Housing prices are falling while incomes continue to rise
5. Rising Interest Rates: Interest rates are much higher at the time of resale
6. Interest Rate Spike: Interest rates at historically high levels

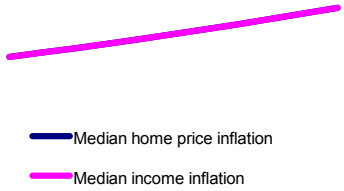
Scenario 1: Static

If housing prices rise at the same rate as incomes, and interest rates remain constant, the market, shared appreciation, affordable housing cost and AMI models all generate about the same return for owners and the same ongoing affordability. Table ___ shows the performance of the approaches assuming a family sells after 10 years during which incomes and home values have both risen at 3% annually and interest rates have remained at 6.5%.

Static Scenario
Housing prices and incomes are growing at the same low rate

Inputs

Holding period	10
Median home price inflation	3.0%
Median income inflation	3.0%
Initial mortgage interest rate (30 yr)	6.5%
Interest rate at resale (30 yr)	6.5%



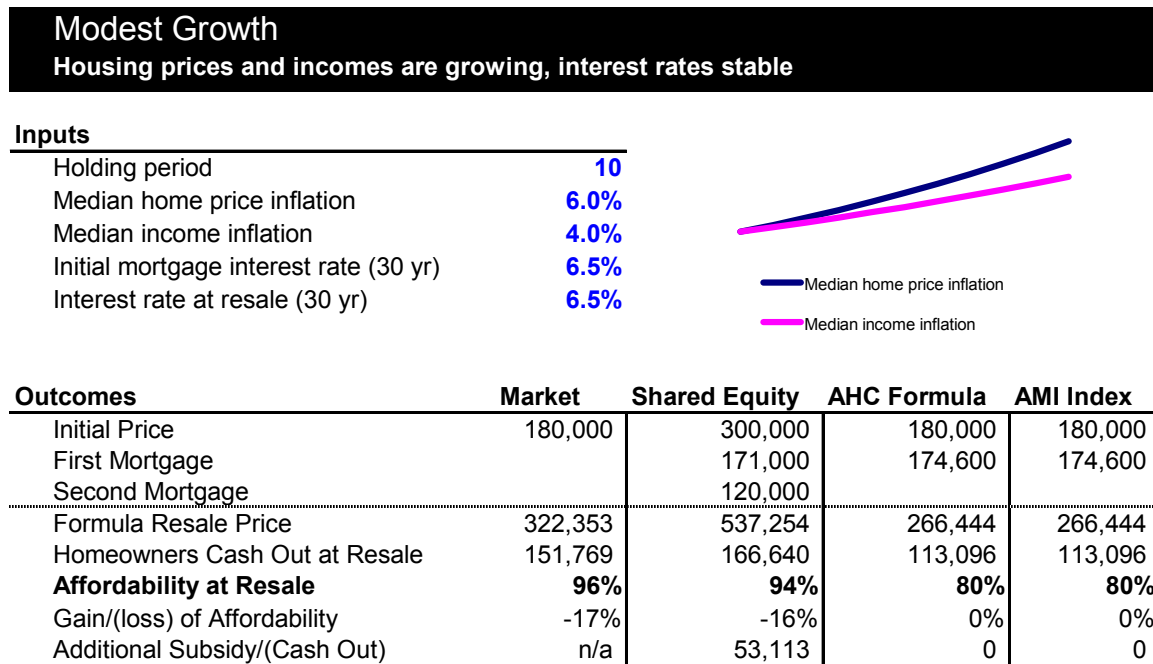
Outcomes	Market	Shared Equity	AHC Formula	AMI Index
Initial Price	180,000	300,000	180,000	180,000
First Mortgage		171,000	174,600	174,600
Second Mortgage		120,000		
Formula Resale Price	241,905	403,175	241,905	241,905
Homeowners Cash Out at Resale	76,952	88,874	89,048	89,048
Affordability at Resale	80%	78%	80%	80%
Gain/(loss) of Affordability	0%	0%	0%	0%
Additional Subsidy/(Cash Out)	n/a	-	-	-

Under this scenario where prices and incomes are rising at the same rate, the two resale price restrictions (AHC and AMI) will result in growth in the homeowner’s equity that keeps pace with market prices. While their restricted units will still sell for less than the full market price, the homeowner’s total equity at sale will be approximately the same as it would have been if they had initially purchased an unrestricted unit for \$180,000. In fact, their returns may be slightly greater than market rate housing because they may not have to pay broker commissions when they sell. The model assumes that market rate sellers face higher transaction costs at resale⁷ (primarily broker commissions) than limited equity buyers who are generally selling homes at far below market price. Other than this difference, the market transaction and the shared equity loan are quite similar. The shared equity seller is receiving a return on their investment in the home but not on the public investment. And under this “static” scenario, the resale restrictions function very much like the shared equity loan, they tie appreciation to incomes instead of the housing market but here the two are rising at the same rate.

⁷ This model uses 7% of sales price for market transactions and 2% for subsidized resales.

Scenario 2: Modest Growth

The difference between the approaches, and the reason we spend time designing complex affordability models, comes from the recognition that incomes and prices do not rise at a uniform rate and interest rates do not remain steady. The important question, then, is, given the uncertainty, does one model perform better than the others under a wider range of likely values for these key variables?



In most of urban America housing prices have been rising significantly faster than incomes. In this, more realistic, situation, the market rate home and the shared equity loan offer sellers more equity than the resale price restricted models⁸. However this increase in equity comes at the cost of declining affordability. If prices rise at 6% and incomes at only 4%, market owners move out after 10 years with \$151,769 in total equity while buyers with an AMI index or AHC restriction receive “only” \$113,096.

⁸ The AMI and AHC formulas generate exactly the same resale price as long as interest rates remain unchanged. We will see below that when we assume rising or falling rates, these two approaches perform very differently from one another.

Under this set of assumptions, the limited equity restrictions reduce the homeowner's equity by \$38,000 relative to the unrestricted market unit but they do so for a reason. Because housing prices are rising faster than incomes, both the market rate unit and the shared equity unit have become significantly less affordable. While the AMI and AHC Units are still affordable to households earning 80% of Area Median Income, a buyer would need to earn 96% of AMI to afford the Market Rate Unit now. Similarly for the shared equity model, even if the local government were to reinvest its \$120,000 plus all of the \$94,000 that it received as its share of equity from the first homeowner, the second buyer would need to earn 94% of AMI to afford the subsidized home. It would take an additional \$53,113 in subsidy (a total second loan of \$268,000) to keep this unit affordable to families earning 80% of median. By reducing the homeowner's total gain by 25% (in this scenario), the resale restrictions insure that the home remains affordable to the next buyer while still offering buyers over \$100,000 in equity accumulation over a 10 year period.

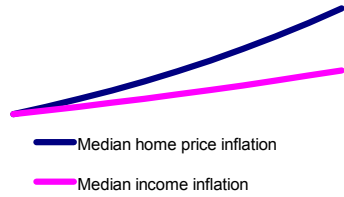
Scenario 3: Price Spike:

Under more extreme home price inflation, the resale restricted approaches (AMI and AHC) fall further behind the market as wealth generators. At 8% annual appreciation, the market owner receives a total of \$213,000 in equity at resale while the AMI and AHC still limit equity to \$113,000. But this extra wealth creation comes at the cost of either a 36-percentage point loss of affordability or an additional \$116,054 investment of public subsidy. While the resale restricted buyers seem further behind the shared equity buyer, the actual dollar value of *their* outgoing equity has not changed. Only the market and shared equity homes are affected when housing prices spike. However, while the absolute wealth creation for the restricted approaches is the same, their relative wealth creation is much less whenever prices are rising rapidly.

Housing Price Spike Prices growing much faster than incomes

Inputs

Holding period	10
Median home price inflation	8.0%
Median income inflation	4.0%
Initial mortgage interest rate (30 yr)	6.5%
Interest rate at resale (30 yr)	6.5%



Outcomes	Market	Shared Equity	AHC Formula	AMI Index
Initial Price	180,000	300,000	180,000	180,000
First Mortgage		171,000	174,600	174,600
Second Mortgage		120,000		
Formula Resale Price	388,606	647,677	266,444	266,444
Homeowners Cash Out at Resale	213,385	230,686	113,096	113,096
Affordability at Resale	116%	114%	80%	80%
Gain/(loss) of Affordability	-36%	-36%	0%	0%
Additional Subsidy/(Cash Out)	n/a	116,054	0	0

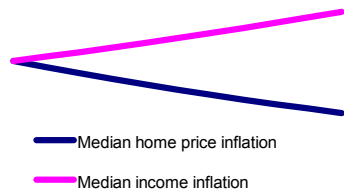
Scenario 4: Housing Bust:

Both the AMI and AHC formulas tie homeowner’s returns to changes in the area median income. If the AMI rises rapidly homeowners can earn higher than expected returns. It is possible that an affordable owner under one of these approaches could receive significant appreciation in their home price during a period when market home prices were actually falling. This was the situation in Los Angeles in the early 1990s. Following dramatic job losses, the Los Angeles region experienced a prolonged period of housing price deflation. Between 1990 and 1995 the average resale price for existing homes dropped by more than 20% or 4.44% per year. At the same time the median income continued to rise at a modest rate.

Housing Price Bust Housing prices falling with rising incomes

Inputs

Holding period	5
Median home price inflation	-4.4%
Median income inflation	3.0%
Initial mortgage interest rate (30 yr)	6.5%
Interest rate at resale (30 yr)	6.5%

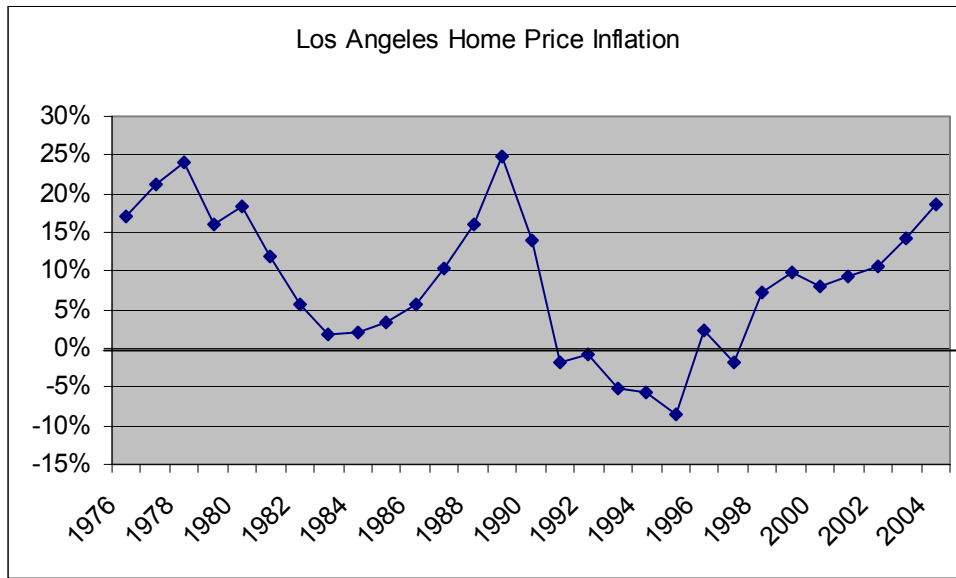


Outcomes	Market	Shared Equity	AHC Formula	AMI Index
Initial Price	180,000	300,000	180,000	180,000
First Mortgage		171,000	174,600	174,600
Second Mortgage		120,000		
Formula Resale Price	143,434	239,057	208,669	208,669
Homeowners Cash Out at Resale	(30,051)	(21,422)	41,051	41,051
Affordability at Resale	55%	54%	80%	80%
Gain/(loss) of Affordability	25%	24%	0%	0%
Additional Subsidy/(Cash Out)	n/a	-	-	-

In this unusual, but not unheard of, environment, limited equity homes tied to the median income rather than the housing market will actually provide superior wealth creation. Put another way, while the limited equity resale restrictions prevent homeowners from realizing some of the dramatic windfalls in a housing boom they protect them from some of the impact of a bust⁹. While housing prices tend to fluctuate dramatically, incomes tend to rise at a more steady and predictable pace. As a result, resale formulas tied to income tend to provide more predictable wealth creation. Note that this risk of falling housing markets is less pronounced the longer a household owns their home. A family buying in LA in 1990 would have faced a 20% loss if they sold after 5 years and would have needed to hold on for 10 years to break even but by 2004 they would have been able to sell at a 67% gain!

⁹ If prices were to fall far enough it might not be possible to sell the limited equity homes for their formula price. In our example the home is initially priced 40% below market. If market prices were to fall by 20% the limited equity price would still be far below market – and at the same time above what the homeowner initially paid.

Chart 1 : Annual rate of change in home values – Los Angeles 1976-2004

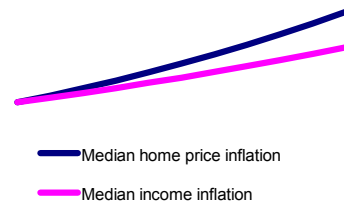


Scenario 5: Rising Interest Rates

Rising Interest Rates
Interest rates higher, housing prices and incomes are growing

Inputs

Holding period	10
Median home price inflation	6.0%
Median income inflation	4.0%
Initial mortgage interest rate (30 yr)	6.5%
Interest rate at resale (30 yr)	8.0%



Outcomes	Market	Shared Equity	AHC Formula	AMI Index
Initial Price	180,000	300,000	180,000	180,000
First Mortgage		171,000	174,600	174,600
Second Mortgage		120,000		
Formula Resale Price	322,353	537,254	229,516	266,444
Homeowners Cash Out at Resale	151,769	166,640	76,907	113,096
Affordability at Resale	112%	109%	80%	92%
Gain/(loss) of Affordability	-32%	-32%	0%	-13%
Additional Subsidy/(Cash Out)	n/a	88,195	-	35,820

Another important difference between the approaches is how they perform when interest rates change. As interest rates rise, everyone has a harder time affording the same prices. Over time, rising rates should hold market prices down. The key difference between the AMI index formula and the Affordable Housing Cost (AHC) formula lies in how they each respond to rate changes. Under the AHC formula, when a homeowner sells, their limited price is directly and proportionally impacted by any change in interest rates. When rates rise, the buying power of low-income households falls and therefore the formula price drops. The AMI index on the other hand ignores interest rates in calculating the resale price. When rates rise, the homes become less affordable. In this example, if interest rates rise from 6.5% to 8% the AHC formula keeps the home affordable to 80% of AMI while the AMI index unit is now only affordable to 92% of AMI. However the AMI index seller would receive the same \$113,096 that they would have received if interest rates had remained stable (as in Scenario 2) while the AHC formula homeowner now only receives \$76,970.

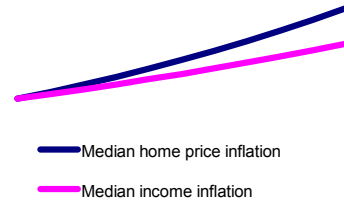
The same difference in interest rate sensitivity functions in reverse when rates drop. If interest rates were to drop from 6.5% to 5%, the AHC unit would still be affordable to households earning 80% of median but the seller would receive \$159,425 while the AMI seller would still receive \$113,096 but now the AMI unit would be affordable to households as low as 68% of AMI. The AHC homeowner receives either the benefit or the consequence of rising rates while the AMI owner is not exposed to this risk. Conversely, the program that creates these below market units under an AMI Index formula faces some risk that units that were initially affordable will become less affordable due to rising rates but also faces the chance that the same units will become *more* affordable if rates fall while the AHC program sponsor is protected from interest rate risk – no matter what happens to interest rates, the units will remain affordable at the same level. Note that the shared equity loan, like the AMI Index places the interest rate risk on the program sponsor not the homeowner, when rates rise the unit either gets less affordable or requires more subsidy.

Scenario 6: Interest Rate Spike

Interest Rate Spike - Sale after 5 years Interest rates higher, housing prices and incomes are growing

Inputs

Holding period	5
Median home price inflation	6.0%
Median income inflation	4.0%
Initial mortgage interest rate (30 yr)	6.5%
Interest rate at resale (30 yr)	10.0%



Outcomes	Market	Shared Equity	AHC Formula	AMI Index
Initial Price	180,000	300,000	180,000	180,000
First Mortgage		171,000	174,600	174,600
Second Mortgage		120,000		
Formula Resale Price	240,881	401,468	157,732	218,998
Homeowners Cash Out at Resale	60,574	72,776	(8,867)	51,173
Affordability at Resale	122%	119%	80%	110%
Gain/(loss) of Affordability	-42%	-41%	0%	-31%
Additional Subsidy/(Cash Out)	n/a	78,991	-	59,427

From the point of view of wealth creation, this difference in who holds the interest rate risk can make a big difference. When rates are constant both the AMI and AHC formulas generate the same wealth creation but, with the AHC approach, the actual level of wealth creation for any homeowner is much less predictable. These homeowners are essentially gambling on interest rates. While this is true to some extent of all market rate homeowners – rising rates could hold prices down - the AHC owners are extremely and immediately sensitive to rate changes. Week to week fluctuations in interest rates change the resale value of the home. This difference is especially important in the early years. For a family with an AHC restricted unit selling after only 5 years, a rate increase from 6.5 to 8 percent will reduce their total equity to only \$21,000 compared with \$51,000 for the AMI and \$72,776 for the shared equity. If rates rose to 10%, the AHC formula would limit their sale price to a level \$22,000 less than they paid for the home. While the market value of their home has risen by more than \$100,000 this family will have to find nearly \$9,000 in cash in order to be able to move out.

While a jump in interest rates of 3.5 percentage points over 5 years seems somewhat unlikely in today's environment, it is not at all historically unusual. Between 1977 and

1982 interest rates on 30 year loans rose by 5.5 percentage points (From around 8.5% to over 14%) During that same period of time home prices rose by an average of 7.7% annually¹⁰! In our example, if rates rose by 5.5 percentage points and prices rose by 7.7% annually, the AHC seller would sell at a \$45,000 loss while the market price of the home would have risen by \$135,000. While this loss is “necessary” to maintain the strict affordability of the unit, it does not result in any permanent increase in the affordability of the unit. The first family’s loss will almost certainly translate into a gain for the second family. The second family will be able to buy a home with a market value of over \$400,000 for only \$157,732. When interest rates inevitably fall, the second family will receive a huge windfall made possible by the discount sale required of the first owner.

AMI Index formulas balance wealth creation and affordability well

If you are only interested in maintaining affordability, AHC is the best tool. If you are only concerned about wealth creation, market ownership is, of course likely to generate the most wealth and shared equity mortgages do a good job of providing comparable returns while retaining the dollar value (though not the buying power) of public investment. However, if you want to balance both maintaining affordability and generating predictable wealth for homeowners, the AMI index outperforms these alternatives. When home prices are rising at only a modest rate, the AMI index offers homeowners a chance to earn the same kind of equity that they would earn in an unrestricted home. When prices rise rapidly, the AMI index protects the public investment by limiting the homeowner’s return to what they ***would have earned*** in a more normal housing market. It provides predictable, though not always maximum equity. And unlike the AHC formula, the AMI Index does not ask homeowners to bear all the interest rate risk. The sponsors of AMI indexed homeownership programs must be comfortable with the risk that, when interest rates rise, these homes will become somewhat less affordable. They can reassure themselves with the observation that interest rates are reliably cyclical. They fall and rise only to fall again. Over time the exact affordability of an AMI indexed unit will rise and fall along with rates but it will cycle around a fairly steady average. If maintaining strict affordability is the only goal,

¹⁰ Office of Federal Housing Enterprise Oversight, Housing Price Index (<http://www.ofheo.gov/HPI.asp>)

than this is an unnecessary concession, however, if asset building is even part of the rational for a program, then this concession allows homeowners to very reliably earn very significant equity without requiring any future investment on the part of the program sponsor or risking the permanent loss of the affordable units.

Part III: How much wealth is enough?

While we have seen that different mechanisms for preserving affordability perform very differently as wealth generators and that generating modest wealth is not necessarily incompatible with maintaining long-term affordability, it is clear that homeowners selling even AMI Indexed homes will leave under most circumstances, with less equity than they would have earned if they had, somehow, bought an unrestricted home. The ultimate policy question, though, is whether the equity that these limited equity homeowners do earn (taken together with the other social benefits) is enough to justify the level of public investment. There is no obvious standard for making this kind of judgment. This section evaluates the return that owners of resale restricted homes earn from several different perspectives.

Anything beats renting, Nothing competes with boom market housing

Advocates of permanently affordable housing often answer critics by pointing out that many limited equity homeowners would have no realistic ownership alternatives. Even limited equity, they argue, is far better than no equity at all, which is what these families would receive if they were to remain renters. Critics respond that this is setting the bar too low. Because rental housing offers essentially no wealth creation for residents, outperforming rental housing is no great feat. If both policy makers and homebuyers are in part motivated by the asset building power of ownership, then the point of reference, they say, should be traditional ownership. To these critics, any limited equity ownership that offers significantly less wealth creation than market ownership is not really homeownership at all. They will cite the fact that homeownership has historically been the most reliable generator of lasting wealth as an argument against any limitation on an owners return. While a limited equity homeowner who earns over \$100,000 in equity over a 10-year period, has more equity than they started with, their neighbor owning a similar house over the same period may sell with over \$300,000 in equity. In many parts of the country, home prices have been rising at over 10% annually for several years

running. Given the very high leverage achieved by 3-5% downpayment mortgages, homeowners are routinely receiving triple digit returns on their initial equity.

There is an enormous distance between the phenomenal wealth generation of homeownership in a boom market and the absolute lack of any wealth creation in rental housing. Some advocates will never see any reason to offer homeowners more than minimal equity while others will complain that any limitation whatsoever is un-American. Between these extremes there is no magic middle ground, no obvious line in the sand between “not enough” and “too much” equity. However there are several milestones that can help policymakers keep their bearings as they wander this terrain in search of the right balance.

Historically Normal Wealth Creation

Over the last 30 years, home prices in America have risen 5.95% annually¹¹ while incomes have risen at 5.36%¹². At this rate, limited equity and market rate housing offer fairly similar rates of wealth creation. Either is vastly better than renting, and neither is nearly as profitable as owning an unrestricted home in the kind of wildly inflating markets that we have seen in recent years. When we say we want to design a homeownership program that supports wealth creation, we need to know whether we mean historically normal wealth or boom market wealth.

The most common limited equity resale formulas offer very significant wealth creation but slightly less than has been the historical norm for American market rate homeownership. In exchange for public help, buyers give up the opportunity to make historically unusual profits but they do not have to give up the chance to build the kind of wealth that has long been seen as the path into the middle class.

¹¹ Office of Federal Housing Enterprise Oversight, Housing Price Index 1974 to 2004 (<http://www.ofheo.gov/HPI.asp>) The OFHEO is the federal agency charged with oversight of Fannie Mae and Freddie Mac. Their Housing Price Index tracks the change in resale prices for homes with Fannie Mae or Freddie Mac mortgages.

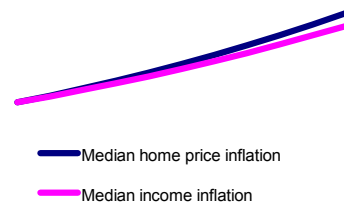
¹² US Census Bureau; Current Population Survey, Annual Demographic Supplements; Table F-6. Regions-Families (All Races) by Median and Mean Income: 1974 to 2001. (<http://www.census.gov/hhes/income/histinc/f06x1.html>)

Put another way, in markets where housing prices are not escalating rapidly, there is little interest in limited equity ownership models. A resale price restriction in such a slow market might generate prices that were not significantly below the market price – the restriction would not be necessary to maintain affordability. A price restriction, in this context, serves only as insurance against the day when prices might escalate more rapidly. Conversely, in a hot market, instead of understanding price restrictions as eliminating wealth creation, it is more accurate to see the well designed price restriction as offering the kind of wealth that homeownership offers to people when the housing market is not booming.

Historic Norm
Prices are rising only slightly faster than incomes

Inputs

Holding period	10
Median home price inflation	5.95%
Median income inflation	5.26%
Initial mortgage interest rate (30 yr)	6.5%
Interest rate at resale (30 yr)	6.5%



Outcomes	Market	Shared Equity	AHC Formula	AMI Index
Initial Price	180,000	300,000	180,000	180,000
First Mortgage		171,000	174,600	174,600
Second Mortgage		120,000		
Formula Resale Price	320,835	534,725	300,543	300,543
Homeowners Cash Out at Resale	150,358	165,174	146,513	146,513
Affordability at Resale	85%	83%	80%	80%
Gain/(loss) of Affordability	-5%	-5%	0%	0%
Additional Subsidy/(Cash Out)	n/a	19,278	-	-

Moving up to Market

One of the common concerns with limiting appreciation is that it will trap homeowners in the subsidized units because, if their resale price rises more slowly than the general housing market they will never be able to afford a new house in the same market. In an ideal world, the equity that homeowners earned through limited equity ownership would provide enough of a head start for those families to move into the unsubsidized market when they move out. A study of resales of limited equity homes in Burlington Vermont

suggests that this is possible¹³. Seventy-five percent of Burlington sellers were able to purchase unsubsidized, unrestricted single-family homes. If homeowner's incomes are rising at a rate close to the rate of growth in market housing prices, the equity that limited equity owners generate through their restricted homes reduces the need for debt - making their next home more affordable even if prices are rising slightly faster than incomes. In this environment, the limited equity housing can serve as a stepping stone giving families a very powerful savings mechanism that keeps them from falling farther and farther behind rising housing prices. While there are many programs that encourage people to save for many years in order to access homeownership, the fact is that unless your income is rising faster than home prices your buying power is being reduced by rising prices faster than it is likely to be improved through savings. Limited equity housing can improve this situation in many cases. Because the homeowner's savings is leveraged by debt and public subsidy, their ability to accumulate equity rapidly can put them ahead of the housing price curve. When prices are rising at moderate rates, buyers who are initially priced out of the market can accumulate enough equity to make market ownership attainable some years later.

However, while this process can be a powerful rationale in favor of limited equity ownership in modestly appreciating markets, it should be clear that the dynamics will be very different in rapidly appreciating markets. If housing prices are rising much faster than incomes, even the leveraged savings available through limited equity ownership will not be enough to keep up with the runaway market. Sellers of limited appreciation homes may not be able to find new homes that they can afford even with \$100,000 to \$200,000 downpayments! This is an argument against resale price restrictions. The argument goes that, while it may seem unfair to allow subsidized homeowners to earn enormous windfalls due to rapidly rising housing markets, allowing unlimited appreciation is the only way to avoid trapping homeowners in the limited equity homes.

¹³ Permanently Affordable Homeownership: Does the Community Land Trust Deliver on Its Promises?
John Emmeus Davis and Amy Demetrowitz, Burlington Community Land Trust, 2004
(<http://www.bclt.net/pdf/summary.pdf>)

However, this argument is based on the assumption that *unrestricted* homeowners will not similarly be trapped by rising prices. The unstated assumption seems to be that since the owner's house is rising in value, their total purchasing power is keeping up with the rapid home price inflation. This is not a safe assumption at all. If a homeowner's income is not rising as fast as housing prices, their purchasing power will fall relative to the market even if the value of their current home rises with the market. Certainly, home price appreciation will give them options that they would not have if their appreciation were more limited, but their only options for moving may still require trading down to a less valuable house – smaller, older, or further out into the suburban fringe. For low-income buyers who receive public subsidy when buying their first house, even this trading down may not be an option. Assuming that the public subsidy must be repaid (even without any equity sharing) the homeowner's proceeds from sale will be far below the level needed to buy a comparable unit in a similar location. The fact that the buyer needed an initial subsidy will mean that, in a rapidly rising market, they need the same subsidy again (or more) for their next home unless their income has risen dramatically.

Table 8

Buying the next house				
Initial Price of Modest Home	300000	Initially affordable to 133% of AMI		
Years Later	10			
Housing Price Inflation	6%			
Income Inflation	4%			
Future Price	\$ 537,254	Affordable to 160% of AMI		
Interest Rate at Resale	6.50%			
	Market	Shared Equity	AHC Formula	AMI Index
Equity available for downpayment	\$ 151,769	\$ 166,640	\$ 113,096	\$ 113,096
First Mortgage	\$ 385,486	\$ 370,614	\$ 424,158	\$ 424,158
Monthly Payment	2,437	2,343	2,681	2,681
Required Annual Income	112,455	108,117	123,737	123,737
Household Income would need to rise to ___ % of AMI	119%	114%	131%	131%
<hr/>				
If income was still 80% AMI, mortgage would be ___% of monthly income	39%	37%	42%	42%
<hr/>				
If income was 100% AMI, mortgage would be ___% of monthly income	31%	30%	34%	34%

The table shows the situation when sellers under a modest growth scenario try to reinvest the equity that they receive after selling their first home 10 years later. Remember that our limited equity buyers bought a modest house with a market value of \$300,000 though they could only afford to pay \$180,000. To afford the \$300,000 house without any public subsidy a family would have needed to earn 133% of the Area Median Income. Our target households earned only 80% of median. Now 10 years later, the same type of modest home would cost \$537,254 (assuming 6% annual price inflation). Now because incomes have risen more slowly (4%) a family with 3% downpayment would need to earn 160% of AMI to afford the same house with no subsidy. However a family selling an assisted house at this point in time would have significant equity to invest in this new market house. The larger downpayment would lower the necessary mortgage payment making the house more affordable. The total equity that such a family would have available to them would vary depending on which type of restriction they faced on their previous home. Under this modest growth scenario, the seller with the shared equity

formula has the most available to reinvest: \$166,640. Still, unless the family's income has risen far more rapidly than the median, they would not be able to afford a comparable market rate home. In fact, their income would have to rise from 80% of median to 114%. The AMI index homeowner faces a slightly larger challenge – their income would need to rise to 131% in order to be able to afford the same home without subsidy. Regardless of how generous our appreciation formula is, buyers who initially required public subsidy will find comparable market rate homeownership unaffordable as long as their household incomes rise more slowly than housing prices.

However, notice that even with a strict resale price restriction, these families will have improved their buying power relative to their initial position even if housing prices rise faster than their incomes. The reality is that homeowners who sell limited equity houses do manage to buy market rate housing. One of the ways that they do this is by buying housing that they can't quite afford. Like many first time homebuyers, they squeeze into homeownership by committing to mortgage payments that represent a share of their income much higher than would be allowed in most "affordable" homeownership programs. While subsidized programs limit buyers to 30 to 35% of their income, banks are more and more likely to make loans that require buyers to pay 40 to 45% of their monthly income for their housing costs. One way to measure how far a household is from being able to afford homeownership is by the percentage of income that they would need to spend to buy a starter house. In our example, the families at 80% of median would need to spend 45% of their income *on the mortgage alone* for a \$300,000 market rate house or 26% of their income for the same house with resale restrictions. Ten years later the same house would cost \$537,000. If their income went up at the same rate as the AMI and they sold their resale restricted house and reinvested the \$113,000 in equity they still couldn't quite afford that starter home – they would need to spend 42% of their income on mortgage payments. Even though they have earned over \$100,000 in equity, their ten years in limited equity housing has not solved the enormous affordability problem that they faced at the start – but it has kept them from falling further behind. If they had remained renters for this 10 year period with only a 3% downpayment, this same house would require 53% of their income.

At the same time, it seems artificial to assume that people's incomes will remain at exactly the same percentage of the Area Median Income over periods of 10 or more years. Surely some families will earn less 10 years later than they did when they bought their house. Of, course others will have incomes that are considerably higher. Because younger people generally earn less than older people (up to a certain age), we can count on most of our limited equity buyers actually earning more at the time that they sell than they did when they bought. While the income mobility of low-income families is certainly more complex than the population as a whole, in general, households headed by someone between 25 and 34 years old earn 99% of the median income while those 10 years older (35 to 44) earn 121% of median (a 22 percentage point increase) and those 45 to 54 earn 134% of median (a 14 percentage point increase over those 10 years younger). Above age 55 incomes decline as people retire¹⁴. However for homebuyers under age 45 there is a reasonable likelihood that they will improve their income relative to the Median by 14 to 22 percentage points. This general trend is fairly consistent between different regions of the country and between urban, suburban and rural areas. While this provides only a rough indicator, if homebuyers (under 45 years old) earning initially 80% of the Area Median Income increase their income in line with this trend, we can expect them to earn between 94 and 102% of median when they move. About half should earn more than this and half less.

If our 80% AMI buyers are generally earning close to 100% of median after 10 years then it is far more likely that the leveraged savings from their limited equity home will provide them with enough of a leg up that they will be able to afford a comparable market rate home. A seller whose income had risen to 100% of AMI would only need to spend 34% of their income on the mortgage for a comparable house. While this is still high enough to be considered "unaffordable," many lenders offer loan products that would allow a buyer with acceptable credit to spend an even higher percentage of their income.

¹⁴ Median income by age for all households in the United States, 2000 Census, US Census Bureau.

Risk Adjusted Return on Investment

Another way to evaluate the returns that limited equity homeowners earn is to consider the equity that they are ultimately able to take from their home as a return on their initial investment (their downpayment and closing costs) and to see how this return compares with other investment/savings options that low- or moderate-income families could choose.

As much as demand for homeownership is driven by issues like security, stability and even pride of ownership, it is hard to ignore the fact that homeownership has historically been a great investment option for middle class families. A family that bought a market rate home like the one in our example for \$180,000 with a \$5,400 downpayment and \$3,600 in closing costs, could expect to receive \$152,000 in equity when they sell 10 years later even if home prices rise by only 6% annually. If they were to invest their downpayment and closing costs in the stock market (with an average rate of return of 9% annually) at the end of 10 years they would have only \$21,000 – a gain of only \$12,000. In fact, in this scenario, the market rate homeowner earns the equivalent of a **33% annual rate of return on their initial investment**¹⁵. And when housing prices rise faster than 6% their return could be much greater.

If we accept that equity building for low-income home buyers is an appropriate goal for affordable homeownership programs, it is only fair to ask how limited-equity ownership programs compare as investment vehicles. Table 9 shows that under the modest growth scenario outlined above, while the market rate owner earns the equivalent of 33% return on their investment the limited equity buyers (AMI and AHC) earn 29% return¹⁶. While the limited equity restrictions have reduced the return, 29% return is still a phenomenally great investment opportunity for anyone. A savings account might offer the same family

¹⁵ When a home appreciates by 6% in a given year, a homeowner who may have paid only 5% of the purchase price will receive 100% of the appreciation – Even though the price only rises 6%, they more than double their equity in one year.

¹⁶ Because much of the equity the seller receives at resale is principal that they paid down on their loan, strictly speaking, this is further investment on the homeowners part and not “return” on their investment. A more formal time value of money calculation that took into account their steady investment of principle would calculate a slightly lower total internal rate of return but still far far better than any other investment option available to the general public.

1 or 2% interest; a Certificate of Deposit could offer 3 or 4%. Mutual funds, still the middle class investment strategy of choice, have historically earned their investors 8-9% annual return. There is simply no other reasonably safe investment that provides the kind of return on investment that limited equity housing offers – except unlimited equity housing.

Table 9: Annualized Rate of Return

Outcomes	Market	Shared Equity	AHC Formula	AMI Index
Initial Investment	9000	15000	9000	9000
Return	151,769	166,640	113,096	113,096
Aprox Rate of Return	32.6%	27.2%	28.8%	28.8%

**Table 10: Return on investment for an AMI index home
assuming 4% annual increase in median income.**

Year	Resale Price	Gain	Return
5	218,998	38,998	34%
10	266,444	86,444	25%
15	324,170	144,170	20%
20	394,402	214,402	17%
25	479,851	299,851	15%
30	583,812	403,812	14%

Under most circumstances all of our limited equity models generate very high rates of return on the homeowner’s initial investment. However, every business school student learns that returns on any investment should be proportional to the level of risk and the risk that buyers face under different resale formulas are really quite different. These programs increase owner’s exposure to certain risks while protecting them from other risks that traditional homeowners face. During periods of unusually high home price appreciation, these programs necessarily limit the homeowner’s “upside risk” – the chance that they will earn returns above the normally high rate. However both the AMI and AHC formulas protect homeowners against the risk that home prices might fall.

Prices would have to fall a long way before the limited resale prices were above the market rate.

But the limited equity formulas substitute new risks. Under the Affordable Housing Cost formulas, the homeowners face the risk that their resale price might be less than their purchase price due to rising interest rates – even when other home prices might be increasing. Under both the AMI and AHC homeowners face a risk that formula resale prices will fall due to drops in the AMI. Even slower than expected growth in the Area Median Income could dramatically reduce the homeowner’s return on investment. Table 11 presents the return on initial investment for each alternative under each of the economic scenarios we discussed in Section II,

Scenario Summary						
	Static	Modest	Price Spike	Rising Rates	Housing Price Bust	Rate Spike - 5 year sale
Economic Environment						
Holding period	10	10	10	10	5	5
Median home price inflation	3.0%	6.0%	8.0%	6.0%	-4.4%	6.0%
Median income inflation	3.0%	4.0%	4.0%	4.0%	3.0%	4.0%
Initial mortgage interest (30 yr)	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Interest rate at resale (30 yr)	6.5%	6.5%	6.5%	8.0%	6.5%	10.0%
Homeowner's Cash out at Resale						
Market	76,952	151,769	213,385	151,769	(30,051)	60,574
Shared Equity	88,874	166,640	230,686	166,640	(21,422)	72,776
AHC Formula	89,048	113,096	113,096	76,907	41,051	(8,867)
AMI Index	89,048	113,096	113,096	113,096	41,051	51,173
Homeowner's Return on Initial Investment						
Market	23.9%	32.6%	37.2%	32.6%	-227.3%	46.4%
Shared Equity	19.5%	27.2%	31.4%	27.2%	-207.4%	37.1%
AHC Formula	25.8%	28.8%	28.8%	23.9%	35.5%	-199.7%
AMI Index	25.8%	28.8%	28.8%	28.8%	35.5%	41.6%

Table 11: Comparison of Returns

Given different investment options with very different risk profiles, a Wall Street analyst (or a business school student for that matter) will focus any comparison not on the total returns available under each option but, will instead focus on what is called the risk adjusted return. All other things being equal, we should prefer a lower return investment that is more of a sure thing to a long shot that pays slightly more. However, if the long shot pays much more and is only moderately more risky, at a certain point, we will choose it over the safe bet. The question is which has the higher return, given the relative risks. This is easier said than done. In comparing our homeownership models we can't

scientifically weight the returns based on the various risks but we can take them into account, generally, when we design our ownership programs. If we limit the homeowner's return, we might want our program to also offer less overall risk than market ownership.

We are all fairly familiar with the risks involved in traditional homeownership. Historically prices have risen at a fairly reliable pace. Sometimes prices rise quickly sometimes they remain "flat" for many years in a row, but, historically, they don't often fall by much or for long. The recent run up in prices nationwide has been quite remarkable and we are beginning to see newspaper articles regularly speculating about whether there is a housing "bubble" raising the real risk that we might soon see a historically very unusual fall in prices. Traditional ownership has been fairly safe but it is far from risk free.

However recent research has been highlighting the possibility that homeownership may be a less effective and far riskier investment for low-income families. Carolina Katz Reid¹⁷ used data from the Panel Study of Income Dynamics (PSID) to analyze the homeownership experiences of a nationally representative sample of low-income households. She found that homeownership performed well as an investment for households at all income levels but that low-income homebuyers were likely to realize significantly less appreciation, face much higher monthly costs relative to income and were far more likely to lose their investment entirely through foreclosure among other factors. Because of the general lack of ownership options at the lower end of the price spectrum, low-income buyers tend to stretch more financially in order to attain ownership. Reid found that half of low-income homebuyers committed more than 50% of their household income for mortgage payments alone. In spite of this high relative spending, low-income buyers were generally forced to buy older, less well-maintained

¹⁷ *Achieving the American Dream? A Longitudinal Analysis of the Homeownership Experiences of Low-Income Households*, CSD Working Paper number 05-02, Center for Social Development, St Lewis, MO, 2005 available at: <http://gwbweb.wustl.edu/csd/Publications/2005/wp05-02.pdf>

properties and to buy in the least desirable neighborhoods. As a direct result, their homes appreciated less than those of middle-income homebuyers. Over the 10 year period ending in 1993, she found the average household in the survey saw a 50% increase in home value while low-income homeowners saw an average increase of only 30%. Low-income minority owners homes actually declined in value relative to inflation. High loan to value ratios, high debt to income ratios, and slower price appreciation combine to make low-income homeowners much more likely to loose their homes. The relative lack of equity in their homes makes banks less likely to restrcture debt when low-income owners face periods of unemployment and makes it harder for low-income owners to refinance to take advantage of falling interest rates. Reid found that only 47% of the low-income homebuyers in her study remained homeowners five years later while nearly 80% of high-income buyers did. It is clear from this and other research¹⁸ that traditional homeownership is both riskier and less profitable than for low-income buyers than it is for middle-income buyers.

While it is not clear how the returns that low-income homeowners can earn in limited equity ownership compare with what these buyers would likely earn in traditional ownership (both are less than what middle income families earn in traditional ownership), it is clear that these programs can be designed to expose homeowners to far less overall risk for several reasons:

- Limited equity ownership programs make it possible for low-income homebuyers to purchase higher quality homes, often in better locations than they could access without public support
- At the same time these programs limit the buyer's monthly payments to a reasonable percentage of their household income, resulting in debt to income ratios far better than the current average for even middle income buyers on the traditional market.

¹⁸ McCarthy, G., S. v. Zandt, et al. (2001). *The Economic Benefits and Costs of Homeownership: A Critical Assessment of the Research*. Arlington, Virginia, Research Institute for Housing America. Available at: <http://www.housingamerica.org/docs/RIHAWp01-02.pdf>

- While buyers are able to buy limited equity homes at affordable prices, the collateral for their bank loans is generally the unrestricted market value of these homes which can be as much as twice the affordable price. While this improved ratio does not directly benefit the homeowners it provides considerable security to lenders which makes it easier for homeowners to refinance to take advantage of lower interest rates or to restructure debt in the event of temporary unemployment.
- Most importantly, the best limited equity programs offer home price appreciation that is far more predictable than traditional ownership. By tying the resale price to an index like Area Median Income, these programs insulate homeowners from some of the fluctuations of the market. The median income moves at a more steady and predictable rate than home prices and is averaged over a metropolitan region, protecting homeowners from block by block price fluctuations¹⁹. Limited equity owners still face some risk of significant losses either because of falling median incomes or the unlikely situation where market prices fall below the subsidized affordable price.²⁰

Predictable Appreciation

On the other hand, most people are less familiar with the risks involved in limited equity homeownership. The AHC formulas expose homeowners to dramatic price fluctuations based on interest rates. Historically interest rates have been far more volatile than home prices, rising and falling somewhat unpredictably. Compared with traditional homeownership, AHC buyers appear to face a much greater chance that their homes will sell for less than they paid – especially if they sell after a short time. At the same time, these homeowners also might earn especially large windfalls if they sell after a short time

¹⁹ McCarthy et al. show that home values in many low-income census tracts fall even as regional housing markets are rising.

²⁰ Some limited equity programs also tie the resale price to changes in interest rates, exposing homeowners to a new set of risks and raising the possibility that they might lose money on sale due to rising interest rates. See www.rjacobus.com/??? for an example and an analysis of the impact of this additional risk.

and interest rates have fallen. However, over the long term they are much less likely to earn large windfalls than traditional homeowners.

The AMI index formula exposes homeowners to changes in the Median Income a variable that has historically been significantly more predictable than home prices and certainly much more predictable than interest rates. Table 12 shows the annual average change in the median income for the Nation and each of 4 regions for each year since 1953. While there are individual years when the national median income dropped and periods of time when it grew very slowly for several years in a row, on average, over any period of several years, the median income has grown by significantly more than 3%. The average annual change for every region is over 5%. While there may be years of decline and short periods of very slow growth, for the purpose of designing this kind of program, we are primarily concerned about the trend over substantial periods of time. The average family in America moves every 7 years. There is no 7-year period in this dataset during which the national median income increased by an average of less than 3.35%.

Table 12:

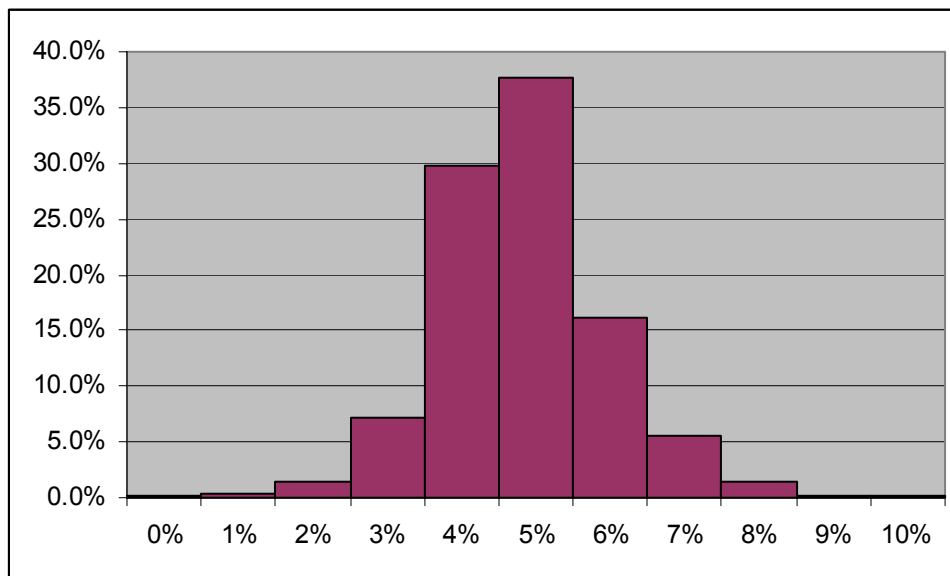
Annual Average Change in Median Income

Year	US	NORTHEAST	MIDWEST	SOUTH	WEST
2001	1.33%	2.39%	-0.20%	1.76%	1.53%
2000	3.96%	7.13%	5.43%	2.29%	4.33%
1999	4.74%	3.61%	4.47%	5.31%	4.48%
1998	4.87%	4.63%	6.03%	4.17%	2.70%
1997	5.36%	3.81%	3.95%	5.92%	7.10%
1996	4.16%	6.02%	3.42%	5.68%	1.43%
1995	4.72%	2.25%	9.33%	3.50%	4.14%
1994	4.93%	4.77%	4.79%	6.06%	3.64%
1993	1.06%	0.72%	2.37%	1.77%	0.92%
1992	1.76%	1.06%	0.83%	2.65%	3.64%
1991	1.66%	1.96%	1.58%	0.67%	1.32%
1990	3.33%	0.02%	4.55%	4.03%	2.77%
1989	6.28%	8.31%	5.25%	5.35%	7.91%
1988	3.94%	6.37%	5.78%	1.98%	3.31%
1987	5.13%	6.56%	5.09%	6.30%	3.41%
1986	6.21%	5.29%	5.92%	6.50%	3.99%
1985	4.93%	7.22%	4.40%	4.08%	6.06%
1984	7.54%	6.78%	8.18%	7.11%	9.71%
1983	4.89%	7.06%	2.11%	4.63%	3.93%
1982	4.67%	5.11%	4.76%	4.46%	3.15%
1981	6.49%	8.46%	6.36%	7.52%	7.15%
1980	7.33%	5.98%	5.66%	9.07%	7.69%
1979	11.04%	13.37%	10.60%	10.07%	12.38%
1978	10.19%	8.25%	10.41%	9.45%	11.49%
1977	7.03%	9.08%	5.66%	8.56%	6.64%
1976	9.03%	6.38%	9.63%	9.67%	8.16%
1975	6.33%	3.81%	5.89%	8.07%	8.17%
1974	7.06%	8.56%	7.02%	6.54%	6.13%
1973	8.41%	7.60%	9.44%	9.92%	8.27%
1972	8.08%	8.37%	8.71%	7.66%	7.61%
1971	4.24%	3.03%	4.43%	5.00%	4.19%
1970	4.60%	6.77%	3.06%	5.52%	2.35%
1969	9.28%	10.22%	10.07%	9.76%	7.14%
1968	8.81%	7.03%	10.27%	8.88%	7.10%
1967	5.32%	7.79%	4.59%	8.81%	8.13%
1966	8.27%	5.50%	8.61%	12.59%	6.72%
1965	5.91%	3.28%	6.17%	3.92%	3.99%
1964	5.12%	5.09%	4.11%	6.16%	3.39%
1963	4.92%	4.61%	5.20%	8.45%	4.55%
1962	3.85%	5.32%	7.06%	4.66%	-2.33%
1961	2.05%	3.34%	1.02%	0.84%	5.23%
1960	3.75%	2.88%	4.62%	0.83%	6.58%
1959	6.49%	5.65%	7.18%	5.89%	8.49%
1958	2.44%	1.96%	0.37%	4.61%	3.77%
1957	3.89%	2.96%	0.47%	4.89%	4.71%
1956	8.19%	12.35%	7.53%	4.35%	8.52%
1955	6.02%	3.11%	8.99%	7.49%	7.72%
1954	-1.77%	-0.07%	-4.86%	0.85%	-2.87%
Average	5.37%	5.45%	5.34%	5.71%	5.22%

Source: US Census Bureau, Current Population Survey, Annual Demographic Supplements

Of course, there are specific metro areas where the median income has declined or grown very slowly for extended periods of time. To get a clearer understanding of the risk AMI index buyers will face, we have to look at the change in median incomes at the county or metropolitan level. HUD publishes the “Area median Income” for every county and Metropolitan Statistical Area in the nation each year. An analysis of all 3,184 counties in the country shows that between 1996 and 2004, the longest period for which data is available in electronic format, median incomes increased by an average of 4.3% annually. Of course some counties saw incomes grow much faster while some experienced much slower growth – 4 counties even saw declines in income over the 8 year period. However the majority of counties (53%) saw their median income grow by between 4% and 6%. Only 9% experienced AMI growth of less than 3% annually.

Chart 2: Distribution of counties by annual change in AMI 1996 to 2004



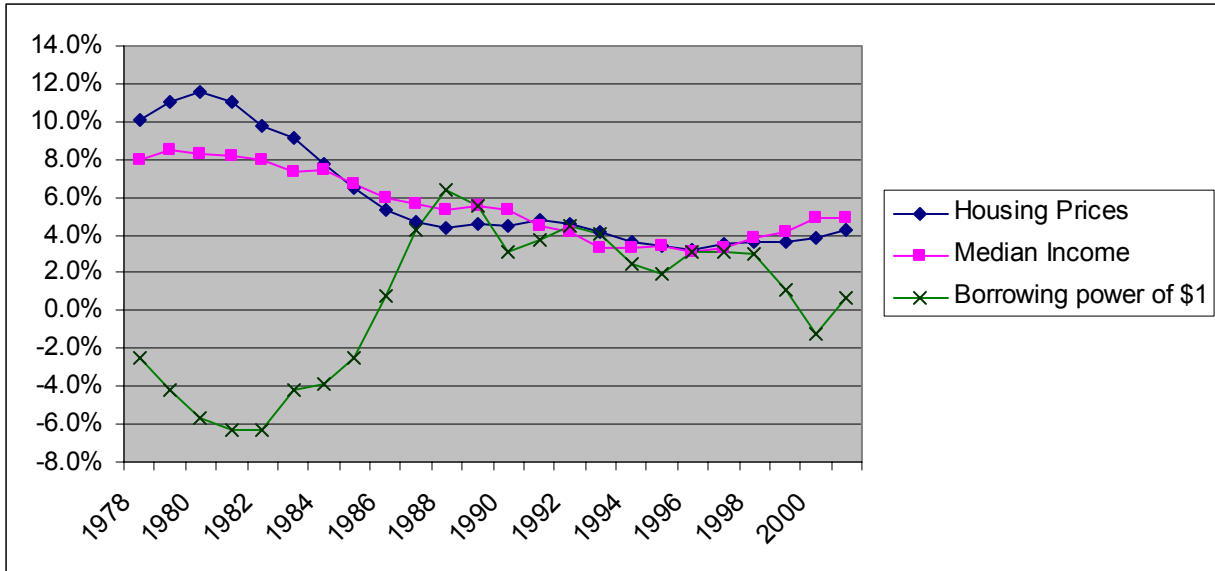


Chart 3: Relative Volatility:

Average change in value compared with 7 years earlier

Over the past few decades, median incomes have been more stable than either home prices or mortgage rates. Chart ___ compares the seven year trailing average change in national median home price, median income and the buying power of \$1 in mortgage payment given changing interest rates. For example, in 1980 home prices were 11.6% higher than they had been 7 years earlier – i.e. the average family buying in 1973 and selling in 1980 realized 11.1% appreciation in the total value of their home. Over the same period the median income rose by an average of 8.3%. Over this same period mortgage rates on 30 year loans rose from 8% to almost 13%. This reduced the amount of money that could be borrowed with any given mortgage payment. In 1973, for every \$1 that a buyer had available for their monthly mortgage payment they could borrow \$136, but with higher rates in 1980 that same dollar only supported \$91 in debt. This spike in interest rates didn't keep home prices from rising more than 11% annually but it may have kept them from rising even faster. However for a family with a resale restriction tied to mortgage rates (AHC Index) the change in interest rates would have lowered the borrowing power of buyers by 33% percent over this period – an average decline in buying power of 5.6% annually. Rising median incomes more than offset this loss allowing AHC buyers in 1980 to sell at a slight profit but the chart clearly shows

how much more volatile prices tied to mortgage rates will be than prices tied to the AMI alone.

While the AMI has clearly been growing at a more stable (predictable) rate over recent decades, it also grows at a slightly lower rate. It is not entirely clear from this data whether traditional homeownership or AMI index limited-equity ownership offers a greater risk adjusted return. It is clear that, on average, both offer similar returns – traditional owners are likely to earn slightly more than AMI owners but not much more. It is clear that traditional owners have a far far greater chance of earning very high returns (above 30% return on their investments). At the same time the AMI buyers are far far less likely to lose money or earn very low returns (Below 15%). The question that is difficult to resolve, is whether the slightly lower average return for limited equity owners is proportional to the lower risk that they face (or to put it another way, does the extra profit that traditional homeowners receive make up for the extra risk that they face?) But in the face persistent criticisms that limited equity ownership is “unfair” to homeowners, this analysis seems to suggest that AMI based resale restrictions offer not only a fair risk adjusted return but an uncommonly high return; a rate of return that, adjusted for relative risks, is quite similar to that of traditional homeownership and vastly superior to all other investment opportunities that potential limited equity homebuyers could ever access.

Conclusion: Unfinished Business

Given the low risks, there is no investment that reliably provides the kind of financial returns that Americans routinely realize through homeownership. There are lower risk investments and there are those that offer much higher returns but none, generally offers such high returns with so little risk. It is this special risk profile that has made homeownership such a powerful institution in American life. Wide spread homeownership virtually transformed a generation of working families that were living from paycheck to paycheck into an asset owning stable middle class. This unique opportunity to generate wealth with low risk is the direct result of a broad set of

programs, policies and institutions, established in the 1930 with the explicit goal of creating the exact kind of “ownership society” that has since developed. But not everyone has been able to take advantage of this unparalleled avenue to wealth. The very success of homeownership as an investment strategy has made it increasingly difficult for lower income families to become homeowners.

While our homeownership rate is at an all time high, ownership has never been as important as it is today. The dismantling of our social safety net, the decline in union membership, and the loss of job stability all make the stability of family assets more and more of a basic requirement of life in America. Where wealth was once a luxury, it is fast becoming a necessity.

Just as it took public action to create the institutions that support widespread homeownership, it will take public action to extend this institution to those who are increasingly priced out of its benefits. Public subsidy is necessary to bridge the growing gap between renting and ownership. But it does not seem realistic to imagine that the public sector can afford to grant the necessary funds to every family in need no matter how great the public benefits.

Permanently affordable, limited equity homeownership offers a practical tool for extending the reach of homeownership as a wealth creation vehicle for generations of low-income/low-wealth families who would otherwise be left permanently behind. By offering real equity to families that would otherwise remain renters, these programs provide a predictable and reliable avenue for advancement. By insuring that the units remain affordable over the long term, the programs preserve a stock of housing so that it can play an asset-building role in the lives of one family after another.