

This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: Housing Markets in the U.S. and Japan

Volume Author/Editor: Yukio Noguchi and James Poterba

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-59015-1

Volume URL: http://www.nber.org/books/nogu94-2

Conference Date: January 3-4, 1991

Publication Date: January 1994

Chapter Title: Public Policy and Housing in the United States

Chapter Author: James M. Poterba

Chapter URL: http://www.nber.org/chapters/c8828

Chapter pages in book: (p. 239 - 256)

# Public Policy and Housing in the United States

James M. Poterba

#### 10.1 Introduction

Housing accounts for one-sixth of consumption expenditure in the United States, second only to food among budget categories. It is also the expenditure category that is most directly affected by public policy. The U.S. tax code is the most important policy instrument that affects housing. The federal income tax subsidizes homeowners by not including imputed rent in the tax base, while allowing deductions for mortgage interest payments. There have also been generous subsidies to rental housing through accelerated depreciation and other tax benefits.

Public policy also affects the housing sector through a variety of programs to support borrowing for home purchase. Targeted low-interest credit initiatives, such as the Federal Housing Administration and the Veterans Administration loan program, permit certain classes of individuals to borrow at below-market interest rates. More generally, the entire housing sector has historically benefited from federal support of savings and loan institutions and from the operation of federal agencies such as the Federal National Mortgage Association, which facilitate smooth operation of a secondary mortgage market.

Finally, a number of federal and state-local programs assist low-income households in finding housing. These include community development grants, subsidies to construction of low-income housing, and direct public-sector intervention to build and operate public housing. Along with food stamps and Medicaid, these programs constitute a major source of in-kind assistance to the poverty population.

James M. Poterba is professor of economics at the Massachusetts Institute of Technology and the director of the Public Economics Program at the National Bureau of Economic Research.

The author is grateful to the National Science Foundation and the John M. Olin Foundation for research support, and to Edgar Olsen for helpful comments.

U.S. public policy toward housing has changed significantly in the last decade. The tax reforms of 1981 and 1986 reduced the value of tax-exempt imputed income for homeowners and made dramatic changes in the tax incentives for rental investment. The prospective subsidy to traditional housing finance institutions, notably thrifts, has also changed as a result of the federal rescue of thrift institutions in the late 1980s. The future therefore portends a U.S. policy stance that provides less encouragement for the housing sector than did other policies in recent history.

This paper describes each of these public policies, noting their current status and changes through time, and assesses their effects on the U.S. housing market. The paper is divided into five sections. Section 10.2 presents background information on housing markets in the United States, such as the distribution of housing expenditure, the mix of owners versus renters in different age groups, and the mortgage status of the U.S. housing stock. Section 10.3 describes the tax benefits available to homeowners and notes how these incentives have shifted through time. It also discusses the tax subsidies to rental housing, noting the controversy surrounding the links between tax subsidies to landlords and the rents ultimately charged tenants. Section 10.4 describes housing programs that operate through financial markets, both targeted mortgage subsidies and more general programs that affect the nature of mortgage markets. Section 10.5 discusses housing programs that target low-income households for direct provision of housing services. It provides information on the size of the population affected by these programs, as well as data on the level of support provided. There is a brief conclusion.

#### 10.2 Stylized Facts about the U.S. Housing Market

This section considers the pattern of housing expenditures across different household types, the status of households as owners or renters, and the financial characteristics of both new buyers and existing homeowners.

Table 10.1 reports data on the tenure choice of households in different economic strata. The table reports tabulations from the 1986 Consumer Expenditure Survey. Households are divided into deciles based on their total expenditures, with higher outlays indicating better economic circumstances. The table shows that most households in upper economic strata are owner-occupiers, while most lower-strata households are renters. More than 60 percent of the households in the lowest expenditure decile are renters, compared with only 15 percent of those in the highest outlay category. The bottom third of the expenditure distribution contains half of all renter households.

Table 10.2 shows the age-specific home-ownership rates for U.S. house-

<sup>1.</sup> Poterba (1989) argues that consumption provides a more satisfactory basis than annual income for classifying households. The results in table 10.1 are insensitive, however, to the choice of income or expenditure to define the deciles.

	<b>-</b>		,,,	
Consumption Decile	Average (\$)	Average Pretax Income (\$)	Average Annual Rent (if Renters) (\$)	% Renters
1	4,008	5,785	978	63.3
2	7,260	9,212	2,170	60.0
3	9,641	13,989	2,802	51.5
4	11,941	16,691	3,380	49.7
5	14,260	20,974	3,952	45.3
6	17,009	25,847	4,114	34.9
7	20,410	29,650	4,643	30.8
8	24,739	36,752	4,438	27.3
9	31,624	40,519	5,528	17.5
10	58,477	51,499	5,506	15.2

Table 10.1 Housing Consumption by Expenditure Deciles, 1986

Source: Tabulations from the Consumer Expenditure Survey, 1986 (first-quarter expenditure data).

Table 10.2 Age-Specific Home-ownership Rates, United States, 1988

Age Category	% Homeowners	Age Category	% Homeowners
Under 25	15.7	50-54	77.1
25-29	35.9	55-59	79.3
30-34	53.2	60-64	79.8
35-39	63.6	65-69	80.0
40-44	70.7	70–74	77.7
45-49	74.4	Over 75	70.8

Source: Unpublished tabulations from the Current Population Survey.

holds in 1988. There is a sharp increase in home-ownership rates for households in their late twenties and early thirties. By age thirty-five, more than half of all households own their own homes. For those approaching retirement, the home-ownership rate exceeds 80 percent. Venti and Wise (1989) note that home equity constitutes the most important asset for many elderly households. The age-specific tenure rates provide important insight on the differential benefits of subsidies to owners and renters.

Table 10.3 presents information on changes through time in the ratio of outstanding mortgages to the value of the owner-occupied housing stock. At the end of the 1980s, housing debt accounted for nearly half of the value of owner-occupied homes. This loan-to-value ratio rose during the 1980s; it was only 36.6 percent at the end of 1980. Movements in the loan-to-value ratio are driven partly by real house price changes and partly by borrowing behavior. In the late 1970s, when real house prices rose sharply, the loan-to-value ratio declined. During the 1980s, the rise of home equity mortgages and the stability

Table 10.5	LU	an-to-value Ratios for Ow	ner-occupied frousing, 1900-09 (%)
	Year	Loan-to-Value Ratio	Home-ownership Rate
	1955	30.5	
	1960	36.8	61.9
	1965	46.3	_
	1970	42.0	62.9
	1975	38.0	_
	1980	36.6	65.6
	1985	42.2	63.9
	1990	51.4	64.0

Table 10.3 Loan-to-Value Ratios for Owner-Occupied Housing, 1960–89 (%)

Source: Board of Governors of the Federal Reserve System, Household Net Worth, December 1990; Current Population Survey.

of house prices coincided with an increase in loan-to-value ratios to record levels above 50 percent.

The average loan-to-value ratio may differ significantly from the loan-to-value ratio on newly purchased homes. Surveys by the Chicago Title Insurance Company suggest an average down payment as a fraction of sales price of 24 percent in 1988, with smaller down payments (15 percent) by first-time buyers. The deductibility provisions for mortgage interest, which now stand in sharp contrast to the nondeductibility of other types of consumer debt, are thus a critical component of the subsidy to new home buyers.

The second column in table 10.3 reports the aggregate home-ownership rate. The share of the population owning their homes grew from the Second World War until 1980. After peaking at 65.6 percent in 1980, however, the homeownership rate *declined* during the first half of the 1980s, to below 64 percent in 1985. The tenure mix was quite stable in the late 1980s. Because the tenure mix adjusts slowly to varying economic incentives, it may still be premature to assess the effects of the decade's tax reforms on home-ownership rates.

#### 10.3 Tax Subsidies to Housing Investments

This section describes the net tax posture toward owner-occupied and rental real estate. It contrasts the cost of housing with and without tax subsidies, and describes the important consequences of the major tax reforms in the 1980s.

### 10.3.1 Owner-Occupied Housing Subsidies

The single most important subsidy to housing in the United States is the federal tax code's omission of imputed housing income in defining taxable income. To calibrate the impact of tax provisions on the demand for housing, it is helpful to define the *after-tax user cost of home ownership*. This measures the marginal cost of an incremental dollar of owner-occupied housing, including the forgone return on the owner's equity. It is defined as

(1) 
$$c_{0} = [(1 - \theta)(i + \tau_{0}) + \delta + \alpha + m - \pi_{c}]P_{0},$$

where i is the nominal interest rate,  $\tau_p$  is the property tax rate per dollar of property value,<sup>2</sup>  $\theta$  is the household's marginal federal income tax rate,  $\delta$  is the physical decay rate for the property,  $\alpha$  is the risk premium for housing investments, m is the cost of home maintenance as a fraction of house value,  $\pi_e$  is the expected rate of house price appreciation, and  $P_o$  is the real price of owner-occupied housing.<sup>3</sup> This expression applies only to households who itemize for federal income tax purposes. For the nearly half of all homeowners who do not,  $\theta = 0$ .

The user cost of home ownership varies across households. For itemizers, it is inversely related to a household's marginal tax rate. While it reflects the *marginal* cost of additional housing purchases, it may not reflect the *average* cost, which determines the most cost-effective way for a given household to obtain housing services. For homeowners who would not have itemized in the absence of the property tax and mortgage interest deduction, but do because of these items, the marginal cost of housing is given by (1) but the average cost depends on the total tax saving. This is

(2) 
$$\operatorname{Tax Saving} = \theta(\tau_n + i\beta)P_aH - S,$$

where H is the quantity of housing, S is the household's standard deduction, and  $\beta$  is the loan-to-value ratio for the property. For homeowners who do not itemize even with their housing-related deductions, the marginal user cost is

(3) 
$$c_{a}' = \{ [(1-\beta)(1-\theta) + \beta]i + \tau_{n} + \delta + m - \pi_{c} \} P_{c}.$$

Table 10.4 presents evidence on the tax status of U.S. homeowners in 1985, prior to the Tax Reform Act, which reduced the probability that homeowners would choose to itemize. The number of tax returns with itemized property tax deductions was only 57 percent of the total number of owner-occupied properties. More than 40 percent of the home-owning population therefore faced the nonitemizer user cost for housing. In part, the surprisingly small share of homeowners who itemize reflects the substantial number of properties without mortgages. Only 57.3 percent of homeowners in 1985 had mortgages; this is due to a very high rate of home ownership among elderly households, many of whom have repaid their mortgages. In 1980, the weighted-average marginal federal tax rate on mortgage interest deductions was 32 percent. By

<sup>2.</sup> Only the part of the property taxes that is *not* a "benefit tax," a fee for local public service provision, should actually be included in the user cost.

<sup>3.</sup> This equation assumes that all capital gains on owner-occupied dwellings are untaxed. Since each household is eligible for \$125,000 in untaxed lifetime gains, this assumption may not be unrealistic. If it were not satisfied,  $\pi_e$  would be replaced with  $(1 - \tau_e)\pi_e$ , where  $\tau_e$  is the effective capital gains tax rate. A more heroic implicit assumption is that the household faces identical borrowing and lending rates. Further discussion of these assumptions and information on plausible parameter values for the components of equation (1) may be found in Poterba (1984).

	Millions	Percentage
Number of homeowners	56.2	
Number of homeowners with mortgages	32.2	57.3
Number of tax returns with mortgage deduction	28.1	50.0
Number of tax returns with real estate tax deduction	32.1	57.1

Table 10.4 Itemization Status of U.S. Homeowners, 1985

Source: Rows 1 and 2 are from U.S. Bureau of the Census, Housing in America 1985/86, Current Housing Report H-121, no. 19. Tax information is drawn from the 1985 Statistics of Income: Individual Income Tax Returns.

1984, when the rate reductions of 1981 had taken full effect, this average tax rate was 28 percent.<sup>4</sup>

The user cost summarizes the tax code's influence on housing costs. To define the subsidy, however, it is useful to compute the user cost that would obtain if imputed income from owner-occupied housing were taxed but deductions for mortgage interest and property taxes were still allowed, *and* depreciation and maintenance expenses became deductable:

(4) 
$$C_{\alpha}' = [i + \tau_{\alpha} + \delta + m + \alpha - \pi_{\alpha}]P_{\alpha}.$$

Table 10.5 reports the user cost of home ownership for households at three income levels at various times during the last decade. It presents both the user cost under the prevailing tax rules and the hypothetical user cost if the tax system did not provide a subsidy. The first panel considers the user cost for a fixed pattern of interest and expected inflation rates, thereby identifying the effect of tax changes. The second panel evaluates the tax code of several selected years since 1980, using interest and expected inflation rates that prevailed at that time, thus indicating the net change in incentives for home ownership. Other auxiliary parameters, such as the property tax rate and the cost of maintaining the home, are assumed constant throughout the calculations.

The results illustrate that recent reforms had their most pronounced effect on the cost of home ownership for high-income households. For a family with adjusted gross income (AGI) of \$250,000 in 1988, the Tax Reform Act of 1986 lowered the marginal tax rate from .50 to .28 and raised the user cost of home ownership from .094 to .114, assuming the base case with an interest rate of 7 percent and 3 percent expected inflation rate.<sup>6</sup> The actual change in the user

<sup>4.</sup> These estimates are based on data reported in IRS (1980, 1984).

<sup>5.</sup> The first set of user cost changes reflects the effects of tax reform but in a counterfactual setting, while the second convolutes the effects of tax changes with the effects of other shocks, for example changes in monetary policy, that are unrelated to the tax system. A more complete analysis would involve general equilibrium analysis of tax policy, in particular with an endogenous real interest rate.

<sup>6.</sup> The reform would have to lower real interest rates by nearly three hundred basis points to offset the lost value of tax deductions.

Table 10.5 User Co	ble 10.5 User Costs of Owner-Occupied Property, 1980–88			18	
	1980	1982	1984	1986	1988
Case	1: Fixed paran	neters $i = .07$	$\pi_{e} = .03$		
User cost of home ownership			_		
1988 AGI = \$25,000	.120	.122	.125	.125	.126
1988  AGI = \$45,000	.110	.113	.117	.117	.114
1988  AGI = \$250,000	.081	.094	.094	.094	.114
No-tax case	.129	.129	.129	.129	.129
Case	2: Prevailing in	terest and inf	lation rate		
User cost of home ownership					
1988  AGI = \$25,000	.080	.094	.098	.115	.109
1988  AGI = \$45,000	.064	.077	.089	.104	.095
1988 AGI = \$250,000	.017	.042	.049	.074	.095
No-tax case	.141	.157	.151	.175	.156
Parameter values					
Nominal rate	.127	.151	.124	.103	.091
Expected inflation	.085	.093	.072	.037	.034

Table 10.5 User Costs of Owner-Occupied Property, 1980–88

*Notes:* Calculations for both cases assume  $\tau_p = .02$ ,  $\delta = .014$ ,  $\alpha = .04$ , and m = .025. AGI = adjusted gross income.

cost of home ownership since 1986, recognizing variations in interest rates and inflationary expectations, is from .074 to .095 for this household. Assuming a price elasticity of demand of -1.0 for owner-occupied housing,<sup>7</sup> this tax change could have large effects on both demand and house prices.

The post-1986 change in user costs for high-income households, however, is small relative to the change from the beginning of the 1980s, when the estimated user cost was .017. The large change in the early 1980s is due to rising real interest rates, falling inflation rates, which raised the after-tax cost of borrowing because the tax system is not indexed, and declining marginal tax rates. The effect of rate reductions on home-ownership incentives for those in lower income brackets is much smaller, since the decline in tax rates in the 1986 reform was less pronounced. For the household with AGI of \$25,000 in 1988, the tax reform lowered the marginal tax rate from 16 percent to 15 percent and raised the user cost (in the benchmark case) from .125 to .126. Some middle-income households, such as the \$45,000 example presented here, even experienced increases in their marginal tax rates, and for them housing costs increased.

The 1986 tax reform also raised the standard deduction, reducing the fraction of the population who would itemize if they were not homeowners and raising the average cost of home ownership. For a joint filer, the standard deduction rose from \$3,670 to \$5,000. Higher standard deductions reduce the

<sup>7.</sup> Rosen (1986) and Olsen (1987) survey the voluminous housing demand literature.

incentive for a household to own, but conditional on deciding to own, they do not affect the marginal cost of additional housing services.

In both panels of table 10.5, the last row indicates the user cost of home ownership, assuming no tax distortions. For the case of a fixed inflation and interest rate, in the upper panel, the costs in all years and for all households would be .129. This implies that the tax code in 1980 reduced the user cost by 14 percent for middle-income (\$45,000) households and by 12 percent for the same households in 1988. At the very high income levels, however, the subsidy is much larger. The user cost was 37 percent below the no-tax level for the \$250,000 household in 1980, but only 12 percent below the no-tax cost in 1988. Again using a price elasticity of demand of -1.0 for housing services, these values imply at least a 10 percent increase in the owner-occupied housing stock as a result of the tax subsidies.<sup>8</sup>

#### 10.3.2 Tax Subsidies to Rental Property

The tax system is also a critical determinant of the net incentives for rental housing investment. In analyzing the tax subsidies to rental housing, there are virtually no tax benefits to renters but substantial tax benefits directed at rental landlords. The summary statistic for policy incentives toward rental property is therefore the landlord's user cost of rental housing. This is defined as

(5) 
$$c_r = \{ [(1-\tau)i + \delta + \alpha - \pi_e](1-\tau z)/(1-\tau) + \tau_p + m \} P_{r}$$

where the parameters not defined above are  $\tau$ , the marginal income tax rate of the rental landlord;  $P_r$ , the real price of rental property; and z, the present value of tax depreciation allowances. In equilibrium, the rent charged must equal  $c_r$  so that the landlord is willing to hold the rental property.

The tax incentives with respect to owner occupation for a given household are straightforward to measure, since they depend on that household's tax parameters. The tax subsidies to rental housing are more complex, because they depend on the tax rates of the "marginal rental landlord" whose tax parameters determine the marketwide rental rate. There is disagreement on the identity of the marginal rental landlord; this translates into uncertainty about the parameter  $\tau$  in the user cost expression. Some studies, such as Titman (1982) and Scholes, Terry, and Wolfson (1989), assume that the landlord is a top-bracket individual investor. Such an investor receives maximum advantage from the depreciation allowances on rental property, since these allowances generate deductions, which reduce taxable income. If the marginal supplier of funds to the rental industry is in a lower tax bracket, however, this will reduce the value

<sup>8.</sup> Part of the tax subsidy to owner-occupied housing will be reflected in higher land values, thus blunting the subsidy effects described here.

<sup>9.</sup> Equation (5) treats the government as sharing the risk associated with rental investments, an assumption that may be incorrect. If the government is not a partner to such risk, the  $\alpha$  term would no longer be multiplied by  $(1 - \tau z)/(1 - \tau)$ .

Table 10.6	Depreciation Provisions for Residential Structures, 1969–88			
_		Lifetime (years)	Depreciation Schedule	
	1969-81	32	150% declining balance	
	1981-84	15	175% declining balance	
	198485	18	175% declining balance	
	1985-86	19	175% declining balance	
	1986-	27.5	Straight line	

Source: Author's compilation, based on U.S. Internal Revenue Code.

of these deductions and therefore raise equilibrium rents.<sup>10</sup> Particularly when the dispersion of marginal tax rates is large, as it was prior to the 1981 tax reform, assumptions about the identity of the marginal landlord significantly affect estimated user costs.

Tax depreciation benefits are a critical part of the net subsidy to rental housing. Table 10.6 shows the recent history of depreciation policy for rental property. The 1981 Economic Recovery Tax Act (ERTA) shortened the tax lifetime for residential rental property from 32 to 15 years. The 1986 Tax Reform Act reversed this policy, extending the lifetime to 27.5 years and requiring straight-line depreciation rather than more accelerated 175 percent declining balance. The reduction in marginal tax rates in 1981 partly counteracted the expanded depreciation benefits in the ERTA, but in 1986 less generous depreciation rules combined with lower marginal tax rates to significantly reduce the value of depreciation benefits. Since the present value of depreciation tax benefits is a key consideration in rental investment decisions, real rents should increase because of the 1986 Tax Reform Act. 12

The net incentive to invest in rental property is also affected by a variety of other tax code provisions, notably the capital gains tax rate and the tax rules designed to curb investment in tax shelters. A substantial fraction of the returns to property investment accrue as capital gains, so the tax reform in 1986 which raised the capital gains rate was unfavorable for rental housing. In addition, the Tax Reform Act of 1986 included several provisions designed to restrict

<sup>10.</sup> Gravelle (1985) argues that corporations, not individuals, are the marginal suppliers of capital to the rental housing industry. Poterba (1987) reports that corporations held only 4.5 percent of residential rental property in 1985, compared with 38.6 percent for partnerships and sole proprietorships, which are taxed at individual rates. The relative unimportance of corporate investors casts doubt on the view that they are price-setters in this market.

<sup>11.</sup> Hendershott (1987) discusses in detail the changes in depreciation provisions and their likely effects.

<sup>12.</sup> The measurement of the present discounted value of depreciation allowances is complicated because buildings may be depreciated more than once. Particularly during inflationary periods when there are substantial gains to selling a building and redepreciating its increased nominal basis, investors may "churn" their properties. This can substantially increase the present value of depreciation allowances for investors in rental property, lowering the user cost and the equilibrium rent demanded by landlords. Gordon, Hines, and Summers (1987) discuss this possibility.

Table 10.7	Kentai Use	er Costs, 1980–88	
F	A	1000	1000

Economic Assumptions	1980	1982	1984	1986	1988
$i = .07$ , $\pi_e = .03$	.126°	.116	.117	.118	.132
Actual economic conditions	.059	.096	.104	.137	.149

*Note:* Rental user costs assume no churning, with marginal tax rates for the rental landlord of .50 in 1980–86 and .28 in 1988. See table 10.5 for definition of "actual economic conditions."

tax shelter investments, including investments in real estate. New limitations on using tax shelter losses to offset other types of income discouraged high-leverage rental projects, because the interest deductions in these projects were no longer as valuable to their investors. In part as a result of these provisions, there was a 37 percent real decline in real estate partnership sales between 1985 and 1988.

Table 10.7 reports estimates of the user cost of rental housing at several dates during the last decade. Assuming that the marginal supplier of rental units was an individual in the top marginal tax bracket, the rental user cost rose from .137 to .149, or 9 percent, between 1986 and 1988. The increase would have been larger if the real interest rate had not declined during this period. The change in user costs in the early 1980s is smaller. If the nominal interest rate and expected inflation rate had been at their 1980 levels in 1982, rental user costs would have declined from .096 (assuming a landlord tax rate of 50 percent in 1980) to .089, or by 7.3 percent. The increase in real interest rates between 1980 and 1982, however, counteracted this effect, so the reported user costs in table 10.7 show virtually no change.<sup>13</sup>

The results for rental user costs during the late 1980s are sensitive to different assumptions about the "marginal investors" in rental properties. If corporations are the marginal suppliers of rental housing, for example, then the adverse effects of the 1986 Tax Reform Act on real rents would be much smaller. Corporate investors face smaller reductions in marginal tax rates and are less affected by passive loss limits, than are individual investors.

It is essential to recognize the partial-equilibrium nature of the foregoing calculations. The net incentive for investing in housing capitals depends not only on the tax treatment of housing, but on the *relative* tax burdens on housing and other assets. Housing had historically been a lightly taxed asset, and the

<sup>&</sup>quot;This entry is notable because it does *not* assume the highest possible marginal tax rate for the rental landlord; it assumes a 50 percent rather than a 70 percent marginal rate. At the 70 percent rate, this value would be .117.

<sup>13.</sup> If the marginal investor in rental property in 1980 was in the 70 percent tax bracket, then the net change from 1980 to 1982 is an *increase* in rental user costs, since the reduction in the landlord's tax rate outweighs the increasingly generous depreciation provisions.

1986 reform raised the tax burden on corporate assets. Thus the present policy regime provides substantial net subsidies to housing.

## 10.4 Policies Affecting Financial Markets

A second set of policies that affect housing markets operates through credit markets. There are three important sets of policies in this regard. The first are mortgage guarantees, which are designed to provide housing assistance to households purchasing particular types of homes. The second are subsidies to the institutions that facilitate the secondary market for mortgages, enabling capital to flow to housing lenders. The third set of subsidies are benefits, now largely of historical interest, to the lenders such as thrift institutions who typically provided mortgage finance. This section considers each type of subsidy in turn.

#### 10.4.1 Targeted Mortgage Assistance

There are three significant federal mortgage subsidy programs, operated by the Federal Housing Administration (FHA), the Veterans Administration (VA), and the Farmers Home Administration. The FHA is the largest program. It began in 1934, with the passage of the National Housing Act, in an effort to reduce volatility in the housing industry and to improve housing affordability. The FHA provided insurance on loans with higher loan-to-value ratios than conventional lenders, and offered longer-term loans than had been commonly available. Before the FHA, the primary mortgage on most homes had a maturity of five years or less (Wiedemer 1990, 124); the FHA popularized twenty-year level-payment mortgages.

The principal benefit of an FHA-insured mortgage, from the home buyer's perspective, is that it provides mortgage credit on more favorable terms than the private market would provide. In some cases, the FHA insurance may enable borrowers who would otherwise have been denied mortgage credit to obtain a loan. FHA provisions also enable many households to borrow with a smaller down payment than lenders typically require.

There are limits on the dollar value of the mortgages that can receive FHA assistance. In 1988, the maximum permissible loan was \$101,250, compared with a median new home price of \$112,500. The upper bound on the loan value as a share of the purchase price (including some costs of the housing transaction) for existing houses is 97 percent of the first \$25,000, plus 95 percent of the value above \$25,000. For new houses, the limit is 90 percent of the purchase price. Particularly for existing homes, the limits are higher than many commercial lenders would permit, thereby enhancing access to home ownership. Since 1982, there have been no limits on the interest rates that lenders can charge on FHA loans.

The program described above is the FHA section 203(b) program, which is the largest FHA initiative to provide mortgage financing. The VA and Farmers

Table 10.8	volume of Guai	anteed Mortgage Or	riginations, 1978–89 (%)
Year	FHA Mortgages	VA Mortgages	Conventional Mortgages
1978	7.9	8.7	83.5
1979	11.1	10.1	78.8
1980	11.2	9.0	79.8
1981	10.7	7.7	81.6
1982	11.8	7.9	80.2
1983	14.2	9.4	76.4
1984	8.1	5.9	85.9
1985	11.7	6.4	81.9
1986	13.6	6.8	79.6
1987	11.4	4.9	83.7
1988	8.5	3.4	88.1
1989	9.8	2.9	87.1

Source: National Association of Home Builders, The Current Housing Situation, December 1990.

Home Administration programs are similar in character to those at the FHA. In the last decade, FHA has also broadened its activities to allow graduated payment mortgages and a variety of other new mortgage designs, all directed at encouraging broader participation in owner-occupied housing.

In 1989, the FHA, Farmers Home Administration, and VA insured approximately one-quarter of all new mortgages. <sup>14</sup> With the exception of just under 10 percent of home buyers who pay cash for their houses, the remaining mortgages are conventional loans. Table 10.8 reports the relative importance of FHA and VA mortgages as a share of all new mortgage *dollar* originations. These loans accounted for only 13 percent of the total in 1989; they are a smaller share of value than number of loans because they tend to be smaller loans than conventional financings. The table also shows that federally insured loans have become a less important part of the total mortgage pool over time. In 1980, these loans were more than 20 percent of all new mortgage debt. The decline is apparently the result of house prices rising more rapidly than FHA loan limits, making the houses that can be financed by FHA a smaller share of the total stock. This is consistent with the stated goals of housing policy in the 1980s, discussed for example in Struyk, Mayer, and Tuccillo (1983), of reducing transfer programs to the middle class.

## 10.4.2 Mortgage Market Support

The second component of federal support for the mortgage market operates through the securitization process, the process by which individual mortgages are repackaged into "mortgage-backed securities" and then sold to secondary

<sup>14.</sup> Data are drawn from the National Association of Homebuilders, *The Current Housing Situation*, December 1990.

market investors. Until the early 1970s, regulated thrift institutions were the principal source of funds for home mortgages lending. These financial intermediaries benefited from regulatory limits on the interest rates that could be paid at their competitor commercial banks. With a virtually assured supply of saving at low interest rates, thrifts were able to supply mortgage loans at reasonable rates. The federal insurance on deposits at thrifts was a partial compensation to depositors for the regulated rates of return. Even before the 1970s, FHA and VA loans had been sold to secondary market buyers. This was possible because these loans were relatively homogeneous, and because the presence of federal guarantees made them riskless investments, appealing to a wide range of investors.

The emergence of an active secondary market for non-FHA mortgages was the result of initiatives by the Federal National Mortgage Association (FNMA) in the early 1970s. The FNMA and Federal Home Loan Mortgage Corporation (FHLMC, a new institution created in 1970) together established industry standards with respect to documentation and credit qualification, which ultimately permitted rapid expansion of the secondary mortgage market. Neither of these organizations have federal guarantees behind their borrowing; they are quasi-governmental agencies, and while many investors expect that default is impossible because the federal government would intervene to prevent it, this is not a legal promise. Today conventional mortgages are repackaged by FNMA, FHLMC, and a variety of other financial intermediaries. Many investors who would not hold particular mortgages are active participants in the secondary mortgage markets, and funnel capital to the housing sector.

Assessing the effect of public policy on the securitization process, and ultimately on housing markets, is difficult. Hendershott and Van Order (1989) analyze the effect of integration of the non-FHA mortgage markets with broader capital markets. They conclude that the rise of pass-through securities backed by mortgages has reduced the volatility of new residential construction, but not altered the *average* level of new construction very much.

#### 10.4.3 Federal Subsidies to the Thrift Industry

A final set of institutions, which have had important influence historically but are of shrinking importance prospectively, are government subsidies to savings and loans. These financial intermediaries benefited from federal deposit guarantees and were able to attract funds at lower rates than the riskiness of their investments should have allowed. Until 1980, federal regulation of interest rates that could be paid by the important competitors to these institutions ensured their supply of funds. Financial deregulation, combined with the high nominal interest rates of the early 1980s and the depressed real estate market in some regions in the late 1980s, removed thrifts as central actors in the housing finance process. By the late 1980s, however, the federal Resolution Trust

Corporation was closing thrifts at which the value of deposit insurance was especially large (i.e., those with very weak financial positions), and the share of mortgage financing accounted for by thrift institutions was shrinking. Nevertheless, the system of regulated deposit rates and deposit insurance undoubtedly contributed to some increase in the U.S. residential capital stock.

## 10.5 Targeted Housing Subsidies: Public Housing

A final dimension of public policy toward housing is the montage of income support and in-kind transfer programs designed to provide housing to low-income households. There are two types of public housing programs: those that target construction of housing units for low-income households (project-based aid), and those that provide support to households and allow them to choose their own units (household-based aid). During the last decade, federal policy has shifted toward providing household-based support.

The two most important project-based aid programs are the public housing program and the section 8 new construction program. Public housing funds support the construction of multifamily dwellings targeted at the low-income population. These projects are usually managed by the local governments, which operate the units when they are completed. These programs were sharply curtailed in the early 1980s since they did not involve market-based determination of resource allocation, a principle that the Reagan administration sought to introduce to all aspects of transfer policy. These reductions continued a trend away from project aid that began a decade earlier, with concern that public housing projects were of low quality and had some proclivity toward becoming ghettos.

Table 10.9 presents information on the importance of public housing programs at the height of their utilization, at the beginning of the 1980s. Most public housing was built in urban areas, so the table focuses on the share of the housing stock in major U.S. cities that was accounted for by public units. In many of the largest metropolitan areas, public housing accounted for more than 5 percent of all rental units. The share of public housing has declined during the subsequent decade.

<b>Table 10.9</b>	Share of Public Housing in Rental Housing Stock, U.S. Cities,
	1980 (%)

New York	5.6	Washington, DC	5.9
Chicago	5.4	San Francisco	2.4
Los Angeles	1.1	Cleveland	8.6
Philadelphia	9.0	Boston	8.0
Detroit	5.0	St. Louis	5.9
Houston	0.9	Seattle	5.4
Baltimore	10.3	Denver	4.5
Indianapolis	2.3	Atlanta	14.6

Source: Struyk 1980, table 2.

tnousar	tnousands)			
	Public Housing Starts	Total starts (public + private)		
1977	14.6	2001.7		
1978	15.8	2036.1		
1979	14.8	1760.0		
1980	20.4	1312.6		
1981	16.1	1100.3		
1982	9.8	1072.0		
1983	9.4	1712.5		
1984	6.3	1755.8		
1985	3.1	1745.0		
1986	1.7	1807.1		
1987	2.2	1622.7		

Table 10.10 Public Housing Starts and Other Housing Starts, 1977–88 (in thousands)

Source: U.S. Department of Commerce, Construction Review, various issues.

Table 10.10 shows the trajectory of public housing starts during the last decade. In the late 1970s and early 1980s, public housing starts averaged between 1 and 2 percent of all new housing starts in the United States. By the second half of the 1980s, however, they had declined to a trivial flow of new construction.

The program that expanded as public housing contracted was the section 8 new construction program. In this program, a private developer who is undertaking new construction receives a federal commitment that, in return for housing low-income households, the government will insure rental payments for some period (typically twenty years). The low-income recipients of section 8 assistance may not spend more than 30 percent of their income on housing, and the federal government pays the difference between that amount and each unit's contract rent. Developers building low-income units can also avail themselves of favorable financing opportunities, for example, by financing their project with federally insured Government National Mortgage Associations (GNMA) loans. A developer who plans to significantly renovate an existing property can qualify for the same guarantee.

The second category of public housing aid programs, household-based programs, provide support for particular individuals or households and typically supplement their rental payments to avoid excessively high shares of income being spent on housing. The single most important program in this dimension is section 8 housing assistance. After a household qualifies for a section 8 certificate, it is free to select any rental unit that rents for less than the "fair market rent" specified by the section 8 program. The federal government then pays the difference between rental costs and the household's estimated rent-paying capacity. In a variation on this program, the household receives a housing voucher and faces no limits on subsequent outlays. The voucher is treated just like cash in purchasing housing services, so the household could choose to

spend more than fair market rent but would bear the full marginal cost of such outlays.

To illustrate the changing composition of public housing programs in the United States, it is useful to compare the programs in 1978 and 1988. Table 10.11 provides data on the basic structure of housing assistance. In 1977, of 3.163 million households receiving assistance, 2.092 million were renters. Within this group, 1.825 million were receiving benefits that resulted from new federally supported construction (public housing), while only 268,000 received support for finding their own units in the standard market.

By 1988, the pattern had shifted radically. Of 4.296 million renter households receiving assistance, nearly one-third were receiving assistance to acquire housing units in the open market. While the number of assisted renter households rose sharply during the decade, the number of assisted homeowners remained stable at 1.082 million in 1978, and 1.059 million in 1988.

Total federal outlays for housing programs are noted in table 10.12, which shows the decline in federal commitment to this area. The table reports *budget authority*, which includes all projected outlays in multiyear building commitments. One important feature of U.S. housing policy during the 1980s has been a shift from long-term federal commitments to shorter projects, leading to smaller budget authorization for a given number of households served. The result is that average annual outlays throughout most of the 1980s remained higher than in previous decades, in spite of falling budget authority.

The 1980s witnessed an important refocusing of U.S. housing assistance policy. Programs were targeted more precisely toward low-income households, to the exclusion of lower-middle-income households who received benefits in

70-11-10-11	II	
Table 10.11	Households Receiving Federal Housing Aid, 1977–88 (in th	iousanus)

	Net New Commitments			s Receiving stance	
	Renters	Owners	Renters	Owners	
1977	375.2	112.2	2092	1071	
1978	341.0	112.2	2400	1082	
1979	333.8	107.9	2654	1095	
1980	213.4	140.6	2895	1112	
1981	178.4	74.6	3012	1127	
1982	86.0	66.7	3210	1201	
1983	77.9	54.6	3443	1226	
1984	115.4	44.4	3700	1219	
1985	128.4	45.4	3887	1193	
1986	119.9	25.5	3998	1176	
1987	110.0	24.1	4175	1126	
1988	107.7	26.6	4296	1059	

Source: U.S. House Ways and Means Committee, Background Material and Data on Programs within the Jurisdiction of the House Ways and Means Committee (1989), 1157-58.

Table 10.12	Federal Appropriations for Housing Assistance, 1977–88 (in millions of 1987 dollars)					
	1977	50.3	1983	11.5		
	1978	52.9	1984	12.7		
	1979	38.0	1985	12.0		
	1980	38.2	1986	10.3		
	1981	32.9	1987	9.0		
	1982	17.4	1988	8.8		

Source: U.S. House Ways and Means Committee, Background Material and Data on Programs within the Jurisdiction of the House Ways and Means Committee (1989), 1157-58.

prior decades. The strategy of public provision of housing services, which had been the basis for housing policy in the 1960s and 1970s, was largely abandoned and replaced by a variety of transfer programs that take advantage of market mechanisms to deliver housing assistance. Government programs remain an important influence on the quality and affordability of housing for low-income households.

#### 10.6 Conclusions

Public policy toward housing has undergone radical changes in the United States during the last decade. Until the early 1980s, the tax system treated housing more generously than other assets, credit institutions that supplied mortgage financing received public subsidies not available to other financial institutions, and all levels of government were active participants in building and subsidizing housing units for low-income households. The net effect of these subsidies was a strong incentive for housing capital accumulation. With these policies in place, the home-ownership rate in the United States rose for nearly four decades after World War II, and housing capital became a larger share of the nation's tangible asset stock.

A variety of policy changes during the 1980s weakened the policy bias toward housing. The net effect of the tax reforms in 1981 and 1986 was a reduction in the tax incentives for rental housing construction, and some diminution of owner-occupied housing's tax-favored status in comparison to other investments. Deregulation of financial institutions, notably removal of interest-rate restrictions on competitors to saving and loan institutions and evolving changes in deposit insurance, has reduced the supply of saving to housing-oriented institutions and integrated the housing finance market with other parts of the capital market. At the same time, federal budgetary pressures led to cutbacks in direct federal housing programs, with limited prospects for future expansion. These changes have reduced the prohousing bias of U.S. public housing policy, although they have not eliminated it.

## References

- Gordon, Roger H., James R. Hines, and Lawrence H. Summers. 1987. Notes on the Tax Treatment of Structures. In M. Feldstein, ed., The Effects of Taxation on Capital Formation. Chicago: University of Chicago Press.
- Gravelle, Jane G. 1985. U.S. Tax Policy and Rental Housing: An Economic Analysis. Congressional Research Service, working paper.
- Hendershott, Patric H. 1987. Tax Changes and Capital Allocation in the 1980s. In M. Feldstein, ed., *The Effects of Taxation on Capital Formation*. Chicago: University of Chicago Press.
- Hendershott, Patric H., and Robert Van Order. 1989. Integration of Mortgage and Capital Markets and the Accumulation of Residential Capital. Regional Science and Urban Economics 19:188–210.
- Olsen, Edgar O. 1987. The Demand and Supply of Housing Service: A Critical Survey of the Empirical Literature. In Edwin S. Mills, ed., *Handbook of Regional and Urban Economics*, vol. 2. Amsterdam: North-Holland.
- Poterba, James M. 1984. Tax Subsidies to Owner-Occupied Housing: An Asset-Market Approach. *Quarterly Journal of Economics* 99: 729–52.
- . 1987. Tax Reform and Residential Investment Incentives. In *Proceedings of the National Tax Association-Tax Institute of America*, 112–19. May.
- ——. 1989. Lifetime Incidence and the Distributional Burden of Excise Taxes. American Economic Review 79 (May): 325–30.
- Rosen, Harvey S. 1986. Housing Subsidies: Effects on Housing Decisions, Efficiency, and Equity. In M. Feldstein and A. Auerbach, eds., *Handbook of Public Economics*, 1:375–420. (Amsterdam: North-Holland).
- Scholes, Myron, Eric Terry, and Mark Wolfson. 1989. Tax Policy in a Complex and Dynamic Economic Environment: Challenges and Opportunities. Mimeo. Stanford University.
- Struyk, Raymond J. 1980. A New System for Public Housing: Salvaging a National Resource. Washington, DC: Urban Institute Press.
- Struyk, Raymond J., Neil Mayer, and John Tucillo. 1983. Rental Housing in the 1980s. Washington, DC: Urban Institute.
- Titman, Sheridan. 1982. The Effects of Anticipated Inflation on Housing Market Equilibrium. *Journal of Finance* 37:827-42.
- U.S. Treasury. Internal Revenue Service. 1980. Statistics of Income: Individual Income Tax Returns, 1980. Washington, DC: U.S. Government Printing Office.
- ——. 1984. Statistics of Income: Individual Income Tax Returns, 1984. Washington, DC: U.S. Government Printing Office.
- Venti, Steven, and David Wise. 1989. Aging, Moving, and Housing Wealth. In David Wise, ed., *The Economics of Aging*. Chicago: University of Chicago Press.
- Wiedemer, John P. 1990. *Real Estate Finance*. 6th edition. Englewood Cliffs, NJ: Prentice Hall.