Policy Implications of Portfolio Choice in Underserved Mortgage Markets

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Expanding homeownership will strengthen our nation’s families and communities, strengthen our economy, and expand this country’s great middle class. Rekindling the dream of homeownership for America’s working families can prepare our nation to embrace the rich possibilities of the twenty-first century.

—President Bill Clinton, 1995

Homeownership in low-income neighborhoods has positive personal and social benefits. It provides residents with an incentive to maintain both their own property and the local neighborhood. Recent research also suggests that homeownership is associated with “life satisfaction” (Scanlon, 1999). Still, these externalities and “internalities” are not costless. A house is not only a dwelling; it is an investment asset. As such it has risk and return characteristics that should affect the purchase decision. This chapter examines the investment value of U.S. housing over the past twenty years. The results suggest that the capital appreciation of housing over the twenty-year period from 1980 through 1999 was substantially less than the return to U.S. stocks, bonds, and mortgage-backed securities over the same period. Although the comparison with stocks and bonds over the past two decades is somewhat unfair, given how well financial assets performed relative to historical norms, housing did not even fair well when compared with inflation. Returns to home investment exceeded inflation
in most states, but only by modest amounts over the period. Not only have returns been historically low, but, when price dynamics are properly accounted for, the risk is significant. Many homeowners in the United States over the past twenty years experienced extended periods in which their home equity was negative. This evidence alone is a compelling reason to reconsider the stated fundamental goal of expanding homeownership.

Despite its relatively poor performance as an investment vehicle, housing has a private consumption value that may induce people to hold it, and the positive externalities of owner-occupied housing are a strong inducement to encourage it. Thus there are clear policy implications of the evidence we present in this chapter. First, the government should be cautious about encouraging wholesale home purchases, especially by the most financially vulnerable in society. It should provide information about risk and return beyond simply helpful guidelines for accessing mortgage credit. Second, it should develop institutions and markets that allow homeowners to insure against local area-wide housing price risk. Proposals for a housing futures market by Case, Shiller, and Weiss (1993) would appear quite beneficial, given the long-term risks of homeownership. Finally, the government should reconsider a tax policy that economically favors renting rather than buying by low-income families.

The role of government-sponsored agencies (GSEs) in encouraging low-income homeownership has been much debated, particularly with respect to their role in fulfilling the mandate of the Community Reinvestment Act. Of particular concern is the development of special programs to encourage higher loan-to-value (LTV) ratios in lower-income neighborhoods. Although increasing LTV ratios relax the wealth constraints affecting tenure choice, they also add substantially to the risk of default (see Gyourko, Linneman, and Wachter, 1998; Gyourko and Linneman, 1996; Haurin, Hendershott, and Wachter, 1996). In addition, higher LTV ratios create conditions for increasing the volatility of housing prices (see Stein, 1995; Lamont and Stein, 1999) and regional recessions (see Caplin, Freeman, and Tracy, 1997).

Besides household and macroeconomic risks associated with increased leverage in low-income neighborhoods, we argue that increasing LTVs in underserved mortgage markets may encourage gentrification. Higher LTV ratios substitute down payments for higher interest rates. However, the mortgage interest deduction provides a greater benefit to higher-income families. Thus allowing high LTV ratio loans in low-income areas may simply encourage higher-income individuals to purchase housing in underserved markets. Even if gentrification issues can be resolved, it is still not clear if increasing the acceptable LTV ratio will do much good. By renting from higher-income individuals, low-income families can capture part of the tax benefits from mortgage interest and property tax payments. Both of these benefits are lost upon purchase, and neither benefit is affected by the set of available low-income loan programs. The alternative to increasing LTV ratios is a direct subsidy of home purchase in low-income neighborhoods. Ambrose and Goetzmann (1998) estimate that the necessary subsidy may be as much as 6 percent per year of the homeowner equity investment.

Housing as an Investment

The Office of Federal Housing Enterprise Oversight (OFHEO) was formed in 1992 as an independent agency within the Department of Housing and Urban Development. OFHEO has developed excellent housing price indices in a broad number of metropolitan statistical areas (MSAs) throughout the country. The quarterly indices cover all fifty states plus the District of Columbia and 328 MSAs, extending back to 1975. Calhoun (1996) describes their composition and method of construction. As of 2000, nearly 12.5 million repeat sales derived from Fannie Mae or Freddie Mac mortgage origination or purchase files were used in a weighted-repeat-sales estimation procedure based on Case and Shiller (1987) with the Goetzmann (1992) correction. These indices provide a rich source of information about the time-series behavior of U.S. housing as an investment over the past quarter-century. This information should be regarded as essential knowledge for every homeowner or potential homeowner.

Housing Returns

Treating housing as a pure investment vehicle implies that gains are realized through price appreciation, less taxes, upkeep, and transaction costs. Goetzmann and Spiegel (1997) show that the variation in the market value of the house over time is largely explained by local indices that track the capital appreciation of a home at the zip code level. If a home is maintained at the same quality level as other homes in its neighborhood, a neighborhood-level price index will typically explain 80 to 90 percent of the change in any one home's value. Thus even though an individual homeowner is not diversified across a number of homes in his region (as are Fannie Mae and Freddie Mac as residual claimants on homes on which they guarantee mortgages), the regional indices provided by OFHEO are useful measures of the return to individual home investment. However, because they are regional averages they underestimate the volatility of the return to investing in a single home in the area.

OFHEO reports that the value of a single-family home in the United States grew by 138 percent over the period from 1980 to March 2000. This represents an annualized rate of 4.2 percent over the past twenty-one years. Given that the consumer price index (CPI) rose at a 3.7 percent annual rate over the same time period, this suggests a relatively modest rate of long-term asset growth. Similar results can be found in Goetzmann (1993). That paper uses index data from 1971 to 1985 (created by Case and Shiller, 1987) to estimate the risk and return of investment in a single-family home. During that fifteen-year interval, average
annual real returns in Atlanta, Chicago, Dallas, and San Francisco ranged
between 5.8 and 8 percent per year. This pattern continues today. Summary
statistics for a selection of U.S. cities over the twenty-year period ending in March
1999 are provided in table 9-1. The annual real returns for this larger collection
of cities range from -1.9 percent to 3.3 percent.

Perhaps more troublesome is the difference between housing investment and
the return on investment in mortgage-backed securities. The mortgage-backed
securities comprising the Salomon Brothers and Lehman indices reported in the
table are, for the most part, liabilities of homeowners. On a before-tax basis it
appears that on average the cost of money to purchase a home far exceeds the
growth in that same home's value. From table 9-2 the 10 percent nominal
annual income return to the Lehman mortgage index exceeds the Houston mar-
ket nominal return by 8 percent per year and the San Francisco market nominal
return by 2.4 percent per year. Assuming that the highest marginal tax rate over
this period was 40 percent, it appears that the nominal after-tax mortgage
income return exceeded home price appreciation in nine of the twelve cities.

Although price indices give some idea of the growth in housing values, calcu-
ating the investor's return on the sale of a home requires the consideration of a
number of other factors. Hendershot and Hu (1981), Case and Shiller (1990),
and Goetzmann (1993) use rents, expenses, and tax variables to estimate after-
tax returns to housing investment. These factors are extremely important
because both maintenance and property taxes are costs unique to housing
investments. Thus price indices may in general overstate the relative return a
family can expect from their house, as opposed to assets such as stocks and
bonds for which the rate of return is easy to calculate.

In sum, examining the most current measures of capital appreciation of
homes in a number of U.S. cities over the past twenty years suggests that they
are dominated as an investment asset. Nearly all markets displayed negative risk-
adjusted returns over the period. Treasury bills would in general have been an
attractive investment alternative. Given the poor performance of housing as an
investment, it is thus surprising that housing continues to represent a significant
proportion of American household portfolios. It also implies that the govern-
ment should weigh housing policies in light of the dramatic trade-off between
wealth accumulation by low-income families and the positive social externalities
of owner-occupied housing in low-income neighborhoods. In light of this, the
government has a responsibility to share this striking information about long-
term housing returns with potential homeowners.

**Housing Risk**

Even with low expected returns, housing may still remain a somewhat attractive
investment if it is a sufficiently "safe" vehicle. In our research, we have found it
useful to break housing risk down into temporal and nontemporal components;

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**Table 9-1: Summary Statistics for Housing and Other Assets in Real Terms, March 1980-March 1999**

<table>
<thead>
<tr>
<th>City</th>
<th>Geometric mean (percent)</th>
<th>Arithmetic mean (percent)</th>
<th>Standard deviation (percent)</th>
<th>Serial correlation (percent)</th>
<th>Sharpe ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta</td>
<td>8.0</td>
<td>5.78</td>
<td>1.61</td>
<td>-0.391</td>
<td>-0.269</td>
</tr>
<tr>
<td>Dallas</td>
<td>5.0</td>
<td>4.13</td>
<td>1.38</td>
<td>-0.302</td>
<td>-0.238</td>
</tr>
<tr>
<td>San Francisco</td>
<td>10.0</td>
<td>8.72</td>
<td>1.94</td>
<td>-0.228</td>
<td>-0.183</td>
</tr>
<tr>
<td>Detroit</td>
<td>6.0</td>
<td>5.49</td>
<td>1.36</td>
<td>-0.278</td>
<td>-0.230</td>
</tr>
<tr>
<td>Houston</td>
<td>8.0</td>
<td>6.91</td>
<td>1.74</td>
<td>-0.291</td>
<td>-0.228</td>
</tr>
<tr>
<td>New York City</td>
<td>10.0</td>
<td>8.91</td>
<td>1.94</td>
<td>-0.291</td>
<td>-0.228</td>
</tr>
<tr>
<td>Newark</td>
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<td>1.36</td>
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</tr>
<tr>
<td>Philadelphia</td>
<td>8.0</td>
<td>6.91</td>
<td>1.74</td>
<td>-0.291</td>
<td>-0.228</td>
</tr>
<tr>
<td>St. Louis</td>
<td>6.0</td>
<td>5.49</td>
<td>1.36</td>
<td>-0.278</td>
<td>-0.230</td>
</tr>
<tr>
<td>Washington, D.C.</td>
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<td>1.94</td>
<td>-0.291</td>
<td>-0.228</td>
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Source: Measurements are per quarter from quarterly housing MSA returns from the Office of Federal Housing Enterprise Oversight (OFHEO). All data
is current as of March 1999.
the temporal components grow with time and the nontemporal components are associated only with transactions. The nontemporal transactions-based risk is due to the illiquidity of housing and is most important when the holding period is short. Although housing markets are competitive, we find the transactions risk to be quite significant: as much as 6 to 8 percent in our studies of the San Francisco Bay Area (Goetzmann and Spiegel, 1995, 1997). Thus it has considerable impact on buyers who may need to move soon.

The temporal components are the risk of the citywide index, deviations of local neighborhoods around the index, and the idiosyncratic risk of the house—that is, the variation in the home price around the local neighborhood index. In our 1997 study of Bay Area housing we found that neighborhood effects were strong. Using zip code-level indices, we were able to fairly accurately predict the sales prices of homes. In our sample, only 8 percent of transactions deviated by more than 10 percent from our local indices. But over the five-year period from 1989 to 1994, we found dramatic variation across neighborhoods. The lowest-priced quartile of Bay Area housing experienced no price appreciation, while the highest-priced quartile experienced price appreciation of 23 to 36 percent. Thus even a well-constructed citywide index is likely to be averaging across dramatically different neighborhood growth rates. It is of some comfort that the returns to lower-income neighborhoods were relatively higher than returns to high-income neighborhoods and that, controlling for income, race was an insignificant factor in capital appreciation rates.

An important consideration in assessing the impact of the temporal components of residential real estate risk is the strong auto-correlation in the time-series of returns. Notice that annual standard deviation figures found in both tables 9-1 and 9-2 make it appear that housing returns are not particularly volatile. However, the high positive auto-correlations indicate that housing returns follow distinct trends, with current increases foretelling future increases and current declines foretelling future declines. This means that negative shocks to housing values persist; once prices in a region begin to decline they continued to decline. Figure 9-1 plots the price indices over the period. It is clear that housing returns do not follow a random walk. Once a local housing market starts to drift lower it may be a long time before it recovers. Goetzmann (1993) shows that once idiosyncratic risk, nontemporal risk, and the trends in the index are accounted for, the annualized standard deviation of investing in a single home over a five-year period is roughly double the annual standard deviation of the city-level index.

1. See Spiegel and Strange (1992) and Spiegel (2001) for theoretical models that explain why economic forces naturally lead to predictably above or below normal expected housing returns. Thus there is no theoretical reason to believe that the serial correlation exhibited by the data is either due to a statistical artifact or likely to disappear if this information becomes more widespread in the market.
The Sharpe ratio is a common performance measure used to risk-adjust the return that an asset class provides in excess of Treasury bills. It is certainly relevant to the home purchase decision in cases for which most of an investor's wealth will be invested in that asset class. Even if we ignore the extra risk to long-term investors resulting from nontemporal components, idiosyncratic risk, and auto-correlation in the housing markets, both tables 9-1 and 9-2 show that the Sharpe ratio is negative for every city other than New York. Thus, in very general terms, over the past twenty years most homeowners across the country could have achieved greater wealth accumulation by investing in Treasury bills than in a home. The one bright spot is that housing is correlated with changes in the CPI. Thus homeownership partially hedges out an important component of inflation.

Standard asset pricing models use diversification arguments to justify low expected returns if an asset has a low or negative correlation to the market portfolio. Negative beta assets could have expected returns below T-bills and still be a part of a diversified portfolio, since the asset returns move countercyclically. The betas of most housing markets are near zero, even when four lagged quarters on S&P 500 excess returns are used as regressors. Thus we do not argue that housing is mispriced from an asset-pricing model framework. Nevertheless, the low returns suggest that, at best, houses are being priced as if investors were completely diversified, something we know is not true given the large percentage the home typically represents in a portfolio. Caplin (1999) cites evidence from the 1995 survey of consumer finances indicating that the average fraction of assets represented by the house in a homeowner's portfolio is 50 to 70 percent.

Mortgages add another level of risk because they facilitate financial leverage. Though government agencies do not advertise default risks to the general public, they are clearly aware of them. OFHEO's primary mission consists of ensuring the capital adequacy and financial safety and soundness of two government-sponsored enterprises (GSEs) the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac). In fact, the motivation for the indices is particularly telling. According to the OFHEO website:

OFHEO is required by its enabling statute—the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 (Title XIII of PL. 102-550)—to develop and administer a quarterly risk-based capital stress test to measure the capital adequacy of Fannie Mae and Freddie Mac. In the stress test, the statute requires OFHEO to use a house price index to account for changes in the loan-to-value (LTV) ratios of mortgages held or guaranteed by Fannie Mae or Freddie Mac.5

In other words, the indices are designed to allow regulators to quantify the risk that homeowner LTV ratios will become negative and thus leave the two agencies with inadequate collateral to cover the mortgages they have guaranteed. By the same token, however, the risk of increasing Fannie Mae and Freddie Mac LTV ratios is also the risk to homeowner equity. The very existence of OFHEO suggests that our own government recognizes that this risk is not trivial for the agencies.

Naturally, if the value of a home represents a relatively small portion of a household's investment portfolio, then the volatility of the index and LTV ratio is of minor concern. However, for most homeowners in the United States, and particularly those in underserved mortgage markets, a house will consume most of their savings. Thus a nontrivial chance of negative equity over a five-year investment horizon poses a serious concern.

What do the OFHEO data tell us about the historical variation in LTV ratios? Using quarterly housing return indices for each of the fifty states and the District of Columbia, we examined the minimum five-year holding period return. For 30 percent of the states there exists at least one five-year holding

2. See OFHEO's website: www.ofheo.gov/about.
4. Let $L$ equal the loan value and $E$ equal the homeowner equity value. Then $L/(L+E)$ is the loan-to-value ratio. The homeowner's equity proportion is $E/(L+E)$ which equals $1-(L/(L+E))$.
5. For expositional simplicity the following discussion treats the District of Columbia as a state. Thus there are fifty-one indices.
Policy Issues and Implications of Risk and Return Measures

Even if homeownership yields positive externalities to the community, it is irresponsible to simply encourage homeownership among modest-income groups via more aggressive lending. A home mortgage simply allows people to leverage their exposure to housing market risk. In addition, the opportunity cost of capital for a low-income household is severe. There are more attractive and liquid investments, and there are great benefits to diversifying an investment portfolio. U.S. housing policy does not effectively compensate low-income homeowners for these opportunity costs.

We suggest that HUD and other government agencies have a responsibility to disclose the historical facts to potential homeowners. The public should know about the low returns and high volatilities associated with housing. A perusal of the HUD website yields ample information about how to buy a home, indeed how to buy a HUD-owned home, but little information about how to consider the pros and cons of housing as an investment. Whereas one government agency has been established to collect information to carefully monitor the risks of housing as an asset, the other actively seeks to encourage homeownership among citizens of modest income. Homeownership may be the American Dream, but the government should not be overzealous in pushing mortgages and housing on those who cannot afford to invest in a low-returning and potentially risky asset. Otherwise it seems likely that sometime in the next twenty years a substantial number of the “beneficiaries” of this policy may find their meager savings severely diminished, or even totally depleted.

Another important step is to encourage the development of markets and instruments that can help homeowners avoid the risk of their home investment. Case, Shiller, and Weiss (1993) advocate the development of housing indices that can be used to develop home equity insurance products. Perhaps the government, through OFHEOs, can provide the local index data to allow this to take place. In addition, government agencies should take the lead in developing these contracts. Of course, one problem with the creation of home equity insurance contracts is that they partially remove incentives for maintenance and upkeek, and they encourage gaming of prices by contract owners. Nevertheless, the potential exists to overcome these drawbacks and initiate programs that will make household asset portfolios safer rather than more risky.

Tax Policy, Government Policy, and Housing Choice

Poterba (1992) provides a simple model that describes how the tax code interacts with the housing market. His analysis focuses on the amount of housing families may wish to purchase but also contains a brief analysis of how it impacts the balance between rental and purchase markets. However, in the current setting we are interested in a slightly different question. Given the current
tax code, how will allowing higher LTV ratios impact low-income families? In particular, will it improve their ability to compete for owner-occupied housing and will it motivate them to buy rather than rent?

**How Taxes Can Undermine Other Housing Policies**

Housing markets are competitive. Thus low-income prospective homeowners compete with higher-income families for the same property. In fact, they potentially compete with higher-income families seeking the property for rental income. Will looser financing allow a low-income family to outbid a high-income family? A fairly straightforward analysis suggests not.

At the margin, higher-income families pay income taxes at higher rates than low-income families. This means that the mortgage interest deduction provides more value as a family's income increases. Thus decreasing the down payment levels (and thereby increasing the interest paid) may make it even less likely a low-income family will purchase a home. To see why, imagine that a house produces a consumption dividend of \( C_j \) to a low-income family and \( C_h \) to a high-income family. Absent taxes, the low-income family will try to outbid the high-income family so long as \( C_j \) is greater than \( C_h \). However, the mortgage interest deduction distorts this. An interest-only mortgage (and in the initial years the payments on a thirty-year mortgage are essentially interest only) provides a family with a tax benefit equal to \( trDP \). Here, \( t \) equals the family's tax rate, \( r \) the mortgage rate, \( P \) the price of the house, and \( D \) the fraction of the price financed via the mortgage (a 10 percent down payment corresponds to \( D \) of 0.9). Thus the total benefit to a family equals \( C + trP \). This implies that, with taxes, the low-income family will only outbid the high-income family if \( C_j > (t_j - t)P \), with subscripts \( j \) and \( h \) denoting low- and high-income, respectively. Clearly, as \( D \) increases (that is, as the down payment declines), the more difficult it will be for the low-income family to win a bidding war. Ultimately, then, a loosening of lending requirements in low-income areas may actually produce gentrification rather than low-income homeownership. This is clearly not the impact envisioned by policymakers wishing to encourage high LTV loans in poor neighborhoods. Housing policy that targets regions for lower credit suffers from this fundamental limitation. To help lower-income buyers, it is necessary to provide them a relative advantage.

Even if a policy of encouraging high LTV loans in underserved neighborhoods does not encourage the displacement of low-income families, there is still the question of whether it will actually increase ownership rates among the poor. All families must weigh the choice of buying versus renting when making their housing decision. For better or worse, the current tax code encourages high-income families to purchase and low-income families to rent. Consider a city in which a residence sells for \( P \), and the mortgage interest rate equals \( r \). In this city lives a family that faces a tax rate of \( t_f \). If they purchase a house it will cost them \((1 - t_f)P \) in after-tax interest and an additional \( EP \) in maintenance expenses, but they will then earn \( g \) in capital gains. For housing, capital gains are effectively tax free, so the owner will keep the entire amount. Thus the total after-tax cost of ownership comes to \((1 - t_f)P + EP - gP \). Alternatively, the family can rent an identical home at a cost of \( n \) from another individual who pays taxes at a rate of \( t_o \). Because the property is rented, the federal government allows the landlord to deduct interest and maintenance expenses as well as depreciation \((\delta P)\) on the building before calculating the tax bill. In equilibrium, a competitive rental market should imply that landlords earn a zero economic rent and thus \( n \) must solve:

\[
n(1 - t_o) = (rP + \alpha EP)(1 - t_o) - t_o \delta P - (1 - t_f)gP,
\]

where \( t_f \) equals the capital gains tax rate on landlords and \( \alpha \) a measure of the inefficiency of third-party maintenance (so \( \alpha \geq 1 \)). As Shiller and Weiss (2000) discuss, third-party maintenance is far less efficient than owner-occupied maintenance, and this should be accounted for in the cost calculations. So,

\[
n = rP + \alpha EP - \frac{t_o \delta P + (1 - t_f)gP}{1 - t_o}.
\]

Therefore it will only pay for a family to buy rather than rent, if:

\[
t_f + g > (1 - \alpha)E + \frac{t_o \delta + (1 - t_f)g}{1 - t_o}.
\]

Notice that the result is independent of the down payment required to obtain the mortgage. This results from the fact that the equation properly accounts for the opportunity cost of tying up money in real estate rather than other investments of similar risk. A higher down payment simply means a higher lost opportunity cost in exchange for an equal reduction in the expected cost of the mortgage. The only impact the down payment requirement has is on whether purchasing is a feasible option.

Note from equation 9-3 that if a family pays taxes at a rate of zero (not unlikely for those with low incomes) and if the capital gains tax rate is less than or equal to the ordinary income tax rate (which it is), then under no circumstances will it pay for them to buy. This is irrespective of what LTV ratios the government may or may not persuade banks to use. By renting, a low-income family can at least capture part of the tax benefit via competition among landlords.

To get a feel for the point at which a family will actually purchase, consider the following scenario. Imagine the landlord pays taxes at a combined federal
and state rate of 39.6 percent. Further assume depreciation can be taken on a
straight-line basis over thirty years. At first one might suppose that this implies
that \( \delta \) equals .033 (1/30). However, once the building is sold, the depreciation
taken until that date will then result in a capital gains tax to be paid on the dif-
ference between the sale price and the building's book value. Thus the full
depreciation allowance overstates by a considerable amount the benefit of the
deduction. The current long-term capital gains tax rate equals 20 percent. If the
landlord holds the building for ten years, then on average the government will
recapture taxes equal to about 13 percent of the depreciation, and this figure is
therefore the effective capital gains tax rate \( (\tau_c) \). Using these adjustments, the \( \tau_c \)
term in front of \( \delta \) in equation 9-3 becomes .396 - .13. Currently the annual
percentage rate for a thirty-year, zero points mortgage equals approximately
8.509 percent. From tables 9-1 and 9-2 it would appear that annual capital
gains on housing come to about 4 percent in the current inflationary envi-
ronment. Assume maintenance runs about 2 percent of a home's value per year.
Further assume that third-party maintenance only runs 20 percent higher than
owner-occupied maintenance. Plugging all these figures into the inequality
implies that a family will only purchase a home if its marginal tax exceeds 32.1
percent. To reach this marginal tax rate, a family of four in a state with a 5
percent income tax would need to earn over $43,000 per year. Based on this, it
seems that tax issues may be playing a far more important role than mortgage
down payment issues in discouraging low-income families from purchasing
their homes. The natural conclusion is that targeting underserved communities
for high LTV loans is unlikely to encourage homeownership.

One word of caution is in order about the above calculations. The marginal
tax rate that causes a family to switch from renting to buying depends critically
on the marginal tax rate of the marginal landlord. Table 9-3 presents figures for
the cutoff point given varying tax rates on the marginal landlord. For example,
if the marginal landlord faces a tax rate of 25 percent, then families with a mar-
ginal tax rate of more than 9 percent would likely prefer to purchase their resi-
dence. This would certainly include most families.

**Policy Proposals and Their Potential Impact on Low-Income Homeownership**

In addition to the government's proposal to relax LTV ratios to encourage low-
income homeownership in underserved areas, there are currently two other pro-
posals (that we know about) put forward by academics. The most recent is by

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6. The 39.6 percent tax rate assumes that the landlord pays taxes at the top federal rate and lives
in a state without an income tax (see www.quicken.com/taxes/articles/917555291_21562). While
the assumption that the landlord does not pay state income taxes may seem to imply that a higher
tax rate is in order, it should be remembered that it is the marginal landlord that sets rents in the
market. Thus, if anything, the tax rate one should use is probably somewhat lower. Figure 9-1 pro-
vides a breakdown of how the results vary with the tax rate on the marginal landlord.

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Table 9-3. Tax Rate at Which Families Are Indifferent between Renting and Buying

<table>
<thead>
<tr>
<th>Landlord's tax rate</th>
<th>Tax rate at which the family is indifferent</th>
</tr>
</thead>
<tbody>
<tr>
<td>.2</td>
<td>.03</td>
</tr>
<tr>
<td>.25</td>
<td>.09</td>
</tr>
<tr>
<td>.3</td>
<td>.158</td>
</tr>
<tr>
<td>.35</td>
<td>.237</td>
</tr>
<tr>
<td>.4</td>
<td>.329</td>
</tr>
</tbody>
</table>

Source: Authors' calculations.

Caplin (1999), who proposes the issuance of equity sharing contracts. Under
this proposal, families would own half of their house and investors the other
half. At first glance this is an appealing proposal because it helps to ameliorate
the price risk faced by families due to fluctuations in the price of their home.
Simultaneously, it frees them to invest in a better diversified portfolio and offers
the potential for increased liquidity via investment in publicly traded securities.
However, though this policy looks good from the perspective of portfolio diver-
sification, it may suffer from a severe moral hazard problem. As Shiller and
Weiss (2000) explain, it is very difficult to write enforceable contracts on home
maintenance. Given this constraint, it seems likely that an equity-sharing con-
tract for X percent of the home would effectively reduce a family's incentive to
modernize, improve, and maintain the home by X percent. The arguments in
both Shiller and Weiss (2000) and Spiegel (2001) suggest that reducing the
maintenance incentive in this manner would likely result in a greater fraction of
dilapidated homes in targeted neighborhoods. The resulting blight would then
destroy the positive externalities policymakers hope to induce through home-
ownership.

The other academic proposal for reducing homeownership risk was put forth
by Case, Shiller, and Weiss (1993). They would have a service produce a local
area real estate price index. Homeowners could then short the index when they
purchased their home, thereby immunizing their portfolio from fluctuations in
housing prices that are beyond their control. On purely theoretical grounds this
is a very appealing solution. Unlike equity sharing contracts, it does not raise
moral hazard concerns. A family that ignores the maintenance requirements to
their own house will see it fall in value relative to the index and thus feel the full
brunt of the home's decline in value. Thus this proposal provides all the benefits
of diversification without reducing the likely production of externalities families
create when they look after their home. Of course, the fact that this proposal has
not been implemented implies that it too is flawed. Here, however, the flaws
may be psychological more than economic in nature. Many families may feel
"cheated" if upon the sale of their home they lose all of the gain to the holder of
their futures contract and may thus be unwilling to enter into an agreement like
If the index has gone up in value but the home in question has gone down, it is likely that the
family will simply declare bankruptcy and the contract will go unpaid. Before a liquid market in
housing futures can arise, questions such as these will need to be resolved.

However, no policy proposal is likely to change homeownership rates in underserved areas so
long as the current tax code remains in place. Poor people do not rent simply because they are poor.
After all, poor people typically purchase cars and high-income people frequently rent via a lease. The
difference lies in the tax treatment. Unlike the interest on a house, the interest on a car loan is
deductible. Thus allowing higher LTV ratios, equity-sharing mortgages, or the emergence of a local
area futures contract will not have any impact so long as the government continues to "pay" low-income families to rent via the
tax code. Until that is changed, all other proposals are likely to be ineffective.

Conclusion

U.S. housing policy has long encouraged homeownership, and there are a number of arguably
reasons to do so. When held in a diversified portfolio, housing provides a hedge against a major component of inflation and has a low
relevance with financial assets. Nevertheless, it is dangerous for homeowners to
devote a large portion of their wealth to an asset that has low historical return and a
serious risk of loss. There is no historical return and a serious risk of loss over multiple-year horizons. We argue that if the government
chooses to actively encourage homeownership, it has the responsibility to
inform potential homeowners of the risks. Beyond providing information, the
government should also seek new ways of helping homeowners to lay off
unwanted local housing risk, perhaps by facilitating insurance contracts as suggested by Case and Shiller. We see policies that encourage overinvestment in housing and higher leverage as potentially dangerous. Overinvestment in housing by families with modest savings means underinvestment in financial assets
that will grow and provide income for retirement. In fact, encouraging homeownership among low-income families will only increase the wealth gap in the
United States.

Another policy problem relates to the way the tax code may interact with any
attempts to encourage low-income homeownership. Because of the progressivity of the
tax code, the interest deduction on a mortgage is worth more to higher-income families than to lower-income families. Since raising the LTV ratio
effectively raises the interest payments, the tax code will in fact encourage higher-income families to move into underserved areas in order to take advantage of the program targeting such areas. The result may thus be gentrification, rather than making it possible for low-income families to own their own homes.

Even if higher-income families can be prevented from accessing any new loan programs, there is still the issue of whether encouraging high LTV loans will persuade low-income families to buy rather than rent. Again a model of the tax
code is instructive here. By renting, low-income families can capture some of the
mortgage tax deduction via competition among high-income landlords. Unless the tax code changes, low-income families will find themselves financially better off, on average, by renting rather than buying.

Given the above issues, what should the government do? The neighborhood
externalities homeowners provide should not be dismissed. Furthermore, since
these externalities are a public good it is clear that the government has a role to
play in their creation. However, changing LTV requirements within poor neighborhoods does not seem to be the answer. Instead, we would suggest a direct mortgage interest subsidy. Such a subsidy would make housing financially more attractive to low-income residents and have the added benefit of making ownership a financially sensible alternative to renting.

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