

INFLATION IN THE HOUSING MARKET:
THE HOUSING AFFORDABILITY EXPERIENCE OF THE 1970'S

by

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ABSTRACT

The sustained increase in house prices, mortgage interest rates, and other costs of owning a home during the 1970's put housing affordability into the forefront of public policy concerns. But while inflation was driving up homeownership costs, people's willingness to purchase bigger and better homes seemed stronger than ever.

This dissertation is an indepth look at the housing cost issue over the 1970's: what it is, why it happened, who is most affected, and what can be done about it.

Inflation changes the costs of owning a home in two distinct ways. By raising house prices, mortgage interest rates, and other costs of owning a home, it increases the cash costs of homeownership. At the same time, inflation increases the benefits of owning: rapid appreciation in home values increase the homeowner's equity, while greater interest and property tax payments, and favorable capital gain provisions produce increased tax savings.

By computing homeownership costs for individual households and tracking them over time with the use of a panel data set, it was determined that the net effect of inflation in the housing market depends on the characteristics and situation of individual households. Upper-income households, who are in high tax brackets, had relatively lower homeownership costs than lower-income households. Long-term owners -- who during the 1970's had older, lower-rate mortgages -- still benefitted from rapidly appreciating house values, and therefore had comparatively lower housing costs than households who purchased late in the decade. These changes in homeownership costs were

reflected in their housing choices. Upper-income households increased their rate of ownership, and generally bought bigger and better homes over the decade. The homeownership rate for lower-income households decreased. Newly formed households increasingly chose to rent their first home, while longer-term owners could afford to buy more expensive homes.

The role of federal housing policy in a period of high and uncertain inflation should be one of diminishing the detrimental effects of inflation. Since the housing cost concern of the 1970's was principally a financial phenomenon that had little to do with traditional housing supply or demand issues, policy actions should appropriately be aimed at the underlying financial causes. The characteristics of commonly used mortgage instruments, and the structure of homeownership tax policy are the two areas that merit the most attention.

Thesis Supervisor: Dr. Bernard J. Frieden
Professor of City Planning

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1. Introduction and Overview

By U.S. standards, the 1970's were a decade of high inflation. The level of prices increased almost eight percent annually over the decade according to the U.S. Department of Labor's Consumer Price Index (CPI). This compares with an average annual increase of three percent during the 1960's and two percent during the 1950's [1].

In the face of these rapid increases in overall prices, the prices of some goods and services rose at an even faster pace. One such example is the cost of owning a home. According to the CPI, increases in the costs of homeownership averaged nine and one-half percent annually between 1970 and 1980; 15 percent more than the overall index of prices over this period.

This rapid increase in housing costs has been a major policy concern since the mid-1970's. Yet, despite much attention and a

1. There is a substantial body of literature which contends that the CPI overstated the actual level of price increases during the 1970's. Quite ironically, homeownership costs are pointed to as the source of this bias. The CPI estimates ownership costs for the household that purchased that year, when in actuality only a small percentage of households purchase a home in a given year. Other households can be assumed to have lower costs. The personal consumption expenditure (PCE) deflator, which is derived from the GNP accounts, is felt to be a more accurate measure of the actual price changes facing consumers. (Gordon, 1981.) I have used the CPI throughout this dissertation for a very simple reason: it provides detail in the components of homeownership costs, while the PCE deflator has a single housing component measure. Since the CPI is used here more to measure relative changes than absolute levels, the bias of the CPI is not critical.

host of policies and programs, the concern over high housing costs has maintained its remarkable resiliency for almost a decade now.

This thesis is intended as an in-depth look at the housing cost problem; what it is, why it has happened, who is most affected, and what can be done about it. The approach that will be used is one of measuring the housing costs of individual households; breaking these housing costs down into specific components, seeing how they change over time, and finally, assessing how households are changing their housing choices in response to changing housing costs.

This introductory Chapter provides background to the housing cost issue. Trends in housing costs are reviewed, followed by a discussion of the central housing cost dilemma: why housing costs and housing demand simultaneously increased over the latter half of the 1970's. Previous research offers several explanations to the housing cost phenomenon, which are reviewed and evaluated in the third section. This is followed by a literature review of the residential choice process, from the perspective of several disciplines. The scope and outline of the thesis are presented in the concluding section.

Trends in Housing Prices and Carrying Costs -- 1968-1981

The trend in home price increases can be seen in the average

sales prices for existing and newly constructed homes, both of which substantially surpassed the general rate of inflation over this period. Since part of the price increases were due to improvements in quality rather than inflation, the Commerce Department's "constant quality" price index for newly constructed homes is also included in Table 1.1. This index estimates the sales price of newly constructed homes that are equivalent in quality to a typical newly constructed home from a previous reference year. The figures in this column are estimates of what the typical house constructed in 1977 would sell for in other years. Comparing the estimated sales price of constant quality units with the average sales price of newly constructed units allows the separation of quality changes from price changes in newly constructed units. Over this thirteen year period, the quality of newly constructed units has remained fairly constant. However, the quality of newly constructed units improved from 1968 to 1979, while the years 1980 to 1981 totally negated this trend.

Increases in new home prices are partly due to changes in the costs of construction. Land acquisition and site preparation costs, along with construction financing accounted for much larger proportions of new home prices in 1980 than they did in 1970. (President's Commission on Housing, 1982; 181.) Materials, labor costs, and overhead and profit accounted for smaller proportions. (See Table 1.2.)

Table 1.1

Trends in Single-Family House Prices--1968-1981

	Average Sales Price of <u>Existing Homes(a)</u>	Average Sales Price of <u>New Homes(b)</u>	Average Sales Price of New Homes Controlled for the Kinds of Homes <u>Actually Sold in 1977(b)</u>
1968	\$22,300	\$26,600	\$27,100
1970	25,700	26,600	30,000
1975	39,000	42,600	44,300
1976	42,200	48,000	48,100
1977	47,900	54,200	54,200
1978	55,500	62,500	62,100
1979	64,200	71,800	70,900
1980	72,800	76,400	78,700
1981	78,300	83,000	85,300
Percentage Change			
1968-1981	+251	+212	+215
Precentage Change Net of Inflation			
1968-1981(c)	+34	+19	+20

Sources:

(a) National Association of Realtors, Economics and Research Division, Existing Home Sales--1981, Chicago, Ill.: National Association of Realtors, 1982, p.42.

(b) U.S. Department of Commerce, Bureau of the Census, "Construction Reports: Price Index of New One-Family Houses Sold", Series C27, Report No. C27-82-Q1, First Quarter, 1982, p.3.

(c) Calculated by dividing total change by change in CPI--all items over same period.

Table 1.2

Distribution of Single-Family Home Construction Costs--1970-1980

	<u>Percent Distribution</u>		<u>Change in Distribution of Total Cost</u>	<u>Percent Change in Cost (net of inflation)</u>
	<u>1969</u>	<u>1977</u>		
Land	19	24	+5%	+64
Building materials	37	34	-3%	+20
On-site labor	19	16	-3%	+8
Financing	7	12	+5%	+127
Overhead and profit	18	14	-4%	+2

Source: Merrill Lynch, Pierce, Fenner and Smith, "Housing Industry", A Merrill Lynch Basic Report, January, 1982, p. 28, as reproduced in The President's Commission on Housing, (1982; 181).

Not only has the cost of buying a home increased recently, but the cost of keeping that home has done likewise. Increases in fuel and utility costs have paced the increases in monthly housing costs; property taxes and mortgage interest rates have not increased as fast as the overall rate of inflation. However, virtually half of the increases in mortgage interest rates over the 1968 to 1981 period have come since 1978; drastically increasing monthly housing costs for recent buyers.

These recent increases in the costs of homeownership have provoked concern over whether households currently are finding housing less affordable. (Frieden and Solomon, 1977; and

Table 1.3

Consumer Price Indices of Housing Cost Components--1968-1981
(1967=100)

	<u>Mortgage Interest Rates</u>	<u>Property Taxes</u>	<u>Maintenance and Repairs</u>	<u>Fuels and Other Utilities</u>
1968	106.7	105.6	106.1	101.3
1970	132.1	121.0	124.0	107.6
1975	142.1	158.8	187.6	167.8
1980	196.1	189.7	285.7	278.6
1981	227.9	202.7	314.4	319.2
Percentage Change 1968-1981	+114	+92	+196	+215
Percentage Change Net of Inflation 1968-1981	-18	-27	+13	+21

Source:

U.S. Bureau of Labor Statistics, Monthly Labor Review, various issues.

Congressional Budget Office, 1977.) Using such traditional measures as the ratio of out-of-pocket housing costs to household income, and household income to home purchase price, it is clear that the burden of housing costs increased substantially over the 1970's. For example, over one-fourth of homeowners in 1980 spent at least 25 percent of their income on housing costs. As recently as 1975, only one-fifth of homeowners spent this much on housing. Increased housing burdens are even more pronounced for

renters. In 1970, just under 40 percent of renters spent 25 percent or more of their income on housing. By 1980, this figure had ballooned to well over one-half (53.4 percent). (Annual Housing Survey, 1975 and 1980; Part A, Table A-2.)

Households are also buying homes that cost more in relation to their income. A general rule-of-thumb is that the purchase price of a home should be no more than two to two-and-one-half times a household's annual income. (Feins and Lane, 1981; 10.) In 1970, the typical homeowner was living in a home valued at 1.7 times the household income, with 13 percent living in a home valued at least four times their income. By 1980, the typical household was living in a home valued at two-and-one-half times their annual income, with over a quarter of all households living in homes valued in excess of four times their income. (Annual Housing Survey, 1980; Part A, Table A-2.)

These increases in housing costs have not been assumed equally by all households. Low-income households are much more likely to spend a higher proportion of their income on housing than those with high incomes. As shown in Table 1.4, high-income owners and renters are overwhelmingly concentrated in the low burden categories, with just the reverse true for low-income households. This same pattern holds for the relationship of house value to household income.

Higher housing costs not only cause households to spend a higher portion of their income on housing. They also can

Table 1.4

Housing Cost Burden for Owners and Renters
by Household Income -- 1980
(in percentages)

<u>Housing Burden</u>	<u>Owners</u>			<u>Renters</u>		
	<u>less than \$10,000</u>	<u>\$35,000 or more</u>	<u>all owners</u>	<u>less than \$10,000</u>	<u>\$35,000 or more</u>	<u>all renters</u>
0-14%	14.1	70.0	41.6	2.7	80.4	16.1
15-24%	26.0	24.9	31.7	14.8	18.0	31.0
25-34%	18.6	4.0	13.8	18.8	1.5	19.4
35-49%	16.7	0.9	7.0	22.8	0.1	13.8
50% or +	24.6	0.1	5.8	41.0	0.0	19.7

Value Income
Ratio

below 1.5	4.1	38.6	18.5
1.5 to 1.9	3.1	24.9	16.0
2.0 to 2.9	9.5	23.7	26.1
3.0 to 3.9	10.6	8.4	13.8
4.0 or +	72.5	4.3	25.5

Source:

Annual Housing Survey -- 1980, Part C -- Financial Characteristics of the Housing Inventory, Table A-1.

influence choice of tenure. The homeownership rate in the U.S. grew steadily through the 1970's, from 62.9 percent of all households in 1970 to 65.6 percent in 1980 in spite of higher homeownership costs. But it grew at a faster rate for some groups than for others, and for some it even fell. As shown in Table 1.5, groups for which the homeownership rate declined were low-income households and families headed by single parents. Groups that substantially increased their homeownership rate were high-income households, households headed by married couples, and families with young children. There are indications, therefore,

that the inflated housing costs of the 1970's not only caused some households to devote a larger portion of their income to cover housing costs, but that these higher costs affected their choice of tenure.

Table 1.5

Comparison of Homeownership Rates by Household Type
1970 and 1980

	<u>Homeownership Rate</u>	
	<u>1970</u>	<u>1980</u>
All Households	62.9	65.6
Household Income*		
0-50% of U.S. median	50.0	48.8
51-100% of median	57.7	60.6
101-150% of median	72.6	77.4
151% of median or more	81.2	89.2
Household Composition		
two or more person households	67.2	71.4
married couples	70.7	79.3
other head	49.5	47.0
single person households	42.7	44.8
Presence of Children		
no children under 18 years of age	59.7	62.6
children under 6 only	46.7	55.9
children 6 to 17 only	75.4	77.0

*(median income limits are approximations)

Source:

Annual Housing Survey -- 1980, Part A -- United States and Regions, Table A-1.

The Paradox of Increased Housing Costs

There is an inconsistency between the rise in the costs of homeownership and the reaction by households. As the price of a good rises relative to other goods, economic theory indicates that demand for that good will fall -- lowering its price -- while the demand for lower-priced substitutes will increase, in turn driving up the price for these substitutes.

These results have not occurred. As can be seen in Table 1.6, the cost of rental housing has increased not only at a much slower pace than owner-occupied housing, it has lagged the

Table 1.6

Consumer Price Index for Homeownership and Renting--1968-1980
(1967=100)

	<u>All Items</u>	<u>Homeownership</u>	<u>Rental</u>
1968	104.2	105.7	102.4
1970	116.3	128.5	110.1
1975	161.2	181.7	137.3
1980	246.8	314.0	191.6
1981	272.3	352.7	208.2
Percentage Change Net of Inflation 1968-1981	---	+28	-22

Source:

Statistical Abstract of the U.S., various years.

overall rate of inflation at about the same level that homeownership costs have exceeded it.

Secondly, housing demand doesn't appear to have fallen in response to increased costs. Three measures of households' continued desire to own their own homes -- the volume of single-family units constructed, the quality of units constructed, and the proportion of households owning homes -- all point to stable if not increased demand for homeownership over this period of rising costs.

The level of new construction for single-family homes has remained high over the 1970's; construction activity ranged from a low of just over 800,000 single-family units in 1970 to a high of 1,369,000 units in 1978. However, periods of particularly high inflation -- 1974-1975 and 1979-1981 -- showed some decline in housing completions. (See Table 1.7.)

Through 1979, the quality of newly constructed single-family houses improved in spite of rising housing costs. As was shown in Table 1.1, the average price of houses actually sold increased more rapidly than the price of constant quality houses between 1968 and 1979. Net of general price increases, constant quality houses increased in price 25 percent while houses actually sold increased 29 percent, indicating that real price increases for newly constructed houses over this period were 14 percent quality improvements and 86 percent inflation.

Part of the quality improvements were reflected in increased

size of houses. Table 1.7 provides data on the average size of newly constructed single-family houses, indicating that the average new house increased in size by over 11 percent between 1968 and 1981. This difference is even more meaningful considering that the size of the average household decreased from 3.14 to 2.75 or 12 percent over this same period. (Statistical Abstract, 1981; Table 59.)

Table 1.7

Indicators of Housing Demand 1968-1981

	Single-Family Housing Units Completed (in 1000's) (a)	Average Size of Newly Constructed Single-Family Homes (in square feet) (b)
1968	858.6	1580
1970	801.8	1500
1973	1197.2	1660
1975	874.8	1654
1978	1369.0	1755
1980	956.7	1740
1981	818.5	1720

Sources:

(a) U.S. Department of Commerce, Bureau of the Census, and U.S. Department of Housing and Urban Development "Construction Reports: Housing Completions", Series C22, Report Nos. C22-82-5, (May, 1982), p.3, and C22-76-1 (January, 1976), p.5.

(b) U.S. Department of Commerce, Bureau of the Census, and U.S. Department of Housing and Urban Development "Construction Reports: Characteristics of New One-Family Homes", Series C25, Report Nos. C25-70-13 and C25-80-13.

Finally, the homeownership rate has continued to grow in spite of growing ownership costs. It increased every year, from

62.9 percent in 1970 to 65.6 percent in 1980 before experiencing a minor drop to 65.4 percent in 1981. There are two factors that help explain the growing rate of homeownership in the face of rising housing costs: the popularity of mobile homes during the 1970's, and the increased use of creative financing techniques by the end of the decade.

The popularity of mobile homes as a low-cost option for homeownership grew during the 1970's, and by 1973 mobile home placements were at a level of 50 percent of the number of traditional single-family homes constructed. Mobile home placements quickly tailed off through the mid-1970's, but began to pick up again by the end of the decade. By 1980, they accounted for greater than 25 percent of the number of traditional single-family homes constructed. (Statistical Abstract of the U.S., various years.)

Purchasers of mobile homes realized significant savings over conventional homes. Mobile home prices -- excluding site costs -- averaged about one-fourth the price of newly constructed single-family homes over the last half of the decade. (Statistical Abstract of the U.S., various years.)

Creative financing techniques also propped up the rate of homeownership. Many households that wouldn't have been able to purchase a home with the high interest rates charged by financial institutions in the late 1970's and early 1980's were able to do so with creative financing. Creative financing circumvented

financial institutions, usually by having the seller provide part of the financing. One technique was to have the buyer assume the seller's lower-rate mortgage, with the seller holding a large portion of the difference between the sales price and the amount left on the original mortgage as an implicit second mortgage that would be repaid at lower than prevailing market interest rates. Another variation was to have the seller completely finance the sale with a short-term arrangement that had a final balloon payment. By the time the balloon payment was due, the buyer would have obtained conventional financing -- hopefully at lower interest rates than at the time of the sale.

Theories of Why Households' Desire for Homeownership Has Remained Strong in the Face of Higher Housing Costs

The recent rise in homeownership costs has been so spectacular, and so confusing as to its origins, that it has attracted considerable attention from researchers. The expansive literature on this topic usually touches on one or more of the following explanations: increases in construction costs; demographic pressures; investment motivation; and inflationary expectations.

(1) Increases in construction costs. All of the factors that go into building a new house have risen in price faster than the rate of inflation recently. Accordingly, housing costs more

simply because it is more expensive to build -- and the eventual buyer must bear the burden of these higher costs.

Land development costs have been the most closely studied component of construction costs. Increases in the price of land are widely attributed to excessively restrictive and expensive subdivision and zoning regulations enforced by localities. A survey of 87 communities by the General Accounting Office documented considerable variation in land development regulations, many of which added significantly to the cost of new homes. (GAO, 1978.) The GAO attributes this variation to the fact that there are no minimum acceptability standards for communities to use as a guide; forcing them to rely on experience or preferences.

Other researchers feel that stringent land development regulations have nothing to do with local health and safety, but are merely anti-poor or no-growth policies in disguise. Frieden (1979), in studying residential development in California in the latter 1970's, finds no connection between the major contemporary environmental issues and environmentalists' vociferous opposition to homebuilding. The result is not merely an increase in the prices of homes constructed, but also significant delays in construction time and fewer homes actually being built. A developer of a large planned community in Irvine, California in 1976 noted that "the homes ... took four years to plan and process through government, four months to build, and four hours

to sell. (Grebler and Mittelbach, 1979; 1-2.)

Increases in new construction costs, for whatever reason, are not a complete explanation of the paradox described earlier. These increases should only raise the prices of newly constructed homes, but the prices of existing homes have increased just as rapidly. Furthermore, this is an explanation of why housing prices have increased; it doesn't help to explain the paradox of why demand has remained strong in the face of these price increases.

(2) Demographic pressures. The post-war baby boom generation began reaching homebuying age in the 1970's. This can be seen by the dramatic increase in the number of households over this decade. According to the U.S. Census Bureau, almost 16 million more households were formed than were dissolved over this decade, representing a 25 percent increase in the number of households. Since the housing construction industry has had difficulty keeping pace with this rapid increase in the number of households, the resulting demand pressure on the housing market can be expected to bid up housing prices. The essence of the demographic theory of housing price inflation is a supply and demand mismatch; the huge growth of households in their homebuying years has caused the upward surge in house prices. Even though the higher prices may have priced much of the potential homebuying population out of the market, the much larger pool of households could still produce a greater absolute

number of homebuyers.

While the tremendous demographic changes in the 1970's obviously affected house prices, this theory is still an incomplete explanation of the increased price / increased demand phenomenon because it fails to explain the difference between the change in rental and homeownership costs. The growth in the number of households would put pressure on the rental as well as the ownership market; new households that couldn't afford to own or chose not to own would rent, thereby increasing demand (and prices) for rental units. However, as shown in Table 1.6, rental costs rose more slowly than the overall rate of inflation.

(3) Investment motive. In analyzing consumer housing preferences, housing is generally viewed as from its consumption aspects. As will be discussed later in this Chapter, households choose a unit that meets their space needs, that they find aesthetically appealing, located in a neighborhood with desirable characteristics, and with an acceptable level of public services. The investment aspects of housing are often overlooked. An owner-occupied home can also be viewed as a capital asset. It provides an annual income stream (the consumption elements described above, as well as federal tax savings from income deductions) and the potential for capital gains through appreciation.

This consideration of the investment returns from homeownership can revise the value of an owner-occupied home. It

has some consumption value and some investment value, and its market value is some combination of these two components. If for any reason the investment returns from housing become more important than the consumption benefits, homeownership costs could vary greatly from rental costs.

This theory, while providing a more complete explanation of what actually happened during the 1970's, still has some gaps. For one, it assumes fairly sophisticated investment motivation and calculations on the part of home purchasers. They not only have to understand the investment aspects of homeownership, but they have to estimate their magnitude, discount their value, and enter in a risk factor as to whether these government created benefits will still exist (and to what degree) when it comes time to collect.

Secondly, it does not explain why home prices have risen faster in some areas than in others. The investment motive should not have a geographical dimension, yet new home prices rose at a rate fifty percent higher in the West than in the Northeast between 1970 and 1980, and about one hundred percent higher over the last half of the decade. (Villani, 1982; 66.)

Finally, the investment motivation has always been present with homeownership, so this should not cause the recent changes in housing prices or homeownership costs. Granted, there have been some recent changes in the federal tax code -- for example the one-time capital gains exemption for homeowners age 55 and

older -- but this is hardly enough to grossly distort housing prices. However, the way that inflation interacts with housing costs, which will be discussed in detail in Chapter 2, dramatically alters the housing investment calculus.

(4) Inflationary expectations. As housing prices began to creep up during the early 1970's, households' purchasing power began to stagnate, and the general economic climate worsened, Katona and Strumpel (1978) found that households began to feel that they would be unable to improve their standard of living. Since progress could no longer be taken as inevitable, households were forced to reconsider their priorities, giving first priority to those things that were important but that they would be unable to achieve under the status quo. For many households, this first priority was homeownership. As inflation eroded the purchasing power of their savings and incomes, households felt it was necessary to make their major planned purchases -- like buying a home -- before it was too late. Households would delay other goals -- starting a family, saving, or making other consumer purchases -- because this might be their last chance to buy a home.

This theory, like the previous, provides a fairly complete explanation of the change in housing prices and costs during the 1970's. Households were willing to pay inflated prices because they felt the prices soon would be even more inflated. This is a version of the "greater fool" theory; there would be a greater

fool than themselves to buy their house at inflated prices when they wanted to sell. Herein lies the weakness of the theory; are households willing to make such a large investment -- one of the largest of their lives -- in something whose value is not intrinsic but rather based on the panic that it may not be available later? Such a mentality may produce a short-term aberration, but not a trend that could dominate housing markets across the U.S. for most of a decade.

How Households Make Their Housing Choices

These theories of why the desire for housing and homeownership have been so strong given the rapidly increasing housing costs contain implicit assumptions about concerns that are important to households in making their housing choices. This section provides a summary of available theory on the housing choice process.

Research into housing choice has shown that this decision is enormously complicated to understand. And the reason it is difficult for the researcher to understand is because it is difficult for the household to make. In choosing a home, the household is selecting much more than four walls and a roof. The household must make a complex series of trade-offs among the many components of the so-called "bundle of housing attributes" when selecting a place to live.

This multi-dimensionality of factors considered when choosing a place to live encompasses concerns covered by many academic disciplines. Sociologists concentrate on the social status implications of housing and tenure choice decisions. Social-psychologists study the ways in which housing decisions are symbolic of other needs of the household. Behavioral geographers concentrate on housing choice from its locational implications. Urban economists study housing decisions from the standpoint of a household's consumption and investment decisions. Finally, Marxist geographers and economists view housing decisions as inherent dictates of a capitalistic economic system.

Sociologists have long recognized the social status elements that influence a household's housing choice. Some have argued that households create a "stage" with their home; a facade that is designed to impress visitors and reflect the social standing of the occupants. Picture windows that face the street rather than a more scenic backyard are cited as one example of the household displaying its home to viewers. (Seeley et. al., 1963; 50.)

While some social theorists feel that the choice of a home is primarily an exercise in conspicuous consumption, other's feel that this choice is an attempt to be near people like themselves; households that share their values and tastes. Mobility therefore has more to do with escaping from neighbors of a dissimilar social character than of increasing social prestige

with one's new home. (Michelson, 1977; 17.)

This "push/pull" dichotomy is a dominant theme in the sociological literature on household mobility. Rossi, in his oft-cited study of residential mobility, Why Families Move, gave considerable credence to the "push" side of this debate by concluding that mobility is principally a process

by which families adjust their housing to the housing needs that are generated by the shifts in family composition that accompany life-cycle changes. (Rossi, 1980; 61.)

He also put demographic and family life-cycle concerns on an equal footing with status enhancement as an explanation for mobility. (Michelson, 1977; 16.)

The decision of whether to own or rent a home also has important sociological interpretations. Partly because homeownership is traditionally felt to be a key element in the "American Dream", and partly because homeowners are thought to be more responsible citizens, homeowners have typically been afforded greater social status than renters. (Agnew, 1982.) There are rational explanations for the greater status afforded homeowners; they have much lower rates of mobility than renters (on the order of one-fifth -- Fredland, 1974; 19), are more likely to be involved in civic affairs, and therefore have greater visibility in the community. Also, by the mere fact of their owning a home, they have tangible assets at their disposal that renters lack. Still, homeownership carries with it symbolic value beyond what rationally can be attributed to this form of

tenure; homeownership is commonly accepted as proof of sound character and at least middle-class status. (Rossi, 1980; 36.)

The social-psychological perspective of housing choice looks at the symbolic meaning that a house has for its occupants. Rainwater (1966) found that lower class households living in public housing projects seek housing as shelter not only from the elements, but also from a wide variety of perceived dangers in their slum environment.

Homeownership has a different symbolic value to working class and middle class households. Being a homeowner is commonly thought to bestow personal autonomy and a sense of self-sufficiency. On one level, it allows the occupants the freedom to create the living environment they desire, without having to convince a landlord that such changes are necessary. At a more subconscious level, homeownership gives its occupants a sense of control over their destiny. They can define the rights of access to their home. Some refer to this need to possess a defended space as an almost animal instinct innate in humans. (Duncan, 1982; 112.) By the same token, homeownership is thought to promote individualism and self-sufficiency. By being in control of their own private space, people are more likely to feel that they have the opportunity to make something of themselves; to achieve a kind of self-fulfillment. (Rakoff, 1977; 102.)

Behavioral geographers and urban planners emphasize the

locational dimensions of housing choice. Work by this group is principally concerned with land-use rather than housing, but the implications have relevance to housing choice.

The standard model of this process assumes that all households value proximity to the urban core, and that locational decisions are made by balancing the higher locational costs near the center city with more expensive travel costs from fringe areas (subject to the household's budget constraint). (Alonso, 1965.) Land-use patterns are produced as a result of households (and other forms of economic activity) bidding for locations by taking into consideration their desire for specific sites and the associated transport costs, in a utility maximizing fashion. This process is predicted to produce a Pareto optimal distribution of space to uses.

Recent refinements to location theory stress the household's desire for proximity to areas other than the central business district, such as one's place of employment (Kain, 1962); and the importance of household characteristics, such as income and household composition, in the location decision. (Wheaton, 1977.)

Urban economists have generally studied housing choice as part of a larger effort to understand the workings of urban housing markets. In their view, when the household makes a housing choice, it simultaneously chooses a diverse "bundle" of goods and services. Aside from traditionally considered

characteristics of the house (its size, layout, architectural design, and other amenities) and the lot that it sits on, other decisions that are intrinsically tied to the choice of a home are:

- (1) neighborhood characteristics, such as the socio-economic characteristics of one's neighborhoods, local shops and other amenities;
- (2) a package of local public services and a government jurisdiction;
- (3) a geographic location; and
- (4) for homeowners, an investment in a durable capital asset. (Rothenberg, 1979.)

The investment aspect of homeownership is one facet of the housing choice that merits special discussion. Although long recognized, the implications of this have received particular attention recently. For the most part, this attention is a product of the recent high level of inflation in the U.S. economy and the way in which inflation distorts the costs and benefits of homeownership. This phenomenon is the subject of Chapter 2.

But even abstracting from recent changes in its investment aspects, homeownership as a way of building wealth has important implications. A 1963 survey of household wealth found that owners' equity in their homes accounted for one-fourth of total household wealth. Though this form of wealth was widely diffused

throughout the population, it was the prevalent form for households with small or moderate amounts. (Projector and Weiss, 1966.)

The notion of using homeownership as a mechanism for financial reward seems to be peculiarly American. Not only does the U.S. have one of the highest rates of homeownership of any country, but the financial orientation of U.S. homeowners is surprisingly strong in contrast to homeowners in other countries. A 1975 study found that almost three-fourths of a sample of U.S. homeowners stated that profit was an important motivation for homeownership. Less than fifteen percent of a comparable sample of homeowners in England held profit in such high regard. (Agnew, 1978; 131.)

Housing choice, in the view of urban economists, is therefore a complicated balancing of these numerous housing dimensions, and deciding on a package that maximizes (or satisfices) the household's utility. The implicit costs of these various housing dimensions are the way that the market mediates these decisions. The household is thought to have some cost figure in mind, and then shops for the optimal configuration of housing attributes within this cost range. (Rothenberg, 1979; 11-13.) The household may alter its targets somewhat during this search process, by trading off (more or less) housing consumption for the consumption of other goods and services, or by investing in (more or less) housing as opposed to other investment

opportunities (eg. stocks, bonds, savings, other tangible assets).

The housing choice process is an alien concept under a Marxist economic perspective. In this view, household preferences are of no concern; housing patterns are determined inherently by the dictates of a capitalistic economic system.

There are two strains of Marxist views on this topic. The structuralist view follows Marx's observation that the mode of production creates the conditions of consumption. It is based on a critique of traditional land-use theory. Structuralist Marxist theory views the bidding for location by households as a somewhat less than competitive situation. Poorer households have almost no choice in location because they can be outbid by every other group. Since all households must procure space, these last bidders are faced with a monopolistic situation in determining what location rents they must pay. (Harvey, 1973.)

The non-structuralist Marxists observe that workers are sometimes able to participate in the accumulation of private property through homeownership. While this may appear paradoxical given the Marxist view of the concentration of the ownership of capital, it is permitted by the capitalist class because it serves larger goals of keeping worker's docile. This "incorporation" theory holds that homeownership by workers promotes social stability by developing the worker's allegiance to the concept of private property and respect for property

rights. In fact, one survey conducted in the U. S. and England in the mid 1970's found that over one-half of the homeowners agreed with the statement "the main purpose of government should be to protect the private property of its citizens", while less than one-sixth of the renters felt this way. (Agnew, 1978; 142.)

It may seem ironic that a ruling capitalist class permits homeownership when there are presumably other methods of exerting its control over the working class. However, these theorists are quick to point out that the worker really doesn't own the house for some time. In the meantime these mortgage payments are drawing money from workers and putting it back into production, and keeping the worker in a chronic debt position; a position that ensures subservience to the ruling classes. (Harvey, 1978.)

These multiple perspectives demonstrate the richness of our understanding of the many complex factors that go into a household's housing decision. Unfortunately, this considerable body of knowledge provides little in the way of understanding the odd workings of housing markets in the mid and late 1970's. The overwhelming majority of this body of theory concerns itself with what economists would call the consumption aspects of housing; benefits that derive directly or indirectly from the use of the house. Very little deals with the investment concerns of homeownership: the ways in which housing acts as a capital good, how the value of housing changes in response to changing economic conditions and institutional arrangements, and how households

factor in these investment considerations when they make their housing choices.

By systematically analyzing the ways in which inflation changes housing costs, and the ways in which different types of households respond to these changes, this thesis will contribute to this existing body of literature by addressing issues in three areas:

Consumer housing choice. How important are the investment aspects of homeownership in the household's housing decision? How does inflation change the housing choice calculus for different types of households, especially in terms of mobility, tenure choice, and level of housing consumption?

Housing markets. To what extent has inflation made housing more influential as an investment good? How has it changed the costs and benefits of housing and therefore the nature of the housing bundle?

U.S. Housing Policy. Who have been the winners and the losers in the housing market in recent years? Has the inflation of housing costs caused any undue burden to any specific types of households? Is there need for government intervention in housing markets?

Scope and Outline of Thesis

The focus of this thesis is how inflation affects the costs

of housing and how the housing choices of households change in response. Chapter 2 looks at the theory of how inflation changes housing costs and the investment motivation of households, how different types of households are theoretically affected by these changes, and what changes in behavior might be expected by households. A review of these issues will then lead to a discussion of the major research issues of this thesis, which comes at the end of this Chapter. Chapter 3 discusses how housing costs are defined and measured. Chapters 4 through 6 describe the housing cost experience for different types of households over the 1970's, and the changes in housing choice. Chapter 7 looks at the extent to which housing behavior during the 1970's was the result of households viewing homeownership as an investment. The final Chapter provides a summary and offers some conclusions about these issues.

2. Inflation and Housing Costs

Even though inflation was one of the most widely observed and debated phenomena of the 1970's, among politicians, policy makers and researchers there was little agreement as to its consequences. Presidents Nixon and Ford branded inflation public enemy number one, and Ford's "Whip Inflation Now" campaign did much to bring inflation to the forefront of public concern. Households shared this concern; they regularly identified inflation as their major concern because of its ability to destroy their purchasing power and add tremendous uncertainty to their financial planning. (Fischer and Huizinga, 1980.)

Economists tend to exhibit less concern toward inflation than politicians and households. Even those economists most concerned about inflation -- monetarists such as Milton Friedman -- point to its principal result being the reduction of money that households keep in non-interest bearing accounts; actions that recent Nobel laureate James Tobin dismisses as mere shoeleather costs. (Feldstein, 1982; 68.)

Fundamentally, inflation is an increase in the general price level; the prices charged for goods and services. With pure inflation, all goods and services rise at the same rate. In this theoretical state, inflation is neutral. No one will gain or be harmed by inflation assuming households have knowledge of what the level of inflation will be and make adjustments based on this

knowledge. However, people tend to believe that their inflation produced income increases are based on merit, and that the higher prices they are forced to pay produces a reduction in their standard of living. In general, this is not the case. Their perception that they can no longer afford what they could before is simply a money illusion. (Solow, 1975.)

By going beyond this theoretical state where everyone has perfect knowledge of future levels of inflation, it becomes clear that inflation produces gainers and losers. Lester Thurow, in his discussion of the manner in which the current U.S. economy produces a zero-sum society, points to inflation as the prototypical zero-sum game:

Whenever a price goes up, two things happen. Whoever buys that particular commodity finds that his real income goes down. But someone also gets that higher price, and his income goes up... For every loser there is a winner. Inflation can redistribute income, but it does not lower the amount to be divided. Everyone cannot be worse off. Some individuals win; some individuals lose. This is not an economic hypothesis, but an algebraic necessity. (Thurow, 1980; 42.)

The uncertainty of return for investors during periods of high inflation tends to steer investments toward real assets (land, buildings, precious metals and consumer durables) and away from financial assets (checking and savings accounts, and bonds). As money loses its purchasing power from inflation, the money-fixed return from financial assets decreases. Tangible

assets are more likely to provide the investor with a hedge against inflation. (Feldstein, 1980.)

The owner-occupied house seems an ideal purchase under these conditions. It is an asset that will grow in value with inflation, and its purchase is easily facilitated with a mortgage which requires only a fraction of the purchase price in cash. One study that estimated the extent to which commonly held assets (treasury bills, government bonds, real estate, labor income, and common stocks) proved to be hedges against inflation, found that residential real estate was the only complete hedge over the period studied (1953-1971). (Fama and Schwert, 1977.)

Households have altered their savings and investment behavior in response to the economic uncertainty brought on by inflation. From an aggregate perspective, household savings has become much more heavily invested in homeownership than in checkable deposits and currency, especially during the high inflationary years of the mid and late 1970's. (See Table 2.1.)

Ways in Which Inflation Distorts Housing Costs

The manner in which housing costs respond to inflation is complicated when institutional factors are considered. With pure inflation, the relative prices of goods and services remain constant. Inflation in and of itself should not change the relationship between the prices of any two items. However, this

Table 2.1

Annual Net Flows of Individual Savings -- 1968-1981
(in billions of dollars)

	<u>Checkable Deposits and Currency</u>	<u>Net Investment in Owner-Occupied Homes</u>	<u>Ratio of Housing Investment to Demand Deposits and Currency</u>
1968	11.1	14.3	1.3
1970	8.9	11.7	1.3
1973	14.1	31.0	2.2
1975	6.9	23.5	3.4
1978	22.6	63.9	2.8
1980	6.5	48.7	7.5
1981	25.8	43.8	1.7

Source:

Board of Governors of the Federal Reserve System, Flow of Funds Accounts -- Second Quarter, 1982, Washington, D. C.: Board of Governors of the Federal Reserve System, September, 1982, pp. 52-53; and Flow of Funds Accounts -- 1949-1978, December, 1979, pp. 80-81.

is not the case when other non-economic factors interact with inflation. The cost of homeownership is one area where researchers believe the relative price is altered by inflation. However, these researchers are divided as to how the cost of housing is changed by inflation. One group has studied how the standard fixed-rate mortgage makes homeownership less attainable in periods of high inflation, while another has studied how contemporary U.S. tax policy has given homeownership tremendous advantages. These competing theories are discussed below.

Inflation and the standard fixed-rate mortgage.

Until very recently, almost all home purchases have been

financed through the standard fixed-rate mortgage. Even with major changes in the U.S. housing finance system, as of 1981 the standard fixed-rate mortgage and a variation of it -- the variable rate mortgage -- continued to account for over ninety-nine percent of mortgages issued by Savings and Loan Associations. (U.S. League of Savings Associations, 1981; 21.)

[1] The salient characteristics of this mortgage instrument are three-fold:

(1) It is computed with a fixed interest rate. The interest on the mortgage is determined in advance by the lender based on estimates of expected inflation rates over the life of the mortgage.

(2) It has a constant nominal payment. The household repays the mortgage with equal monthly payments throughout the life of the mortgage.

(3) It is self-amortizing. The monthly mortgage payment is part interest payment and part repayment of principal, and

1. Citing figures from the U.S. League, which surveys only its member S and L's in arriving at the figures, obviously ignores other sources of mortgage credit, such as banks, credit unions, financial institutions which have participated in shared-equity mortgages, and private individuals. In fact, the high mortgage rates in the early 1980's increasingly forced prospective homebuyers to rely on creative financing techniques, whereby the seller agrees to hold a substantial portion of the mortgage personally. Still, it seems appropriate to assume that the traditional sources of mortgage funds will continue to provide funds in the future, and therefore the characteristics of mortgage instruments offered by these institutions are indicative of what will be available in the future.

is computed so that the principal is totally repaid during the term of the mortgage.

The standard mortgage was designed for noninflationary economic times. The characteristics discussed have serious ramifications during periods of high inflation; so much so that this type of mortgage was labelled obsolete by a major study of mortgage designs in an inflationary environment. (Lessard and Modigliani, 1975.) By "tilting" the mortgage payments toward the early years of repayment, thereby forcing the homebuyer to pay more now and less later (in real terms), it is believed that the standard mortgage reduces the number of households that can afford to buy a home.

In a period of no inflation, a level monthly mortgage payment would impose a similar financial burden on the homeowner throughout the life of the mortgage. However, as inflation increases, the real value (that is, the dollar value adjusted for the effects of inflation) of these payments decreases dramatically. This phenomenon has been termed the tilting effect of a rising inflation rate on a level payment mortgage. (Lessard and Modigliani, 1975.) As can be seen in Figure 2.1, the effect of this tilting can be considerable, even with moderate inflation. An inflation rate of eight percent more than doubles the mortgage payments the first year, as compared with no inflation. The result of this tilting of payments has a

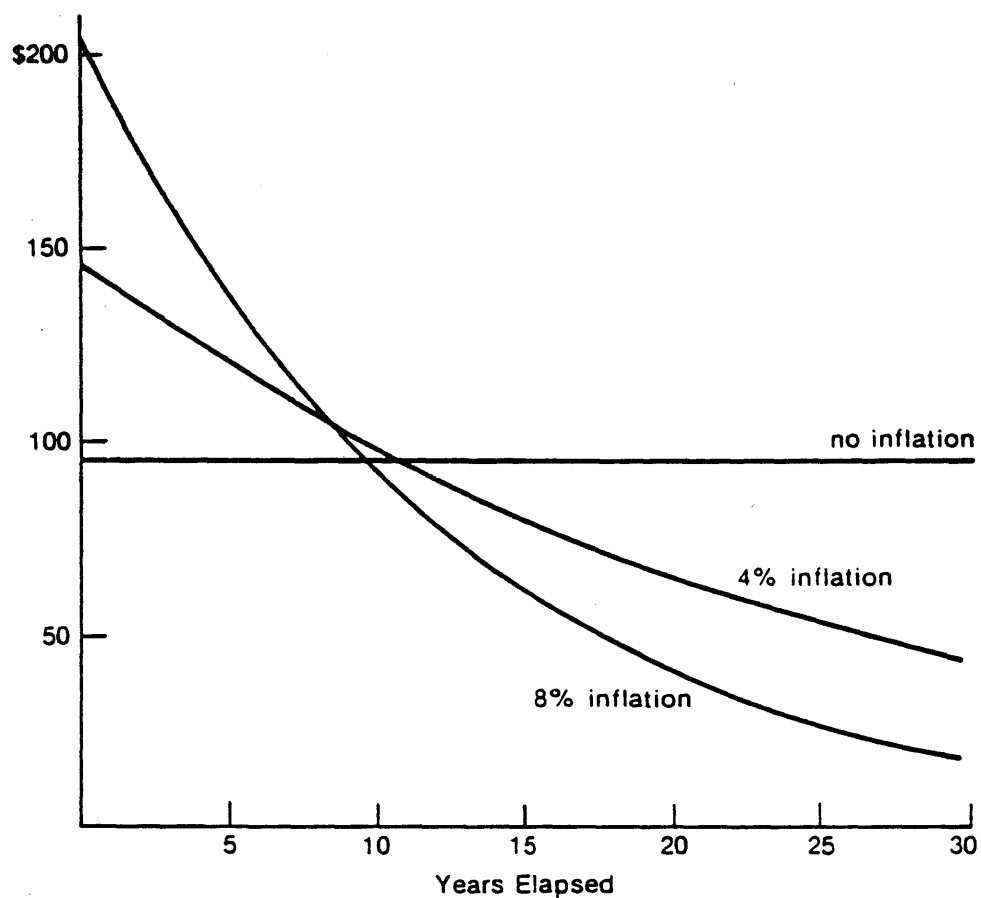
tremendous effect on the household's housing cost burden. Consider a household with a \$10,000 annual income and a two percent annual real income growth assuming the mortgage as described in Figure 2.2. With no inflation, this household's housing cost burden will be ten percent of income the first year and 5.6 percent the thirtieth year. With an eight percent rate of inflation, the burden will be 20.9 percent the first year and 1.3 percent the thirtieth year. (Lessard and Modigliani, 1975; 16.)

Using similar assumptions but higher prices and inflation rates to reflect the realities of the late 1970's and early 1980's, Lynn Browne has calculated the housing cost burdens of a household earning the mean family income taking out a 25 year mortgage for \$57,225 (75% of the purchase price for the median priced house in 1981). With no inflation, this household's burden would decrease from 12.1 percent to 8.3 percent between year one and year 20. At 18 percent inflation, the burden would start at 48.1 percent the first year and decrease to 1.5 percent by year 20. (Browne, 1982.)

While the high real housing payments during the early years of the mortgage repayment are primarily interest repayment, the net effect is that the household is building up equity in its house at a very rapid rate. For example, if a household purchases a \$100,000 house that inflates in value at ten percent per year, by the end of five years the house will have a value of

Figure 2.1

Real Value of Monthly Mortgage Payments on Level Payment Mortgage



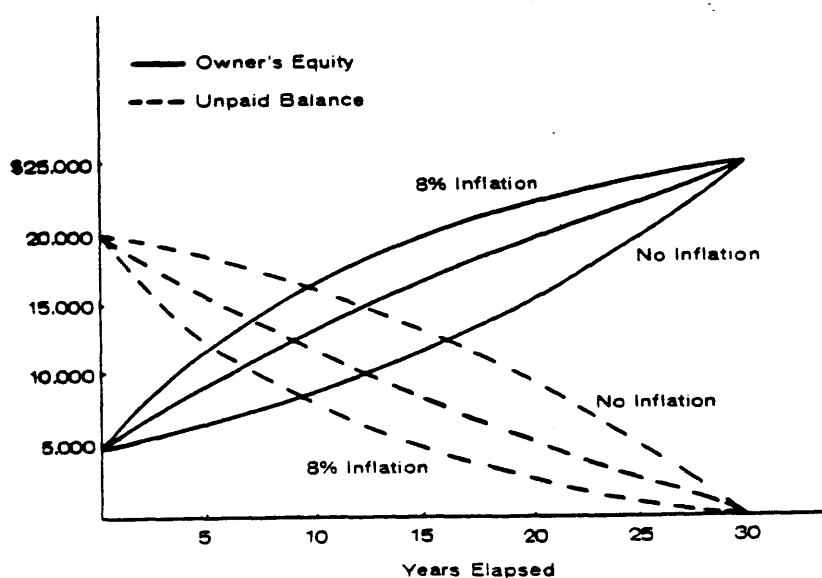
Source: Tucker, 1975; 73.

\$161,000. From the household's perspective -- assuming a 20 percent downpayment but ignoring any principal retired through monthly mortgage payments -- it will have built up \$81,000 in equity in the house; over 50 percent of the market value of the house and 81 percent of the original purchase price. This rapid equity build-up is shown in Figure 2.2.

Empirical investigation into the issue of whether inflation in conjunction with the standard mortgage reduces housing demand

Figure 2.2

Real Value of Owner's Equity and Unpaid Mortgage Balance



Source: Tucker, 1975; 73.

has produced fairly conclusive confirmation. Kearl concludes that constant payment mortgages have inhibited adjustment of the housing market to inflation. This market distortion has resulted in a reduced demand for housing. Using a simulation approach, Kearl estimates that the net effect is the reduction in single-family housing construction on the magnitude of ten to 12 billion dollars over the period 1966-1973, or about one year's construction activity. This same phenomenon distorted the mix of new units constructed over this period; increasing the production of multifamily units and reducing the production of single-family units from the level that would have been constructed in the absence of the constant payment mortgage. (Kearl, 1979; 1136-1137.)

Follain looks more generally at whether the rate of inflation affects the level of housing demand or the probability of ownership. He comes to the same conclusion as Kearl that inflation substantially reduces the demand for housing consumption and the rate of homeownership. Follain notes, however, that these results vary widely with the characteristics of the household. In fact, his general finding is reversed for households in high tax brackets that consume a lot of housing. For this group, housing demand and the rate of homeownership increases slightly as the rate of inflation increases. (Follain, 1982; 579-580.)

The tilting of real mortgage payments caused by the standard

mortgage should have particularly adverse consequences on certain types of households. Lower-income households that don't have substantial equity built up in a current home are likely to face considerable problems with the steep mortgage payments required. These hopeful first-time buyers are either renters that want to purchase a home or recently formed households that are looking to buy.

Another group harmed by the standard mortgage is homeowners with stable or declining incomes that want to move but are reluctant to assume a large monthly mortgage payment in lieu of their current lower payment. These so-called "frozen occupants" are likely to be households that bought their current units when interest rates were much lower, and that have minimal assets other than the equity in their home.

Inflation and the federal income tax

While the standard mortgage discourages homeownership, there are a host of federal income tax policies that are directly aimed at reducing the cost of homeownership, thereby increasing demand. There are two principal categories of federal income tax benefits associated with homeownership:

(1) The exclusion of net imputed rental income from taxation. In purchasing a house, the household buys housing services as well as a capital asset. These housing services are the shelter benefits received by living in the unit. They have

an obvious monetary value; the example usually given is that the household could rent the house to someone else. Though this imputed rent can be viewed as income, the household is not required to pay taxes on it. There are several costs associated with this imputed rent: mortgage interest payments, property taxes, maintenance and other operating costs, and the depreciation of the house. The net imputed rent is defined as the total imputed rent minus these expenses. While the owner-occupant is permitted to deduct mortgage interest payments and property taxes from his income tax, he is not permitted to deduct operating expenses and depreciation. Therefore, the actual tax benefit is equal to the tax savings associated with the sum of: net imputed rent, mortgage interest payments, and property taxes.

(2) Deferral and exclusion of capital gains on home sales.

The U.S. Internal Revenue Code excludes from taxation any capital gains from the sale of an owner-occupied house when another house, costing at least as much, is purchased within two years. Taxpayers age 55 or older may take a one-time exclusion of up to \$125,000 in capital gains on the sale of a house. (Greene, 1981.)

The magnitude of these tax benefits are substantial. Aaron estimates that the tax savings to homeowners resulting from their ability to deduct mortgage interest, property taxes and the exclusion of net imputed rent totalled seven billion dollars in

1966, or 16.7 percent of the amount collected from homeowners under the personal income tax that year. (Aaron, 1972; 55.) The Congressional Budget Office estimates the homeownership subsidy resulting from the deductability of mortgage interest, property taxes, capital gains deferrals and exclusions, and the exclusion of interest on state and local bonds for owner-occupied housing at 31 billion dollars in 1981, and projects it will reach 82.5 billion by 1986. (Greene, 1981; 7.)

As an aside, it is important to note that the tax benefits from homeownership do not exist in and of themselves. It only makes sense to consider tax benefits in comparison to comparables that may be treated differently under the Internal Revenue Code. The usual reference is rental housing. Income tax benefits to homeowners are thus defined as the tax advantages homeowners have and renters do not. Recently, as more attention has been focused on the investment benefits of homeownership, it is more relevant to compare homeownership to other potential investments, such as financial investments (corporate bonds), tangible investments (rental housing), and consumer durables (an automobile). Table 2.2 compares the income tax advantages of homeownership with these other investment and consumption goods. There is no denying that housing fares well in any comparison. But some of the commonly cited tax benefits of homeownership, such as the deductibility of interest payments and property taxes, are not benefits unique to homeownership.

Table 2.2

Income Tax Benefits of Common Investments

	Financial Investment (<u>corp. bond</u>)	Tangible Investment (<u>rental hsqg.</u>)	Consumer Durable (<u>auto</u>)	Owner- Occupied <u>Home</u>
Deductibility of Interest Payments	yes	yes	yes	yes
Deductibility of Property Taxes	N.A.	yes	N.A.	yes
Deductibility of Operating Costs	N.A.	yes	no	no
Deductibility of Depreciation	N.A.	yes	no	no
Non-Taxation of Net (Imputed) Rent (dividends for financial investments)	no	no	yes	yes
Non-Taxation of Capital Gains	no	no	no	deferred and exempted

Not only is the magnitude of these tax advantages to homeownership considerable (however they are defined) but their value grows as inflation increases. The reason for this is the way that the tax system responds to inflation induced changes.

The first way that inflation increases the tax benefits of homeownership is through the tax treatment of interest payments. An increase in the rate of inflation will provoke an increase in interest rates. In fact, it is commonly thought that the market level for interest rates is simply the sum of the real rate of

interest and the expected rate of inflation. (Fisher, 1930.) Under this theory, the interest rate will rise point for point with the (anticipated) inflation rate. However, the market interest rate is tax deductible, thereby reducing the effective (after-tax) interest costs in proportion to the household's marginal tax rate. This is on the cost side.

The benefit side of this calculation is realized through capital gains on the house. Recalling an argument developed earlier in this Chapter, with pure inflation all goods are expected to inflate at the same rate. Therefore, it would be expected that the increase in the price of houses would match the overall rate of inflation. If the value of a house is appreciating at the rate of inflation, but the cost of purchasing that house is below the mortgage interest rate, and this discrepancy increases as the rate of inflation increases, then this benefit of homeownership increases with inflation.

By the same token, the benefits derived from the income tax treatment of capital gains increase with inflation. The "rollover" provisions deferring the realization of capital gains if a new house is purchased allows these gains to be paid in future dollars that will have reduced purchasing power. Also, Congress has already seen fit to acknowledge the inflation of house prices by increasing the \$100,000 capital gain exclusion authorized in 1978 to \$125,000 in 1981. If this trend continues, most households will be able to avoid the payment of inflation

induced capital gains on their homes.

The third tax benefit of homeownership increased by inflation is tax bracket creep. Inflation pushes households into higher tax brackets, even though the income increases are generally not real, but merely cost-of-living adjustments that compensate the household for losses in purchasing power. Since the household is paying a higher portion of its income for taxes, the value of the mortgage interest and property tax deductions increase.

Finally, while many of the tax benefits of homeownership are increased by inflation, the tax code tends to reduce the benefits of many alternative investments. A good example is the impact of inflation on the taxation of corporate capital income. Many analysts feel that corporate profits, and therefore tax liabilities, are overstated during periods of high inflation because (1) capital depreciation is based on historic rather than current cost, and (2) inventory accounting procedures are based on historic rather than market values. (Summers, 1981.)

The bottom line of the income tax benefits to homeowners is a reduction in the costs associated with owning a home; costs that are further reduced as the rate of inflation increases. This has led many analysts to conclude that despite the large nominal increases in housing costs, the real cost of owning a home declined over the 1970's. Diamond (1980), for example, estimates that the average after-tax cost of homeownership

decreased 30 percent between 1970 and 1979. Villani (1982) similarly computes a low homeownership cost of capital as the rate of inflation rises, but as Table 2.3 demonstrates, the effective cost of borrowing for homeownership is extremely dependent on both the rate of inflation and the homeowner's marginal tax rate. According to Villani's estimates, the after-tax cost of borrowing is negative for households' with marginal tax rates in excess of 40 percent when the rate of inflation exceeds seven percent. (See Table 2.3).

TABLE 2.3

Homeowner Cost Of Capital For Varying Marginal Tax Brackets
and Inflation Rates (in percentages)

Rate of Inflation	<u>Marginal Tax Rate</u>				
	<u>.1</u>	<u>.2</u>	<u>.3</u>	<u>.4</u>	<u>.5</u>
1%	4.5	4.0	3.5	3.0	2.5
3%	4.3	3.6	2.9	2.2	1.5
5%	4.1	3.2	2.3	1.4	0.5
7%	3.9	2.8	1.7	0.6	-0.5
9%	3.7	2.4	1.1	-0.2	-1.5

Source:

Expanded from Kevin Villani, "The Tax Subsidy to Housing in an Inflationary Environment: The Implications for After Tax Housing Costs", in C. F. Sirmans (ed.), Research in Real Estate, Volume 1, Greenwich, Conn.: JAI Press, Inc., 1982, p.48.

The reduced costs of owning a home, according to these analysts, are responsible for growth in the homeownership rate

and improvement in the quality of the owner-occupied housing stock. Rosen and Rosen (1980) estimate that the homeownership rate would drop four percentage points if all personal income tax benefits for homeownership were eliminated. Hendershott (1980) estimates that the tax benefits to homeownership have led about 4.5 million additional households to own rather than rent over the period 1964-1979. Similarly, he estimates that the housing stock increased \$33 billion over this period because of quality improvements resulting from lower effective housing costs.

Homeownership tax benefits are not distributed equally to all households. Inflation further enhances these benefits to households that are eligible for homeownership tax deductions. Households in high tax brackets and those with large homeownership deductions will be aided the most. This translates into households that: own their home; have high incomes; have recently purchased homes (because mortgage payments for recent purchasers have a higher ratio of interest to principal); or live in high-valued homes (because the overall level of homeownership deductions is likely to be higher).

Integration of Theories of Inflation and Housing Costs

We are thus confronted with two well defined -- and contradictory -- theories of how inflation affects the cost of, and demand for, homeownership. Each produces very different

expectations of how households will behave in the housing market during periods of high inflation.

In another sense, though, these two theories are not in conflict; they are merely descriptions of two independent effects of inflation on homeownership costs. One increases costs -- at least for a time immediately after purchase -- while the other decreases them. From theory alone, it is not possible to determine which effect will dominate. However, these two phenomena have very different implications for different types of households. The net result of inflation on housing costs depends on the characteristics of the household.

This observation leads to my principal thesis. "Housing costs are greatly distorted by the way in which inflation enhances the investment benefits of owner-occupied housing while simultaneously increasing cash outlays. While the net effect of this situation may be minimal, there are substantial distributional implications. It produces clear winners and losers in the housing market, which can be observed through adjustments in their housing behavior."

Tests of the Thesis

There are three facets of my thesis that can be empirically tested:

- (1) How much have housing costs changed as a result of

inflation?

- (2) Have they changed differently for different types of households?
- (3) What are households doing differently in response to changes in housing costs?

Housing cost changes -- Chapter 1 presented information on housing cost burdens and the extent to which they increased between 1970 and 1980. However, these figures consider only out-of-pocket housing expenses (mortgage payments, property taxes, and utilities), and not costs related to investment in homeownership. As was discussed earlier in this Chapter, the investment costs and benefits are altered tremendously by inflation. It is likely, in fact expected given the theory presented, that different types of households are responsive to different components of housing costs.

Households most seriously affected by housing cost changes -- The ways that inflation distorts the costs and benefits of housing have differential impacts on households. The economic situation of households, as measured by their income, assets, or marginal tax rate, is one critical dimension. A household's tenure, and the duration of that tenure, is an equally important dimension in determining whether a household will be helped or harmed by the inflation of housing costs. The household's stage in the

life-cycle is a final dimension that will influence its position with respect to housing costs.

Household responses to changing housing costs -- If inflation seriously alters the housing costs of a household, its behavior can be expected to change in response. One area of response is housing consumption patterns; households might increase or decrease their level of housing. A second area is tenure and mobility patterns. Households may change their tenure, the timing of their tenure changes (first-time buyers may be older, or in a different stage of their life-cycle), or their mobility (some households may frequently "move-up" to take advantage of housing cost changes, while others may be trapped in their current residence). Finally, housing cost changes may reinforce demographic changes, such as household size and composition, labor force participation, fertility, or household formation. Since it is assumed that these demographic trends are largely independent of housing cost trends, it is not an issue of causality but rather of whether housing cost changes exaggerate or diminish current demographic patterns. The next Chapter defines and provides measures for a method of calculating housing costs.

3. Analysis of Housing Costs

Housing costs compose a substantial portion of the typical household's expenditures. According to the 1972-73 Consumer Expenditure Survey, households on average devoted 30.8 percent of their total consumption expenditures to housing (including utilities, household operations, and home furnishings), and this was for a period before housing costs became a serious policy concern. The next largest categories of expenditures were food and transportation, each of which accounted for less than 20 percent of consumption expenditures. (U.S. Department of Labor, 1978.)

Changes in housing costs, therefore, have a substantial impact on how much the household has to spend on non-housing consumption. Relatively minor changes in housing costs are greatly magnified since housing composes such a large portion of the household budget.

There are other reasons to be concerned with the level of housing costs. Changes in homeownership costs obviously influence the household's choice of tenure. Since the encouragement of homeownership has been a cornerstone of U.S. housing policy for several decades, homeownership costs are a central concern of federal policymakers. Also, housing costs undoubtedly influence household formation rates and patterns of housing consumption.

There are many factors that influence housing costs. Macro-economic conditions -- particularly the rate of inflation and prevailing interest rates -- are a central component of homeownership costs, and also affect the level of new construction activity because developers rely on financing for their construction activities. Policies of the federal government, especially tax policy, is a determinant of housing costs. The local government plays a role, also. The level of public services it provides help determine the property tax rate, while zoning and building ordinances affect how much and what type of housing gets built. Local housing market conditions are also a factor. This includes those factors pertinent to the supply of and demand for housing, and characteristics of the neighborhood. Finally, and often overlooked, some characteristics of the household influence to the cost of housing. The households's income (and therefore marginal tax bracket), tenure, and duration of occupancy all directly relate to the cost of housing.

There are several definitional and measurement problems when it comes to determining housing costs. Definitional issues are questions of what should be included in housing costs; measurement issues deal with how one quantifies the items that are to be included.

Housing costs have been defined in various ways in past studies. Feins and Lane (1981), in an exhaustive study of how much

different types of households pay for housing, define housing costs as the direct out-of-pocket expenditures plus foregone income: that is rent, mortgage payments, property taxes, hazard insurance, heat and utilities, maintenance and repair, and the opportunity cost of the homeowner's equity in the unit.

Since the theory of how inflation affects housing costs indicates that the financial benefits of homeownership (tax savings and capital gains) are important determinants of housing costs and consumer behavior, I have used a more comprehensive measure of the cost of housing. It is an approach similar to that of other contemporary research on housing costs, such as Follain (1982) and Rosen (1979). In fact, Feins and Lane (1981; 163) acknowledge the need to include tax savings and capital gains in an estimate of the net economic cost of housing, but could not do so because of data limitations over the period of their study -- 1960-1977. The specific elements used to estimate housing costs are presented in Table 3.1.

Housing costs are estimated separately for each household. Each of the cost elements in Table 3.1 is quantified -- except for shelter -- and then costs are totalled up. Direct and indirect costs and benefits are treated equally. Benefits are treated as negative costs and are subtracted from housing costs to arrive at a total net cost figure for each household. This figure may be viewed as the cost of shelter for that household. It may be either positive or negative, depending on the magnitude

Table 3.1

Components of Housing Costs

	<u>Costs</u>	<u>Benefits</u>
<u>Consumption</u>	imputed rent/contract rent* utilities* property taxes* maintenance and repairs* insurance* transaction costs*	shelter
<u>Investment</u>	mortgage payments* opportunity cost of equity depreciation capital gains taxes	tax savings capital gains imputed rent

*denotes an out-of-pocket (cash) expenditure

of the costs and the benefits. It is not an estimate of the market value of the "shelter benefits" provided by a unit; but rather an implicit estimate of the cost of shelter for a specific household living in a specific housing unit at a specific period in time. As any of these dimensions change, so may the estimate of shelter cost.

Housing cost components are categorized as either costs or benefits, and whether they relate to consumption or investment. The consumption/investment separation is based on the premise that homeownership serves two distinct functions. It provides the household with a place to live, and it is simultaneously a capital asset that provides the owner with an annual flow of benefits (tax savings) and the potential for longer-term appreciation (capital gains). This separation of total housing

costs may provide insights into the reasons for housing cost changes, and it may serve as a useful framework for understanding how households make their housing choices.

There are questions as to whether specific cost components properly should be defined as housing costs. Two examples are utility payments and property taxes. The crux of the issue is whether these costs are dependent on the house one chooses, or independent consumption decisions.

The argument for including utilities is that there is a trade-off between the energy efficiency of a home and utility costs. Two households may achieve the same comfort level, one by investing in energy conservation equipment and paying lower utility bills, and the other by not making these investments and using more energy.

The argument for including property tax payments in calculations of housing costs is that households view the level of property tax payments as related to the public service package that they receive. I have included both of these components in my estimates of housing costs because there seems to be reasonable expectations that households view these as part of their housing consumption. Commuting costs also fall into this category, since the choice of a home also implies a journey-to-work. However, data limitations are just too great to include this consideration.

There are also several measurement questions. One deals

with the non-economic costs and benefits of housing. An example is housing tenure. There is substantial evidence that it matters whether a household rents or owns its home, even if everything else is the same. There are social status and other symbolic benefits associated with homeownership. Yet in a cost analysis, where it is necessary to attach a price to everything, this presents a difficult problem.

Some other costs and benefits are in principle able to be quantified, but nonetheless are difficult to measure. Examples that fall in this category are: house value, imputed rent, depreciation, and the opportunity cost of the equity in one's home.

The most appropriate measure of house value is what the owner could sell it for, but this information is obtained only when a unit is sold. Other measures of house value that are typically used are: the homeowner's estimate of the market value; an appraiser's estimate of the market value; or a computerized hedonic estimate of market value. The imputed rent of a unit presents an equivalent problem in that it is a measurement of the market rental of a unit, but since the unit is not for rent, this value has to be estimated through other means.

Depreciation is the measure of the physical deterioration and economic obsolescence of a house. It is ironical to consider depreciation in inflationary periods when home price appreciation is vastly greater than depreciation. But depreciation is

occurring all the time, independent of the rate of appreciation, although the owner's maintenance and repair activities obviously influence its rate.

Finally, the opportunity cost of a homeowner's equity in the unit depends on the alternative uses in the absence of homeownership. Some homeowners forego current consumption in order to make mortgage payments, and so the opportunity cost for these households is decreased consumption. Others may have put the money in a low interest savings account, while others may have invested in high interest bearing instruments.

The third type of housing cost measurement problem is data availability. Examples are maintenance expenditures, capital gains realized upon the sale of a unit (and the household's tax liability on these gains), the household's marginal tax rate, and the cost of moving to a new residence. Unless the researcher undertakes an original data collection effort, one or more of these cost categories are likely to be unavailable.

As shown in Table 3.1, only quantifiable housing cost elements have been included in this analysis. In an attempt to avoid extreme housing cost burdens that might unduly influence the results, annual housing costs were allowed to vary only between minus 50 percent and 100 percent of household income. Observations that didn't fall within this range were excluded from the analysis. Households with missing data items or with housing costs beyond this range accounted for about ten to

fifteen percent of the total number of households each year.

Table 3.2, which is included at the end of this Chapter, explains how each of the cost components is defined and measured.

Whenever they appeared reliable, measurement techniques from previous researchers have been borrowed. Fortunately, many are provided directly by respondents in the Panel Study of Income Dynamics; the principal data source for this analysis. These estimates of housing costs differ somewhat from a household's calculations; a household has to predict the future, whereas this analysis is an ex post facto estimate of costs that were actually experienced. (See Table 3.2 at the end of this Chapter.)

Analysis Framework

Individual household's housing costs will be used to address three research issues:

- (1) What are the magnitude of housing costs, and how do they compare at different points in time, and for different types of households during the 1970's?
- (2) What components of housing costs have changed the most, and why?
- (3) How do households respond to changes in housing costs?

An explicit hypothesis is that housing costs vary considerably for different types of households. To test this, housing costs and changes in housing costs are calculated for

five different types of households. The typologies selected were ones that embodied characteristics that are thought to influence housing costs: household income; tenure, and recent changes in tenure; and the household's life-cycle stage. Those selected were:

- newly formed households - households created within the past three years;
- elderly households - where the head of house is 65 years of age or older;
- non-elderly low-income households - where the household income is in the bottom 30 percent of the income distribution, and the head is under 65 years of age;
- upper-income couples and families - where the household income is in the top 30 percent of the distribution, and the head of house is currently married and between the ages of 35 and 64; and
- households recently purchasing a home - where the household was not created with the past three years, but has purchased a house over that time period.

The principal data source for the analysis is the Panel Study of Income Dynamics; an annual survey of a pre-established panel of households conducted by the Institute for Social Research at the University of Michigan. This data base dates to 1968 when it began with just under 5,000 households. The 1981 interviews are the most current, and contain information for just

over 6,600 households. Thus the data set contains fourteen years of information. The panel is self-replacing; households that dissolve are eliminated from the file, whereas new households that are formed by "splitting-off" from sample households are added to the sample. This creates some bias in using the Panel Study historically. In analyzing previous years, many households that existed those years are no longer in the data set.

The main reason that this data base was selected to study housing cost issues is the long time span of family histories that are available. Since it often takes several years for a household to adjust its housing to other changes, it is important to have a time-series data base to observe these changes.

Comparison of housing costs. This section of the analysis will address the following questions:

- What were the level of housing costs and housing burdens in the 1980's and how do these compare with other periods during the 1970's?
- How have housing costs changed for different types of households over the 1970's?

This analysis will help determine the extent to which inflation has distorted the costs and benefits of homeownership, and therefore changed the overall level of housing costs over the 1970's. Furthermore, by looking at housing costs for various types of households, it will identify the households which were the most severely affected by changes in housing costs.

Components of housing costs. The housing cost elements that compose the measure of total housing costs may not have equivalent value to all households. As was mentioned previously, it is composed of out-of-pocket costs, indirect costs, and benefits. There are theoretical reasons, as well as empirical results, which indicate that households evaluate these cost elements differently. Chester Fenton (1974) hypothesizes that households of differing socio-economic characteristics have different time horizons when it comes to making spending decisions. Low-income households, for example, are thought to have short time horizons because of high market discount rates and preferences for present vis-a-vis future consumption. Follain has shown empirically that the household's housing choices are sensitive to the composition of cost. Though inflation increases the anticipated capital gains from homeownership, by separating housing costs into cash costs and capital gains when he estimated the housing demand and tenure choice equations, Follain found that homeowners are much more sensitive to cash carrying costs in making their housing decisions. (Follain, 1982; 580-581.)

Different types of households, therefore, are likely to discount certain housing costs and emphasize others, depending on their circumstances as well as their consumption and investment objectives. Younger households probably will place primary concern on the level of mortgage payments. Elderly households

that have substantial equity built up in their homes may be concerned with the level of property taxes, maintenance, and utility payments. Upper-income households may key into the potential for tax savings. Households thinking about their eventual retirement may be concerned with the long-term capital gain likely to be realized from a unit.

This section of the analysis will disaggregate housing costs to investigate how various components have changed over time, as well as to assess if different types of households appear to be more sensitive to, and burdened by, some areas of housing costs than others.

Relationship of housing costs to behavior. The final area of analysis will investigate the relationship between changes in housing costs and changes in housing choice and other behavioral responses on the part of households. Four areas of potential response to changes in housing costs are investigated.

(1) Tenure choice and mobility. As housing costs change, or as ownership costs change relative to the cost of renting, households will eventually respond through their choice of tenure. Established households are likely to respond more slowly than new households because the new ones are faced with more immediate decisions. However, even the established homeowner moves on average every ten years or so (with renters moving much more frequently), so even these households are forced to make tenure choices periodically.

(2) Housing characteristics. Households may also respond to changes in housing costs in their selection of homes. Households that are initially entering the housing market may be more inclined toward multi-family structures or mobile homes than their counterparts were five or ten years ago. Households that are experiencing decreases in housing costs may generally move-up to larger homes in relation to their family size.

(3) Demographic characteristics. There have been substantial changes in the demographic characteristics of households over the 1970's, in the areas of household formation rates, household size, and fertility. While changes in housing costs certainly are not the sole cause of these changes, it is quite possible that, on the margin, housing costs may influence the magnitude of change.

(4) Financial characteristics. Households may attempt to change their financial position in response to changes in housing costs. The most likely response would be a change in labor force participation, with a spouse or other family member joining the workforce.

Table 3.2

Estimates of Housing Cost Components

<u>Component</u>	<u>Method of Estimating</u>
(1) Contract Rent	provided by respondent (a)
(2) Mortgage Payments	provided by respondent (a)
(3) Utility Payments	provided by respondent (a)
(4) Property Tax Payments	provided by respondent (a)
(5) Maintenance and Repairs	set at 1.0 percent of house value (b)
(6) Insurance	set at 0.5 percent of house value (b)
(7) Opportunity Cost of Equity in Home	homeowner's equity * 1-year Treasury bill rate (c)
(8) Depreciation	set at 0.7 percent of house value (d)
(9) Tax Savings	(mortgage payments + property tax payments + net imputed rent - insufficient non-housing deductions) * marginal tax rate (e)
(10) Capital Gains	increase in house value from previous year
(11) Taxation of Capital Gains	ignored (f)
(12) Net Imputed Rent	house value deflated to 1970, inflated back to target year by CPI rental figure, and multiplied by a net rent/value ratio of 7 percent (g)
(13) Transaction Costs	set at 7 percent of house value for owners, and averaged over a three year period (h)
(14) House Value	provided by the respondent (i)
(15) Marginal Tax Rate	estimated by University of Michigan Institute for Social Research based on household income and characteristics

Notes:

- (a) Respondents provide this information directly in the Panel Study of Income Dynamics. Property tax payments in 1970 were estimated by the Institute for Social Research rather than asked.
- (b) Estimates of maintenance and repairs, and insurance from Follain (1982).

- (c) Houses are traditionally financed by two sources. The outstanding mortgage balance is generally financed by a bank or S. and L., while the difference between the mortgage balance and the market value is implicitly financed by the owner. There is an opportunity cost associated with this investment; it could be invested elsewhere and receive a return. The issue is: what is an appropriate opportunity cost for this investment? While this is a subjective decision, one guideline is the 1-year Treasury bill rate, which is a common investment option for households that might want to invest the equivalent of their home equity in a financial instrument. (Rates for 1-year Treasury bills from Statistical Abstract of the U.S. - 1981, p. 522.)
- (d) Estimates from Follain and Malpezzi (1980). These researchers note that there is considerable variation in rates of depreciation across SMSAs. The age of the unit was also found to be an important factor in the rate of depreciation; newer units depreciate much faster than older ones.
- (e) The mortgage interest and property tax payments are approved income deductions from a federal tax perspective. The actual tax savings is a function of the marginal tax rate of the homeowner. There are two complications; the reported mortgage payments are part interest and part principal, and there is no way of separating them. Secondly, taxpayers are allowed the option of claiming a standard deduction if they choose not to itemize their deductions. Therefore, the difference between the standard deduction and the household's other (non-housing) itemized deductions should be subtracted from the housing deductions in computing their value to the homeowner. An example: the standard deduction for the year in question is \$3,000. The household has \$2,000 in non-housing deductions and \$4,000 in housing deductions. The real value of these housing deductions is \$3,000 (times the household's marginal tax rate) because this is the amount above the standard deduction that the household can claim.
- (f) The actual taxation of capital gains depends on whether the household defers the realization of capital gains upon sale by purchasing another house, or whether the homeowner is age 55 or older and takes the one-time \$125,000 exemption from capital gains. Since the present value of any capital gains taxes are generally small and difficult to predict, most analysts tend to ignore them completely when estimating housing costs.
- (g) Net imputed rent of a unit is a measure of the market rental value of a unit (minus costs of operating the unit); in this sense it is a measure of the owner's return on investment in the unit. Typically, rent is computed as a fixed percentage of house value (most studies peg rent to value ratios at about ten percent -- see Johnson (1981), Shelton (1968),

Laidler (1969), and Aaron (1972). In periods of low inflation, this rule-of-thumb may be reasonably accurate. However, in periods of high inflation, this procedure is inappropriate because the inflated house values reflect increases in investment, not consumption, benefits. To circumvent this problem, I have deflated house values back to a base year of 1970 using the Commerce Department's constant quality index, and then inflated them back to the target year using the CPI rental figure. This produces a house value for any year based on consumption rather than investment benefits. Gross imputed rent is estimated at ten percent of this "adjusted" house value, with net imputed rent estimated at seven percent of value after property tax payments, maintenance, and insurance have been deducted.

- (h) Transaction costs for homeowners (brokers fees, points, title search, and moving costs) are generally estimated as seven to eight percent of the value of a house (see Diamond (1980) and Shelton (1968)). They are paid partially by the seller and partially by the buyer. Who pays what is usually unclear since, although the seller nominally pays the realtor, all or part of this fee may be passed on to the buyer through a higher sales price. Transaction costs are paid at the time of sale, but are usually thought to be spread over the duration of occupancy in the household's calculations. Since I look at a three year mobility horizon, I spread moving costs equally over each of the three years following a move.
- (i) Numerous studies of owner's estimates of the value of the house have shown that on average they are quite accurate. See for example, Follain and Malpezzi (1980); Kain and Quigley (1972); and Kish and Lansing (1954). Follain and Malpezzi (1980) found that owners are better at estimating their house values than renters are at estimating their gross rents. (Follain and Malpezzi, 1980; 98-103.)

4. Changes in Housing Costs and Household Behavior Since 1970

Overview of Housing Cost Increases

In spite of numerous reports to the contrary, housing costs rose substantially during the 1970's. They not only rose in absolute terms, which is to be expected given the high general level of inflation, but they rose in relation to household income.

Table 4.1

Total Housing Costs
(expressed as average percent of household income)

	<u>1970</u>	<u>1976</u>	<u>1980</u>	Difference: <u>1970-1980</u>
All Households	14.4	16.4	21.1	+6.7 (+47%)
Owners	12.1	13.2	19.8	+7.7 (+64%)
Renters	18.7	21.7	23.3	+4.6 (+25%)
	n=3018	n=4643	n=5999	

Source: tabulations of the Panel Study of Income Dynamics, waves I through XIV.

As shown in Table 4.1, housing costs increased by an average of almost seven percent of household income between 1970 and 1980. Though housing costs for renters remained at a higher proportion of income than for owners, homeownership costs grew at a much faster rate, increasing 64 percent in contrast to 25

percent for renters.

This trend of a rapid escalation of households' housing cost burdens was not uniform over the decade. While housing costs increased temperately between 1970 and 1976, renters faced increases that were over twice as large as those for owners. The last four years of the decade reversed this trend. Housing cost burdens jumped for owners while moderating for renters.

Why did costs increase so dramatically between 1970 and 1980? One explanation is suggested by analyzing changes in the components of homeownership costs. Table 4.2 divides these components into housing costs and benefits. The cost side consists of out-of-pocket cash outlays (mortgage payments, utilities, property taxes, maintenance and repairs, insurance, and transaction costs), the opportunity cost of the homeowner's equity in the unit, and the physical depreciation of the unit. The benefit side consists of the federal tax savings resulting from homeownership, and the appreciation in the value of the unit -- the capital gain.

Both homeownership costs and benefits increased between 1970 and 1980. In fact costs and benefits increased at almost precisely the same rate. But since housing costs started at a higher level, the net result was an increase in the housing cost burden for the average homeowner.

While out-of-pocket costs of homeownership increased -- due principally to increases in mortgage interest rates and

residential energy costs -- another driving force behind housing cost increases was the jump in equity in the typical homeowner's home, and the concurrent jump in the opportunity costs associated with holding that investment as equity. There is a two-fold explanation for this phenomenon. The first is that inflation increased the rate at which homeowners built up equity in their homes. This rapid equity build-up is reflected in the capital gains calculations in Table 4.2. But this is only part of the story. The opportunity cost of this built-up equity -- the return on alternative investments -- has also increased with rising inflation and interest rates. The return on 1-year U.S. Treasury bills (the proxy used for the return on alternative investments) dropped slightly from 6.5 percent to 5.5 percent between 1970 and 1976, but then doubled to 10.9 percent by 1980. This rapid increase in both equity and in the opportunity cost of this equity have caused this component of housing costs to more than double in relation to household income between 1976 and 1980.

On the benefit side of the ledger, capital gains increased, while the tax benefits from homeownership exhibited a moderate loss.

The increase in house value appreciation (which results in a capital gain once the house is sold) produced by inflation is supported by Table 1.1, which showed house prices increasing

Table 4.2

Components of Housing Costs for Homeowners
(expressed as average percent of household income)

	<u>1970</u>	<u>1976</u>	<u>1980</u>	Difference: <u>1970-1980</u>
<u>COSTS</u>				
1. Out-of pocket	16.1	17.6	20.6	+4.5 (+28%)
2. Opportunity cost of equity	7.4	7.2	18.1	+10.7 (+145%)
3. Depreciation	0.7	0.8	1.1	+0.4 (+57%)
Total	24.2	25.5	39.7	+ 15.5 (+64%)
<u>BENEFITS</u>				
1. Tax savings	3.0	2.0	2.6	-0.4 (-13%)
2. Capital gains	9.7	11.1	17.9	+8.2 (+85%)
Total	12.7	13.1	20.6	+7.9 (+62%)
	n=3018	n=4643	n=5999	

Source: tabulations of the Panel Study of Income Dynamics, waves I through XIV.

considerably faster than the rate of inflation during the 1970's. As rapidly as house values have appreciated, though, they did not always keep pace with their cost counterpart -- the opportunity cost of the equity the owner has built up in the unit -- with 1980 being a case in point.

This finding is highly dependent on the figure selected as the appropriate opportunity cost for this asset [1]. It is also

1. Alternate estimates of opportunity costs were developed using the national average for mortgage interest rates (from The Federal Home Loan Bank Board Journal), and the average yield on

dependent on the assumption that if homeowners did not have this asset as equity in their home, they would have it in some other form. This is a questionable assumption since homeownership has traditionally been viewed as a way to build equity in the absence of a sizeable cash investment; it is unlikely that the typical household could build as much equity in the absence of homeownership.

That the tax benefits of homeownership decreased between 1970 and 1980 is a surprising finding given the attention that has been devoted to it in the literature as a reason for the upsurge in housing demand in the face of higher costs.

The reason for the decline is largely due to the increase in the standard deduction over this period. From a maximum of \$1,000 in 1970, it had risen to \$2,800 by 1976 (\$2,400 for singles) and to \$3,400 by 1980 (\$2,300 for singles). An increase

prime tax-free municipal bonds (from the Statistical Abstract of the U.S. -- 1981, Table No. 873) instead of the return on 1-year U.S. Treasury bills as an estimate of the opportunity cost of equity in one's home. The results are shown in the following table:

<u>Measure of Opportunity</u> <u>Cost of Equity</u>	<u>Homeownership Costs as</u> <u>Percent of Income</u>		
	<u>1970</u>	<u>1976</u>	<u>1980</u>
1. mortgage interest rate	14.0	17.0	21.8
2. 1-year Treasury bill	12.1	13.2	19.8
3. tax-free municipal bond	10.3	11.1	14.7

While these three measures yield divergent results, the conclusions that can be drawn using the other measures are essentially the same: housing costs rose substantially over the 1970's, and the increased opportunity costs of the homeowner's equity was a major cause of the cost increases.

in the standard deduction reduces the value of the homeownership tax savings since the value of these savings is dependent on the amount they are in excess of the standard deduction. The reduced value of homeownership deductions in light of increases in the standard deduction is confirmed by the declining proportion of persons that itemize deductions on their federal income tax returns. In 1970, almost 40 percent of returns had itemized deductions; by 1976 this had dropped to just over 30 percent, and continued to drop to under 25 percent by 1979. (Statistical Abstract, 1981; 257.)

Another surprising finding is the magnitude of tax savings. By 1980, tax savings were only about one-seventh as great as capital gains as a contributor to the benefits of homeownership. Even if all benefits to homeownership through deductions of mortgage interest and property tax payments were eliminated, the average household would pay only 2.6 percent more of its income for homeownership costs.

While a presentation of what has happened to housing costs on average may well describe national trends, it does not adequately convey the wide variation faced by individual households. For example, in each of the three years studied -- in spite of rapidly increasing housing costs -- at least one out of five households had negative housing costs. For these households, the investment related benefits of homeownership exceeded the costs; the net effect being that these households

lived rent free and still made money by owning their home. At the other extreme, the proportion of homeowners with an excessive housing cost burden (at least 35% of income) virtually doubled between 1970 and 1980. Inflation induced housing cost increases appear to have had very serious consequences for these households.

Table 4.3

Distribution of Housing Cost Burden for Homeowners
(in percentages)

<u>BURDEN</u>	<u>1970</u>	<u>1976</u>	<u>1980</u>
Negative	22	23	20
0 to 14%	36	31	23
15 to 24%	19	20	19
25 to 34%	10	12	14
35% or more	13	14	25
	n=3018	n=4643	n=5999

Source: tabulations of The Panel Study of Income Dynamics, waves I through XIV.

Variation in homeownership costs is not limited to comparisons across households. Housing costs for the same household change a lot over time, especially when the rate of inflation is high.

For example, of the households that were participating in the Panel Study over the period of 1970-1980, over two-thirds

experienced increases or decreases in their housing burdens of 50 percent or greater. There are obviously reasons other than inflation as to why housing burdens may show substantial change. Households may move to smaller or larger homes based on changes in their size or composition. Renters may buy or buyers may rent, thereby changing their housing costs.

However, as shown in Table 4.4, inflation seems to be a dominant force in causing these changes. Even households that changed tenure between 1970 and 1980 experienced less variation in housing cost burdens than did households that owned in both years. And changes in housing costs for households that owned in both years are likely to be principally the result of inflation. Owners that didn't move between 1970 and 1980 had fixed mortgage payments but inflation-induced income increases, thereby lowering their housing burdens. Owners that purchased other homes during this period were generally forced to pay higher mortgage rates, which would increase their housing burdens, at least in the short run. Both of these changes are the direct result of inflation.

As will be shown in the next two chapters, this wide variation in homeownership costs is associated with certain household characteristics. Whether inflation induced housing cost changes had positive or negative implications depends heavily on household characteristics such as housing tenure, income, life-cycle stage, and mobility.

To summarize, inflation substantially increased the cost of

Table 4.4

Variation in Homeownership Burdens for Households -- 1970-1980
(in percentages)

	Increase Greater than <u>50 Percent</u>	Decrease Greater than <u>50 Percent</u>	Increase or Decrease of 50 Percent <u>or Less</u>	n
All households	32	36	32	2,357
Owners in 1970 and 1980	30	45	25	1,045
Renters in 1970 and 1980	29	14	56	641
Owners in 1970 and renters in 1980	45	28	27	439
Renters in 1970 and owners in 1980	31	30	38	92

Source: tabulations of the Panel Study of Income Dynamics, waves I through XIV.

owning a home over the 1970's. Factors that most greatly influenced homeownership costs were non-cash investment related costs. Specifically, the opportunity costs of the equity in one's home ballooned because of the inflation induced equity build-up, and the simultaneous increase in the return on competing investments. By the end of the 1980's, capital gains resulting from these rapidly inflating home values only partially offset these opportunity cost increases. Essentially, the investment related costs of homeownership outstripped the investment benefits.

Contrast to Other Studies

The finding that housing costs have increased substantially over the 1970's is in marked contrast to the current body of academic literature, which maintains that housing costs have declined recently. Since these researchers are defining housing costs in a manner roughly similar to the method used here, it is worthwhile investigating why we have arrived at such diverse conclusions.

Diamond (1980; 295), in analyzing the real after-tax cost of capital for homeowners, concludes that the cost of housing declined on average by 30 percent from 1970 to 1979. Villani (1982) develops an annual net cost of housing index for households in different tax brackets over the period 1963-1978. Though this index exhibits considerable variation from year to year, housing costs were estimated to have declined (in most cases substantially) for all tax brackets between 1970 and 1976, and increased somewhat between 1976 and 1978. Hendershott and Hu (1981; 188-189), while not directly measuring housing costs, conclude that over the period 1972 to 1979, the difference between the return on investing in homeownership and investing in financial assets was in excess of 10 percent.

There are several reasons why these results differ from mine. The first is that these studies use aggregate data while I have

used information from individual households. The theoretical experience of the average household living in a median priced house may be substantially at odds with the experiences of a wide range of households making a wide range of decisions and adjustments based on the situations they confront.

Secondly, these studies calculate housing costs on the margin. Essentially, costs are computed for a household that is currently purchasing a house; current interest rates are used, and equity in the house other than the downpayment is ignored. This effectively excludes from consideration all non-purchasers. In this sense they are computing the capital costs of purchasing a home rather than the total costs of ownership.

The housing affordability literature has operated under the assumption that current homebuyers are the group that should be extended the greatest concern. Regardless of whether or not this is true, it serves to focus on a rather narrow segment of the population. For example, it was shown in the previous section that the opportunity cost of the homeowner's equity has a tremendous bearing on that household's housing costs. Yet this is not an important factor for recent homebuyers, who tend to have very little equity in their homes.

Finally, there is a slight time difference in the periods under consideration. Housing costs varied considerably from 1970 to 1980, with marked differences between the first half and the second half of the decade. Looking at the period through 1978 or

1979 may generate different conclusions about housing costs than this analysis, which incorporates 1980 figures. House values grew rapidly between 1976 and 1979, with double digit percentage increases each year. Yet mortgage rates and other cost of funds did not start their rapid rise until the very end of the decade. Therefore, a comparison of housing costs in 1980 with costs in 1977, 1978, or 1979 may lead to very different conclusions about the benefits to be gleaned from homeownership. The three researchers discussed above ended their analysis period near the high-water mark of housing investment benefits, and thus their results are limited to this one unique period of atypically high housing benefits.

How Households Have Responded to Higher Housing Costs

In the face of higher homeownership costs, it would be expected that households would attempt to adjust their behavior. While some might be able to find other ways to cover their increased housing expenditures, most households would be expected to look for ways to reduce them. It was noted in Chapter 1 that a central paradox in housing affordability research is that households apparently have responded to higher ownership costs by buying more.

Upon closer inspection, however, there appears to have been a duality in the responses households have taken. While there

are clear indications that housing demand strengthened between 1970 and 1980, there are simultaneous signs that other households were forced to cut back. Indeed, the twofold nature of household responses is entirely expected given the housing costs faced by different households. It was shown in Table 4.3 that even after the dramatic housing cost increases witnessed during the 1970's, one-fifth of the homeowners still had negative housing costs and an additional one-quarter had low burdens (less than 15% of their household income). With almost half of the homeowners having low or negative burdens, it is not unusual that a large number of households may be increasing their housing consumption.

The rate of homeownership is one clear indication of how households are reacting to homeownership costs. The fact that the homeownership rate increased from 62.9 percent in 1970 to 65.6 percent in 1980 indicates that there was still a strong desire among households to own their homes. But the ownership rate increased very little toward the end of the 1970's, dropped slightly in 1981 -- breaking an uninterrupted forty year string of ownership rate increases -- and dropped a full percentage point by the end of 1982. (U.S. Bureau of the Census, 1981.) The housing cost increases experienced in the 1970's were clearly causing some delayed repercussions by the early 1980's.

The duality in the response of households to inflated housing costs can be seen in the way that high-income households have increasingly become homeowners and low-income households

increasingly renters. In 1973, 84 percent of high-income households (households with incomes at least one and one-half times the U.S. median income) were owners and 44 percent of the low-income households (households with incomes less than 80 percent of the U.S. median income) were renters. By 1980, these figures had increased to 88 percent and 47 percent respectively.

Household mobility is linked with tenure since a change in tenure almost always implies a move. The annual mobility rate for households is regularly very close to 20 percent. In 1980, however, the mobility rate dropped to 17.8 percent, and dropped again in 1981 to 17.6 percent. (Annual Housing Survey, 1981.) By 1980, those that did move were less likely to purchase a home. As shown in Table 4.5, the purchase rate for moving renters dropped almost 25 percent between 1973 and 1980 and almost 10 percent for moving owners over the same period.

Table 4.5

Home Purchase Rates for Movers
(in percentages)

	<u>1973</u>	<u>1977</u>	<u>1980</u>	Percent Change <u>1973-1980</u>
Previous Renters	27.5	26.6	20.8	-24.4
Previous Owners	64.8	67.3	58.4	-9.9

Source: Joint Center for Urban Studies, analysis of the Annual Housing Survey, 1983.

Newly constructed units increased in size over the 1970's in spite of the fact that household sizes were decreasing. They also included more amenities (a larger proportion of the homes were built with a garage and with multiple bathrooms). In addition, households were buying more expensive housing relative to their income. In 1970, the average homeowner lived in a home valued at 210 percent of their income; by 1980 this figure had jumped to 260 percent. (Panel Study of Income Dynamics -- tabulations of data tapes.)

In the face of indications of upscaling of houses over this period, there are contrary indications of downscaling. Between 1977 and 1981, single-family detached homes lost 20 percent of their share of newly constructed units to condominiums and mobile homes.

Table 4.6

New Housing Units By Type
(in percentages)

	<u>Single Family Detached Homes</u>	<u>Condominium Units</u>	<u>Mobile Home Shipments</u>
1973	58.4	12.4	29.2
1977	78.6	6.4	15.0
1981	62.6	16.1	21.4

Source: Statistical Abstract of the United States -- 1982-1983, p. 747, Table 1340.

And while there has been a pronounced trend toward the "uncoupling" of households during the 1970's -- more and more persons establishing independent households -- this trend has recently reversed according to the Census Bureau's Annual Housing Survey. At the beginning of 1981, 1.2 million homes had a second, related family sharing the unit; by March, 1982, this figure had increased to 1.9 million, the first significant jump since 1950. (Winerip, 1983; B-1.)

Households Most Substantially Influenced By Changes in Housing Costs

This evidence strongly suggests that the household's housing cost experience will depend to a great extent on its choice of tenure, its income, its mobility, and its stage in the family life-cycle.

In Chapter 3, five household types were identified that are theorized to have experienced unusually large changes in their housing costs; three with larger than average cost increases, and two with smaller than average cost increases.

(1) Households recently entering the housing market. Most of the public concern over increases housing costs has been oriented toward the first-time buyer. These households often have a difficult time saving up for a downpayment, especially if their income isn't keeping up with inflation. Even if they are able to

save (or borrow) for a downpayment, they still will have trouble making mortgage payments during the early years until their income grows sufficiently.

On the other hand, newly formed households that do purchase a home are in a much different position than those that don't. These home purchasers, while having tremendous cash outlays, have a highly leveraged capital asset, and the investment benefits of homeownership may offset some of the cash outlays.

(2) Elderly homeowners. Increases in utility costs and property taxes prompted by inflation can cause considerable hardship for elderly on fixed incomes. If they try to move to a smaller home, they may run into the problem of taking out a new mortgage at rates far in excess of those in effect when they bought their current home. This situation may trap the elderly in their current units even though they might prefer to live elsewhere.

(3) Non-elderly low-income households. Households in the bottom 30 percent of the income distribution are thought to be particularly hard hit by shifts in housing costs because they do not have the necessary flexibility in their incomes to absorb these cyclical changes. Like the elderly, lower-income households may be restrained from moving to a different unit because it would involve assuming larger mortgage payments at the current high rates. Households with erratic incomes have additional problems, because they will find it difficult to make

regular mortgage payments without a stable income.

(4) Upper-income middle-age couples and families. Households in the top 30 percent of the income distribution are in high marginal tax brackets and may be looking for ways to shelter their incomes. High mortgage interest rates, because they are tax deductible, are not as likely to scare off these households. Additionally, this group has the resources to meet the substantial financial requirements of homeownership. By already owning a home, they can roll over this equity into an even more expensive home if they so desire. This group is limited to households where the head is between the ages of 35 and 64 to concentrate on households that are in their prime income-earning years.

(5) Households that have recently purchased a home. Recent purchasers, in spite of the high cash requirements of home purchase, are likely to fare well over this period. They have a highly leveraged asset in their newly purchased home, and as long as house values are appreciating at least as fast as the after-tax mortgage interest rates (which they were for a majority of homeowners over this period), this leverage will work to their advantage. Repurchasers are in an even more advantageous position than purchasers, in that they can use the equity in their previous homes to meet the high cash demands of home purchase. Since newly formed households are looked at separately, this group includes those recent purchasers who have

not recently formed a household.

The following chapters will document how housing costs have changed for these groups, and what their responses have been.

5. Losers in the Housing Market

Newly Formed Households

There was a net increase of over 15 million households during the 1970's, and since all of these households must live somewhere, the housing costs facing new households was of considerable public interest over the latter part of this decade. In fact, the housing affordability literature has focused its concern almost exclusively on newly formed households and other households that are considering purchasing their first home. The young, recently married couple with little savings that is struggling to buy its first home tends to evoke widespread concern. It is a situation that most people have been in.

While this image may capture the public's concern, the reality of their plight was much less severe. Housing burdens for newly formed households were high; for the years studied they ranged from 30 percent to 80 percent higher than those of the general homeowner population. But the increases in these burdens were well below those of the average homeowner; the average burden increased 20 percent for newly formed households that purchased, and 64 percent for all homeowners. So while housing costs are certainly a concern, inflation induced housing cost increases over the 1970's had less effect on new households than they did on the general population.

Table 5.1

Housing Costs for Newly Formed Households
(expressed as average percent of household income)

	<u>1970</u>	<u>1976</u>	<u>1980</u>	Difference: <u>1970-1980</u>
Owners	21.8	23.7	26.1	+4.3 (+20%)
Renters	16.7	20.0	20.9	+4.2 (+25%)
	n=305	n=715	n=828	

Source: tabulations of the Panel Study of Income Dynamics, waves I through XIV.

New households have a distribution of housing costs that distinguishes them from others. Their cash costs of owning are very high. In fact, the out-of-pocket costs are almost exactly the same as their total housing costs. The non-cash housing costs and housing benefits are small relative to cash costs, and essentially offset each other.

Since new households that own their homes by definition have recently purchased it, the portion of mortgage payments composed of tax deductible interest payments is high. Their tax savings as a percentage of income are high compared with other owners. Also, since capital gains for this group tend to be quite low, tax savings are a large portion of the total investment benefits of homeownership.

While tax savings are high relative to other homeowners, capital gains for this group are unusually low. Newly formed households report increases in home values about 25 to 30 percent

below typical increases in sales prices of existing homes as published by the National Association of Realtors, and about 50 percent below average increases in home values as reported by all homeowners in the Panel Study. There are two possible explanations for these differences. The first is that newly formed households for some reason consistently underestimate the increases in the value of their homes. The second is that home values of new households were not increasing as fast as for other homeowners. Neither seems like a particularly plausible explanation. There is no reason to presume that homes purchased by newly formed households should appreciate more slowly than other homes. Likewise, since these households recently purchased a home, they should be familiar with house values. On the other hand, they may not be well versed in the rates of appreciation in home values, especially those witnessed during the latter part of the 1970's, since they had only recently entered the homebuying arena.

The high out-of-pocket costs and the low investment benefits of homeownership have produced a situation where -- for most new households at least -- the investment motive can be considered a disincentive to homeownership. For 1976 and 1980, the housing investment components increase housing costs; for only about 20 percent of the newly formed households that purchased in these years do the investment aspects of homeownership reduce housing costs. This may be one reason why only one out of five new

Table 5.2

Components of Housing Costs for Newly Formed Homeowners
(expressed as average percentage of household income)

	<u>1970</u>	<u>1976</u>	<u>1980</u>	Difference: <u>1970-1980</u>
<u>COSTS</u>				
1. Out-of-pocket	22.0	23.8	25.0	+3.0 (+14%)
2. Opportunity cost of equity	6.0	2.6	9.2	+3.2 (+53%)
3. Depreciation	0.6	0.5	0.7	+0.2 (+33%)
Total	28.6	26.9	34.9	+6.3 (+22%)
<u>BENEFITS</u>				
1. Tax savings	3.2	2.1	3.7	+0.5 (+16%)
2. Capital gains	4.1	1.6	5.8	+1.7 (+41%)
Total	7.3	3.7	9.5	+2.2 (+30%)
	n=305	n=715	n=828	

Source: tabulations of the Panel Study of Income Dynamics, waves I through XIV.

households purchase a home, and why renters in this group on average have lower housing burdens. For 1976 and 1980 at least, there are clear financial advantages to renting for most members of this group.

The distribution of housing costs for newly formed households has affected the behavior of this group. Even though housing costs have not risen as fast for other groups, the heavy cash requirements have kept the home purchase rate at about 20 percent over the decade. The income mix of purchasers and renters for this group has changed dramatically, however,

Table 5.3

Consumption and Investment Costs for Newly Formed Homeowners
(expressed as average percentage of household income)

	<u>1970</u>	<u>1976</u>	<u>1980</u>	Difference: <u>1970-1980</u>
<u>CONSUMPTION COSTS</u>				
1. Out-of-pocket	11.8	13.6	13.3	+1.5 (+13%)
2. Imputed rent	11.1	7.4	7.4	-3.7 (-33%)
Total	22.9	21.0	20.7	-2.2 (-10%)
<u>INVESTMENT COSTS</u>				
1. Mortgage payments	10.5	10.3	12.0	+1.5 (+14%)
2. Opportunity cost of equity	6.0	2.6	9.2	+3.2 (+53%)
3. Depreciation	0.6	0.5	0.7	+0.1 (+17%)
<u>BENEFITS</u>				
4. Imputed rent	11.1	7.4	7.4	-3.7 (-33%)
5. Tax savings	3.2	2.1	3.7	+0.5 (+16%)
6. Capital gains	4.1	1.6	5.8	+1.7 (+41%)
Total Investment	-1.3	+2.3	+5.0	+6.3
	n=305	n=715	n=828	

Source: tabulations of the Panel Study of Income Dynamics, waves I through XIV.

according to the Census Bureau's Annual Housing Survey. The proportion of high income households (incomes at least 1.5 times the median for U.S. households) that purchased increased by 20 percent between 1973 and 1980, from 36.6 percent to 43.9 percent. Likewise, among low-income households (incomes less than 80 percent of the U.S. median) the proportion that rented their

first home increased from 89.5 to 90.7 percent between 1973 and 1980. Quite clearly, the high cash demands of homeownership for newly formed households altered the mix of households who found homeownership both viable and attractive.

There have been other changes in the characteristics of newly formed households. Households that purchased their first home were much more likely to have at least two income earners in the household compared with new households that decided to rent, and compared with all other households. Related to the increase in the number of income earners is a delay in childbearing. New households that purchased are less likely than new renters or than other households to have had any children by age twenty-five. And finally, because of delayed childbirth (among other reasons), household sizes have gotten smaller. The increase in one or two person households is greater for new households that purchased than it is for those that rented, or for all other households.

In summary, newly formed households have not been very seriously harmed by the general increase in homeownership costs. Though housing costs are high for this group, the general inflation in homeownership costs has not affected this group as much as other households.

The cash costs of homeownership, however, remain high. This seems to have assisted in causing some minor changes in the economic and demographic characteristics of this population. First and foremost, it has segregated tenure choice by the

Table 5.4

Changes in Household Size
(percent of households containing one or two persons)

	<u>1970</u>	<u>1976</u>	<u>1980</u>	<u>Change: 1970-1980</u>
New households - purchasers	50	68	72	+44%
New households - renters	72	80	82	+14%
All households	41	51	57	+39%
	n=305	n=715	n=828	

Source: tabulations of the Panel Study of Income Dynamics, waves I through XIV.

household's income. High income households have become much more likely to purchase upon establishing a household, and low income households increased their already strong propensity toward renting.

Finally, new households -- especially those that purchased -- have more income earners per household, and are smaller because many have delayed starting a family. These demographic trends, while not necessarily caused by the changing costs of homeownership, are certainly consistent with the nature of homeownership costs for this group, particularly the heavy cash requirements both for downpayments and carrying costs.

Elderly Households

The elderly are another group whose ranks swelled between

1970 and 1980. Over this period, the number of elderly households increased thirty percent from 12.4 million to 16.1 million (Statistical Abstract, 1981; Table 66.) as longevity increased and more elderly retained independent residences. Because the elderly tend to have rather small fixed incomes, it is commonly assumed that they have had trouble responding to increases in housing costs. Whereas younger households can delay forming a family or put more household members to work to cope with higher housing costs, the elderly have limited responses available. Selling their current house and moving to a smaller one is one possible response, but in inflationary times when interest rates are high, many elderly homeowners have been reluctant to assume a new high interest rate mortgage if the proceeds from the sale of their current home don't cover the costs of a new one.

Renters are not even able to tap into this rainy day bank account -- the built-up equity of homeowners. They are totally exposed to the vagaries of the housing market. Fortunately, rental housing cost increases have tended to be quite a bit lower than homeownership cost increases.

Even for homeowners, however, housing cost increases have been somewhat below what might have been expected. Housing costs relative to income dropped slightly from 1970 to 1976, and then jumped between 1976 and 1980. However, this big jump was well below the cost increases faced by the average homeowner over this

Table 5.5

Housing Costs for Elderly Households
(expressed as average percent of household income)

	<u>1970</u>	<u>1976</u>	<u>1980</u>	Difference: <u>1970-1980</u>
Owners	21.7	20.8	27.5	+5.8 (+27%)
Renters	26.3	29.2	30.1	+3.8 (+14%)
	n=209	n=503	n=763	

Source: tabulations of the Panel Study of Income Dynamics, waves I through XIV.

period.

Nonetheless, housing costs remained high for the elderly. On average, housing cost burdens for owners and renters were on the order of 50 to 80 percent higher than they were for the typical household. This translates into spending an extra seven to nine percent of their income on housing.

Both housing costs and housing benefits grew to be very large portions of income for elderly homeowners. Costs were driven up by huge increases in the opportunity cost of equity; likewise benefits increased because of capital gains. Both of these components more than doubled between 1970 and 1980 after taking a slight dip between 1970 and 1976. The magnitude of the opportunity cost of equity and of the capital gain is due to the fact that elderly homeowners generally have high valued homes in relation to their income. Even relatively small increases in opportunity costs or capital gains are magnified when considered

in relation to elderly incomes.

Homeownership cost increases for the elderly derive principally from two sources. The first is the difference between the opportunity cost of the homeowner's equity and the capital gain produced by increases in property values. For each of the three years studied, opportunity costs exceeded capital gains. The other source is out-of-pocket costs. Though more modest in their magnitude, increases in these costs account for fully 40 percent of total cost increases. They were produced principally by increases in utility costs and property tax payments.

Tax savings for the elderly are almost non-existent. Incomes, and therefore marginal tax brackets, tend to be low. Also, the elderly tend to have low mortgage payments, if any, so their potential income tax deductions will be low, often not exceeding the standard deduction.

Some adjustments in the behavior of elderly households can be observed that may be related to changes in housing costs. One unexpected change is the increase in the ownership rate, which increased from 70.3 percent to 72.3 percent between 1970 and 1980. The homeownership rate increased much faster for high-income elderly households than it did for those with low incomes. But even this modest increase is misleading for two reasons. First, it does not necessarily imply that more elderly are purchasing homes. It could well imply that households becoming

Table 5.6

Components of Housing Costs for Elderly Homeowners
(expressed as average percent of household income)

	<u>1970</u>	<u>1976</u>	<u>1980</u>	<u>Difference:</u> <u>1970-1980</u>
<u>COSTS</u>				
1. Out-of-pocket	17.7	18.3	20.1	+2.4 (+14%)
2. Opportunity cost	16.5	13.5	32.5	+16.0 (+97%)
3. Depreciation	1.5	1.4	1.7	+0.2 (+13%)
Total	35.7	33.2	54.3	+18.6 (+52%)
<u>BENEFITS</u>				
1. Tax savings	0.4	0.3	0.4	0
2. Capital gains	14.4	13.1	27.3	+12.9 (+90%)
Total	14.8	13.4	27.7	+12.9 (+87%)
	n=209	n=503	n=763	

Source: tabulations of the Panel Study of Income Dynamics, waves I through XIV.

elderly over this period have higher ownership rates than the existing elderly population. In fact, the home purchase rates for elderly movers are low, and declined between 1973 and 1980, dropping from 44 percent to 35 percent of all movers. (Joint Center for Urban Studies, 1983.)

Traditionally, the elderly are thought to live in homes that are far larger than their immediate needs. While this stereotype has some validity, the elderly were choosing smaller homes during the 1970's when the trend was toward larger ones. By contrasting an index of minimum required space for a household (basically

estimated as one person per room) and comparing this figure with actual household space, it can be seen that by 1980 the percentage of elderly households living in homes with "extra" rooms had dropped below the average for all households.

Table 5.7

Households in Homes with Extra Space*
(in percentages)

	<u>1970</u>	<u>1980</u>	<u>Difference:</u> <u>1970-1980</u>
Elderly homeowners	37	34	-3
All homeowners	26	37	+11

n=204 n=763

*Defined as having four or more rooms beyond what is required by minimum habitability standards.

Source: tabulations of the Panel Study of Income Dynamics, waves I through XIV.

Finally, though the elderly are traditionally an immobile population, their rate of mobility dropped even lower -- by 15 percent -- between 1970 and 1980 according to the Annual Housing Surveys. While it might be expected that more elderly would move so that their housing consumption would be more in line with their preferred housing expenditures, there are apparently other factors, such as increased interest rates, that restrict this mobility.

In summary, though the elderly pay a high portion of their

income for housing, housing cost increases during the 1970's have not been as great for the elderly as for the typical homeowner. Still, there have been some notable changes in the behavior of elderly households. In spite of an increase in the overall rate of elderly homeownership, the home purchase rate for movers declined. While the reduction in the proportion of units that are large (in relation to household size) has decreased, so has the rate of mobility, indicating that the elderly may be having difficulty adjusting to changes in housing costs.

Low-Income Non-Elderly Households

A consistent theme with the households looked at thus far is that low-income households have responded much differently in the inflationary housing market of the 1970's. In fact, the dual nature of household responses to housing cost changes is largely based on income. Lower-income households have more difficulty saving up for a downpayment and in meeting the heavy cash burdens of homeownership during the first few years after purchase. Lower-income households also cannot effectively utilize the tax benefits of homeownership since they are in low marginal tax brackets. It has been pointed out repeatedly that tax savings are largely inconsequential in the household's homeownership burden. The one exception identified thus far is recent purchasers, who not only have large mortgage burdens in

comparison to other households, but also for whom mortgage interest payments are a large fraction of total mortgage payments. The point is that tax savings may well be a significant factor for households trying to attain homeownership.

It is not surprising then, that low-income households have not fared well in the inflationary housing environment of the 1970's. Housing burdens traditionally have been high for this population; in 1970 the average housing burden was in excess of the standard one-fourth of income rule-of-thumb, and over 40 percent of these homeowners paid at least 35 percent of their income for housing.

Given this backdrop, the experience of the 1970's for households of limited means can only be described as a disaster. By 1980, the average low-income homeowner was paying 13 percent more of its income for housing than in 1970. As a result, 55 percent of homeowners were paying at least 35 percent of their income for housing. As a percentage of income, this increase was almost twice as great as for the average homeowner. As with other homeowners, most of the increase came between 1976 and 1980.

The experience for renters was not quite so bad. Though burdens were higher than those of owners in 1970, the increases by 1980 were only half as great, and renter burdens by 1980 had fallen well below those of owners.

There were two major sources of the homeownership cost increases: increases in the opportunity cost of equity in the

Table 5.8

Housing Costs for Low-Income Non-Elderly Households
(expressed as average percent of household income)

	<u>1970</u>	<u>1976</u>	<u>1980</u>	Difference: <u>1970-1980</u>
Owners	26.1	30.9	39.4	+13.3 (+51%)
Renters	28.4	32.5	34.4	+6.0 (+21%)
	n=802	n=1111	n=1365	

Source: tabulations of the Panel Study of Income Dynamics, waves I through XIV.

home in contrast to house value appreciation (capital gain), and increases in out-of-pocket expenditures. In 1970 and again in 1976, capital gains exceeded the opportunity cost of equity. By 1980, however, this had reversed and the opportunity costs exceeded capital gains. In total, the difference between opportunity cost of equity increases and capital gain increases accounted for about 45 percent of homeownership cost increases.

While opportunity costs and capital gains are paper costs in that they are only indirectly realized by the homeowner, out-of-pocket costs are more immediately felt, especially by low-income households. Increases in out-of-pocket costs for this group of homeowners accounted for fully half of the total increase. By 1980, this group paid on average over one-third of its income as cash homeownership costs.

Because of the low marginal tax rates of this population and the increases in the standard deduction between 1970 and 1980,

tax savings are not only very small in relation to household income, but declined in importance over the decade. For all three years studied, tax benefits were non-existent for at least three-fourths of the low-income homeowners.

Table 5.9

Components of Housing Costs for Low-Income Non-Elderly Households
(expressed as average percent of household income)

	<u>1970</u>	<u>1976</u>	<u>1980</u>	Difference: <u>1970-1980</u>
<u>COSTS</u>				
1. Out-of-pocket	27.2	29.8	33.8	+6.6 (+24%)
2. Opportunity cost of equity	12.5	10.9	26.2	+13.7 (+110%)
3. Depreciation	1.3	1.4	1.7	+0.4 (+31%)
Total	41.0	42.1	61.7	+20.7 (+50%)
<u>BENEFITS</u>				
1. Tax savings	1.0	0.3	0.7	-0.3 (-30%)
2. Capital gains	14.7	11.9	22.4	+7.7 (+52%)
Total	15.7	12.2	23.1	+7.4 (+47%)
	n=802	n=1111	n=1365	

Source: tabulations of the Panel Study of Income Dynamics, waves I through XIV.

In spite of the large increases in homeownership costs and the resulting heavy housing costs burdens, changes in the behavior of this population have in general been quite limited.

One area where the response has been marked is tenure

choice. The number of homeowners among this population fell by ten percent between 1973 and 1980; a period when the overall homeownership rate was increasing. The tenure choice of households that moved paints an even clearer picture of how housing costs were affecting tenure choice. The proportion of all movers that purchased held steady at about one-third between 1973 and 1980. It increased a little between 1973 and 1976, and then dropped off between 1976 and 1980. The experience of movers who were low-income and non-elderly was more extreme. There was a steady drop in the proportion who chose to purchase over this period. By 1980, 28 percent fewer movers were choosing ownership than were in 1973.

Table 5.10

Homeownership Rates for Low-Income* Non-Elderly Households

	<u>1973</u>	<u>1976</u>	<u>1980</u>	<u>Difference:</u> <u>1970-1980</u>
All low-income non-elderly households	48.7	44.6	44.3	-4.4 (-9%)
All households	64.5	64.7	65.6	+1.1 (+2%)
Low-income non-elderly recent movers	21.7	17.0	15.6	-6.1 (-28%)
All recent movers	36.6	37.2	33.3	-3.3 (-9%)

*Low-income defined as households with income less than 80 percent of the U.S. median.

Source: Joint Center for Urban Studies, analysis of the Annual Housing Survey, 1983.

There were also some differences in the types of homes selected by this population. Many more chose mobile homes, while fewer were living in single family detached units. But in general, these low-income households were not making the type of life-style and demographic adjustments that would be expected of a population facing such large increases in housing costs. Compared to the general population, they were not delaying the time of marriage to a noticeable extent, they were not decreasing rates of household formation, they were not starting families later nor reducing the size of their families. Quite to the contrary, these households appear to be starting families earlier.

Finally, there are no indications of sending more household members into the work force to help alleviate higher housing costs. In 1980, only 20 percent of low-income homeowners had two or more income earners (which was fewer than did in 1976) as compared to over half for all households. Part of the reason is because low-income households have a higher proportion of single persons (35 percent versus 17 percent for all households in 1980 according to tabulations from the Panel Study) and single parents (15 percent versus 5 percent), which restricts the ability of this group to respond to higher housing costs. For whatever reasons, though, many low-income households have not felt compelled to modify their life-styles because of changes in housing costs.

Not Really Losers

While all three of these groups have housing costs that are significantly higher than average, two of the three -- newly formed households and the elderly -- experienced homeownership cost increases that were below those of the general population. These groups are clearly not the losers that they were theorized to be, or that they are perceived to be in the popular press. Low-income households, on the other hand, not only have high burdens, but ones that have grown considerably over the decade.

Household responses to increased housing costs have for the most part been measured. While there have been some changes in the choice of tenure, on the whole households have been slow to respond. It may be that they are waiting to see if these cost increases persist before they take any action, or it may be that households are willing to bear these higher costs and make their adjustments by reducing expenditures in other areas.

6. And The Winners Are...

Upper-Income Households

Upper-income households have not received much attention in housing affordability research. It has been assumed that the rich can well cope with inflationary housing costs, and that public policy should devote its attention to groups at risk in these times of soaring housing costs.

In fact, most of federal homeownership policy is well suited to meet the needs of the upper-income population. Income tax deductions, deferrals, and exemptions, which are the backbone of federal homeownership incentives, are of greater value to households that have large tax liabilities.

Moreover, this high-income population plays a critical role in the operations of the housing market. To the extent that filtering is an accurate concept of how housing markets work, the actions at the top end of the market largely determine the options open to the rest of the population. Newly constructed or rehabilitated homes entering the housing market are generally purchased by upper-income households. Therefore, the rate at which housing units turn over, as well as the characteristics of these units, are greatly influenced by households at the upper end of the income spectrum.

A final reason why it is important to look at the housing

costs and coping behavior of this group is that upper-income households should be best able to take advantage of the investment benefits of homeownership. More than any other group, these households should be sensitive to the investment implications of homeownership.

Upper-income households, as might be expected, have relatively low housing costs. Ownership burdens were in general one-half of those of the general population over the 1970's. The increase in the average burden for upper-income households between 1970 and 1980 (3.7 percent of income) is also just half of what it was for all owners (7.7 percent).

Table 6.1

Housing Costs for Upper-Income Households
(expressed as average percent of household income)

	<u>1970</u>	<u>1976</u>	<u>1980</u>	Difference: <u>1970-1980</u>
Owners	6.2	6.1	9.9	+3.7 (+60%)
Renters	9.4	11.7	11.3	+1.9 (+20%)
	n=513	n=679	n=838	

Source: tabulations of the Panel Study of Income Dynamics, waves I through XIV.

Upper-income renters were faced with smaller cost increases. There is an interesting contrast between the timing of increases in ownership and rental burdens. Ownership burdens held steady between 1970 and 1976, and jumped between 1976 and 1980. The

reverse is true for renters. Though this pattern is more pronounced for high-income households, it is true to a more limited extent for all of the households examined. Why should rents stabilize during periods of high inflation -- as in the period of 1976 to 1980 -- while homeownership costs skyrocket? While this is a complicated issue that needs more investigation, one explanation is based on the way in which inflation changes the investment benefits of housing. Rental property owners, like homeowners, derive their benefits from three sources: rental income, tax benefits, and capital gains. In periods of high inflation, capital gains are likely to increase in value (for reasons discussed in Chapter 2), potentially allowing rents to increase at a slower pace. Homeownership costs, because they incorporate factors other than imputed rent, may therefore behave much differently than rents.

The components of housing costs for upper-income homeowners share many similarities with those of other types of households: homeownership costs and benefits have increased at about the same rate, out-of-pocket cost increases account for about 50 percent of total cost increases, the opportunity cost of equity and capital gains both increased substantially, and tax savings decreased relative to income.

There are, however, two important differences in the homeownership cost components for upper-income households that merit some discussion. The first is that this is the first group

for whom the capital gains are consistently above the opportunity cost of equity. For other households, capital gains have exceeded the opportunity cost of equity in 1970 and 1976, but for no other group has this been true for 1980. In investment terms, this means that the cost of holding an asset (one's home) is below the cost at which it is appreciating, which should encourage homeownership.

Also, even though the tax benefits of homeownership have declined relative to income, they are at a very high level --

Table 6.2

Components of Housing Costs for Upper-Income Households
(expressed as average percent of household income)

	<u>1970</u>	<u>1976</u>	<u>1980</u>	<u>Difference:</u> <u>1970-1980</u>
<u>COSTS</u>				
1. Out-of-pocket	12.6	12.9	14.9	+2.3 (+18%)
2. Opportunity cost of equity	5.4	5.2	13.6	+8.2 (+152%)
3. Depreciation	0.4	0.5	0.7	+0.3 (+75%)
Total	18.4	18.6	29.2	+10.8 (+59%)
<u>BENEFITS</u>				
1. Tax savings	4.2	3.0	3.9	-0.3 (-7%)
2. Capital gains	8.7	10.0	16.0	+7.3 (+84%)
Total	12.9	13.0	19.9	+7.0 (+54%)
	n=513	n=697	n=839	

Source: tabulations of the Panel Study of Income Dynamics, waves I through XIV.

higher than for any other group and about 50 percent above the average for all homeowners. This is principally due to the high marginal tax brackets of this population. Tax incentives can provide substantial financial motivation for this population.

In spite of minor increases in housing costs, upper-income households responded as if costs had been reduced, both by increasing their homeownership rate, and by selecting better quality homes.

In 1973, almost 88 percent of high-income (incomes in excess of 150 percent of the U.S. median) middle-age households owned their own home. This figure continued to increase through the 1970's, and was over 91 percent by 1980. So while there was an increase in the overall homeownership rate of 1.1 percent between 1973 and 1980, there was an increase in the upper-income homeownership rate of almost three times this level. (Joint Center for Urban Studies, 1983.)

Not only were upper-income households increasingly turning to homeownership during the 1970's, but they were also selecting higher quality units. A higher proportion of homeowners chose single-family detached units, and a lower proportion chose mobile homes in 1980 than in 1970. For the overall population, just the reverse was true.

Recent Purchasers

In reaching the conclusion that housing costs declined and were frequently negative over the 1970's, Diamond (1980), Villani (1982), and Hendershott and Hu (1981) estimate housing costs using typical costs and benefits that recent home purchasers would face. One might presume, then, that recent purchasers have fared quite well from the way that inflation has altered their housing costs.

However, just the opposite argument could be made. Recent purchasers have many similarities with newly formed households -- the very group that epitomizes the housing affordability problem in the popular literature. Both groups are trying to scrape together enough cash to purchase a home at a time when inflation is eroding savings, and both are forced to finance their purchase with (at least by the end of the 1970's) double-digit mortgages that produce extremely burdensome monthly payments.

The theory of how inflation effects housing costs for recent purchasers is therefore mixed. They have the potential to benefit from greater tax savings, yet they also must pay higher carrying costs. An important factor, however, in determining how recent homebuyers will fare is whether the household was previously a renter (a "purchaser") or an owner (a "repurchaser"). Repurchasers will have equity from their

previous home which they can use toward the downpayment for their new one. A survey of homebuyers conducted by the U.S. League of Savings Associations (1982) indicates that in 1981 the typical repurchaser acquired almost \$40,000 from equity in their previous home [1]. This allowed 73 percent of repurchasers to put down at least 20 percent of the purchase price as a downpayment, while less than half of the purchasers put down this much. (U.S. League, 1982.) This also allows repurchasers much more flexibility in deciding how much they want to spend on a new home, as well as the degree to which they want to leverage this new purchase. Purchasers have more limited choices; they will tend to be highly leveraged, which is advantageous when home appreciation rates are high, but a problem when they are low compared to mortgage interest rates.

Housing costs for both purchasers and repurchasers were quite high over the period studied; generally about 50 percent above levels for the average homeowner. However, for both of these groups, costs have risen slowly; for repurchasers they have risen less than for any other group studied thus far.

Homeownership costs and benefits rose at about the same rate for purchasers, whereas benefits grew twice as fast as costs for

1. The U.S. League has conducted three surveys to find out more about homebuyers -- in 1977, 1979, and 1981. The 1981 study was based on information taken from more than 14,000 conventional mortgage loans on single-family homes made in the second quarter of 1981. The loans were randomly selected from 250 savings associations across the nation.

repurchasers. The principal difference was the rapid increase in capital gains for repurchasers.

Table 6.3

Housing Costs for Recent Purchasers and Repurchasers
(expressed as average percent of household income)

	<u>1970</u>	<u>1976</u>	<u>1980</u>	Difference: <u>1970-1980</u>
Purchasers	19.0	21.9	26.3	+7.3 (+38%)
Repurchasers	19.9	19.2	22.7	+2.8 (+14%)
	n=281	n=642	n=920	

Source: tabulations of the Panel Study of Income Dynamics, waves I through XIV.

Out-of-pocket costs are very high for both purchasers and repurchasers. This is largely because these households are using outside financing for large portions of their homes. And not only is the level notable, but as mortgage interest rates rose over the 1970's, the increase in these cash costs was substantial. For purchasers, increases in out-of-pocket costs were equivalent to 90 percent of total homeownership cost increases between 1970 and 1980; for repurchasers, they were equivalent to 165 percent of the total increases.

Because of the limited equity that these recent homebuyers hold in their homes, the opportunity cost of equity is low. Correspondingly, out-of-pocket costs are high, because a mortgage is used to finance what the homeowner doesn't hold as equity.

Tax savings as a percent of income have increased both for purchasers and repurchasers. By 1980, they were at a higher level for these households than for any other group studied. Tax savings increased because 1980 homebuyers had higher interest payments and were in higher marginal tax brackets than their 1970 counterparts.

Table 6.4

Components of Housing Costs for Recent
Purchasers and Repurchasers
 (expressed as average percent of household income)

	<u>PURCHASERS</u>			<u>REPURCHASERS</u>		
	<u>1970</u>	<u>1980</u>	<u>Change</u>	<u>1970</u>	<u>1980</u>	<u>Change</u>
<u>COSTS</u>						
1. Out-of-pocket	23.4	29.9	+28%	23.6	28.3	+20%
2. Opportunity cost of equity	3.1	7.5	+142%	5.9	12.5	+112%
3. Depreciation	0.5	0.8	+60%	0.7	1.0	+43%
Total	27.0	38.2	+41%	30.2	41.8	+38%
<u>BENEFITS</u>						
1. Tax savings	3.9	4.5	+15%	4.2	4.3	+2%
2. Capital gains	4.8	7.9	+65%	6.6	15.3	+132%
Total	8.7	12.4	+43%	10.8	19.6	+81%
	n=156	n=291		n=125	n=629	

Source: tabulations of the Panel Study of Income Dynamics, waves I through XIV.

As housing cost changes have been different for home purchasers and repurchasers, so are the adjustments that these

two groups have made. Home purchasers, especially first-time buyers, have had to cut back in many areas to afford homeownership. Repurchasers generally haven't had to make sacrifices to buy a different home; these purchases tend to be more discretionary. Though current homeowners may repurchase for many reasons -- such as a change in employment or wanting to live closer to relatives -- these households basically fall into one of two categories. Some households, because of high housing prices, couldn't afford to buy the type of home they wanted originally, so they bought something else and upgraded as they built up equity and as their incomes increased. Another group is more interested in the tax shelter and appreciation aspects of homeownership and repurchase to increase their housing "investment". When households in the Panel Study were asked why they moved, responses fell in three areas. About one in five mentioned job related reasons, about three in five indicated that they wanted to change (either increase or decrease) their housing consumption, while the rest mentioned other, usually involuntary, reasons. Repurchasers, however, more commonly indicated that their moves were oriented to changing their housing characteristics; at least 80 percent in both 1970 and 1980 listed housing consumption as the primary motivation. (Panel Study of Income Dynamics -- tabulations of data tapes.)

These differences in motivation, and the sacrifices that need to be made by home purchasers and repurchasers show up in

the relative home purchase activity of these two groups. In 1973, twice as many homes were purchased by households who previously rented as opposed to those who previously owned. By 1980, the numbers were approximately equal according to the Census Bureau's Annual Housing Survey. (See Table 6.5)

Table 6.5

Level of Homebuying Activity by Purchasers and Repurchasers

	<u>PURCHASERS</u>			<u>REPURCHASERS</u>		
	<u>1973</u>	<u>1980</u>	<u>Change</u>	<u>1973</u>	<u>1980</u>	<u>Change</u>
As percent of all households age 20-34	7.1	4.4	-38%	3.3	3.9	+18%
As percent of all recent homebuyers	68	53	-22%	32	47	+47%

Source: Joint Center for Urban Studies, analysis of the Annual Housing Survey, 1983.

The portion of home purchasers who were first-time buyers also dropped considerably. Between 1977 and 1981, the proportion of homebuyers who had never owned a home dropped from 36 to 14 percent, according to a survey conducted by the United States League of Savings Associations. (U.S. League, 1982; 24.)

The types of cutbacks and other adjustments made by first-time buyers and other home purchasers (as distinguished from repurchasers) fall into three areas: changes in the types of homes purchased, financial adjustments, and demographic adjustments.

Purchasers are buying older, smaller homes that tend to be

of poorer quality than those bought in 1970. (U.S. League, 1982; 24.) The proportion of purchasers that bought single-family detached homes dropped between 1970 and 1980, while the proportion buying mobile homes and condominiums increased. (Panel Study of Income Dynamics -- tabulations of data tapes.)

Despite the fact that purchasers are buying less desirable homes, they tend to have higher incomes than did their counterparts ten years earlier. The proportion of purchasers that are in the top 30 percent of the income distribution increased by more than 25 percent between 1970 and 1980, while the proportion of purchasers that were at the bottom end of the income distribution declined. (Panel Study of Income Dynamics -- tabulations of data tapes.) Clearly, more and more low and moderate income households were being excluded from the home purchase market.

The change in the income distribution of home purchasers is partly due to the fact that these households were increasingly sending multiple members into the workforce. The percent of purchasers that had two or more income earners increased from 44 to 60 percent between 1970 and 1980, well above the increase for all households. (Panel Study of Income Dynamics -- tabulations of data tapes.)

In spite of higher incomes, first-time buyers were putting less money into their home purchase as a downpayment (U.S. League, 1982; 30), and were using alternative sources of funding

for downpayments. Whereas first-time purchasers have traditionally relied almost exclusively on their personal savings for downpayments, by the late 1970's they were increasingly looking to relatives, the seller, or traditional financial institutions as a source of these funds. For example, in 1976, relatives of the first-time buyer provided 11 percent of the downpayment on average. By 1980, this had jumped to 20 percent. This means that by 1980 relatives were providing over \$2,500 toward the downpayment for the typical first-time buyer.

Table 6.6

Source of Downpayment for First-Time Homebuyers
(in percentages)

	<u>1976</u>	<u>1980</u>	<u>Change</u>
A. <u>Source of Downpayment</u>			
1. All from own savings	71	51	-28%
2. All or part from relatives	20	33	+65%
3. Other	9	16	+78%
B. <u>Average Composition of Downpayment</u>			
1. Own savings	80	67	-16%
2. Relatives	11	20	+82%
3. Other	9	14	+56%

Source: "1982 Homebuyer's Survey: Housing on Hold", The Guarantor, Chicago Title Insurance Company, January/February, 1983, pp. 10-11.

Finally, housing cost increases may have reinforced other changes that purchasers were making in their life-style. Many

were delaying marriage. Whereas in 1970 ten percent of purchasers were unmarried, by 1980 this had jumped to 28 percent. (Panel Study of Income Dynamics -- tabulations of user tapes.) Those purchasers that were married were delaying the start of a family and reducing the number of children. In 1970, over half of the purchasers had at least one child by age 25; by 1980 this had dropped to one-third. (Panel Study of Income Dynamics -- tabulations of data tapes.)

Repurchasers were in very different circumstances than purchasers. They were buying to upgrade their housing. They were using not only their growing incomes but also the equity they had built up in their previous homes to finance their purchase. As mentioned previously, by 1981 repurchasers averaged almost \$40,000 in capital gain and amortized principal from the sale of their previous residence. It is no surprise, then, that the net worth of repurchasers averaged over two and one-half times that of first-time purchasers. (U.S. League, 1982.)

In spite of rising housing costs, repurchasers continue to purchase more desirable homes. The proportion of repurchasers buying single-family detached homes increased between 1970 and 1980, while the proportion buying mobile homes decreased. Both of these run counter to the trends for the rest of the population. (Panel Study of Income Dynamics -- tabulations of data file.)

To increase their housing consumption, repurchasers made

almost no adjustments in other areas of their life. Marital status, timing of family formation, fertility, and income composition all remained relatively constant over the 1970's. (Panel Study of Income Dynamics -- tabulations of data file.)

7. Homeownership As An Investment

In economic terms, homeownership has long been recognized as having both investment and consumption aspects. Owning a home allows the owner not only to live in it, but also to enjoy certain investment benefits -- namely, savings on federal income taxes, and the potential for increase in the value of the home.

Though recognized, the investment aspects of homeownership have traditionally received much less attention in the research literature. Models of urban housing markets and theories of residential choice have concentrated on consumption issues like accessibility to employment, the quality of local public services, and neighborhood characteristics as well as the physical characteristics of the home. But as inflation began heating up in the latter 1970's -- driving up housing prices and homeownership costs but not diminishing households' desires for more housing -- these consumption oriented theories proved inadequate. Why would households increase their outlays for housing if they weren't getting more benefits from it? As analysts began searching for alternative explanations of residential choice, investment considerations became an obvious candidate. The financial uncertainty brought about by inflation, coupled with the increased investment potential of homeownership, have led some observers to conclude that a shift from housing as shelter to housing as investment has occurred. This

"post-shelter society", in the view of Sternlieb and Hughes (1979), leads households to make their housing decisions based on the long-term investment potential of a home rather than on their immediate shelter needs.

There is little doubt that this attention to the investment potential of homeownership is long overdue. Studies have shown that one's home is the principal asset and the major vehicle for wealth accumulation for a majority of U.S. households, particularly those with low and moderate incomes. (Projector and Weiss, 1966.) Furthermore, the potential for investment benefits increase when the rate of inflation is high. The two main investment benefits -- capital gains and tax savings -- both increase in value as inflation increases because of the preferential tax treatment traditionally bestowed on homeownership.

In fact, several studies conducted in the late 1970's concluded that the way in which inflation changed the costs and benefits of homeownership made it a good investment. Diamond states that the investment benefits more than offset higher housing prices, mortgage interest rates and other homeownership costs, and concludes that the cost of owning a home declined 30 percent over the decade. (Diamond, 1980; 295.) Hendershott and Hu found the return on homeownership to be more than ten percent in excess of the return on financial assets over this period. (Hendershott and Hu, 1981; 188-189.)

Has homeownership really inspired a different breed of investors; a new generation that prefers to keep its investments close to home? Are current homebuyers really so financially oriented that they care more about a home's internal rate of return than its layout, location, and neighborhood characteristics? Are homebuyers more concerned with a home's ability to shelter their income than their family members?

While inflation has certainly influenced the way that many people make their housing choices, its importance seems overstated in recent literature. For most households at least, housing decisions are still principally consumption decisions, though inflation has added a new dimension to them. To better understand the importance of homeownership as an investment, it is useful to consider two issues: "How good an investment is homeownership?"; and "Are households making their housing decisions the same way they would make other investment decisions?"

Is Homeownership a Good Investment?

The investment view of homeownership notes that inflation increases the benefits of owning a home. But while the benefits of homeownership increase with the rate of inflation, so do the costs. Mortgage interest rates, utility costs, property taxes, maintenance and repairs, and the opportunity cost of equity in

the home all can be expected to increase proportionately with inflation. The question of whether homeownership is a good investment during inflationary times therefore depends on the relative increases in the costs and benefits of homeownership. Since the costs and benefits vary from household to household -- depending principally on its level of housing consumption and its marginal tax rate -- the question of whether the net impact of inflation is positive or negative depends on the circumstances of a specific household.

For most households, the homeownership investment costs exceed benefits during periods of high inflation, at least if the experience of the 1970's is representative. As can be seen in Table 7.1, analysis of the Panel Study of Income Dynamics indicates that all of the investment cost categories increased between 1970 and 1980, while two of the three investment benefit categories declined. The net result was that the benefits derived from investing in homeownership decreased 60 percent between 1970 and 1980. By 1980, homeownership investment benefits could offset only a small fraction of the consumption costs, whereas in 1970 they were able to offset almost one-half of these costs for the average homeowner.

Even though inflation increased the overall costs of homeownership for most households during the 1970's, the net effect varied considerably for different types of households. Households in lower tax brackets and those recently entering the

Table 7.1

Housing Consumption and Investment Costs for Homeowners
(expressed as average percent of household income)

	<u>1970</u>	<u>1976</u>	<u>1980</u>	Difference: <u>1970-1980</u>
<u>CONSUMPTION COSTS</u>				
1. Out-of-pocket	10.2	12.3	13.7	+3.5 (+34%)
2. Imputed rent	11.7	10.0	9.7	-2.0 (-17%)
Total	21.9	22.3	23.4	+1.5 (+7%)
<u>INVESTMENT COSTS</u>				
1. Mortgage payments	6.5	5.8	7.1	+0.6 (+9%)
2. Opportunity cost of equity	7.4	7.2	18.1	+10.7 (+145%)
3. Depreciation	0.7	0.8	1.1	+0.4 (+57%)
<u>BENEFITS</u>				
4. Imputed rent	11.7	10.0	9.7	-2.0 (-17%)
5. Tax savings	3.0	2.0	2.6	-0.4 (-13%)
6. Capital gains	9.7	11.1	17.9	+8.2 (+85%)
Total Investment	-9.8	-9.3	-3.9	+5.9 (+60%)
	n=3018	n=4643	n=5999	

Source: tabulations of The Panel Study of Income Dynamics, waves I through XIV.

housing market suffered the greatest increases in housing costs. For these groups, the investment related costs of homeownership exceeded the benefits, thereby increasing the overall costs of owning a home.

For other groups -- upper-income households and households that had owned for longer periods -- inflation had a positive

side. These households either could take advantage of the federal income tax deductions from the higher mortgage interest rates, had older, lower-rate mortgages, or both. Either way they benefitted from the inflation-induced increases in their property values. For these groups, the investment benefits of

Table 7.2

Investment Costs and Benefits for Homeowners(a)
(expressed as average percentage of household income)

		<u>1970</u>	<u>1980</u>	Difference: <u>1970-1980</u>
Newly Formed	Investment Costs	17.1	21.9	+4.8 (+28%)
	Benefits	18.4	16.9	-1.5 (-5%)
	Net Cost	-1.3	+5.0	+6.3
Elderly	Investment Costs	20.7	36.8	+16.1 (+78%)
	Benefits	34.0	41.8	+7.8 (+23%)
	Net Cost	-13.3	-5.0	+8.3 (+62%)
Non-elderly Low-income	Investment Costs	23.4	38.2	+14.8 (+63%)
	Benefits	32.9	37.1	+4.2 (+13%)
	Net Cost	-9.5	+1.1	+10.6 (+112%)
Upper- Income	Investment Costs	11.7	20.3	+8.6 (+74%)
	Benefits	22.2	27.3	+5.1 (+23%)
	Net Cost	-10.5	-7.0	+3.5 (+33%)
Purchasers	Investment Costs	13.7	21.8	+8.1 (+59%)
	Benefits	18.9	20.2	+1.3 (+7%)
	Net Cost	-5.2	+1.6	+6.8 (+131%)
Repurchasers	Investment Costs	15.3	25.8	+10.5 (+69%)
	Benefits	22.5	29.1	+6.6 (+29%)
	Net Cost	-7.2	-3.3	+3.9 (+54%)

(a) Investment costs are mortgage payments, the opportunity cost of equity in the home, and depreciation. Investment benefits are the imputed rent of the home, tax savings, and the (unrealized) capital gain resulting from appreciation in value of the home.

Source: tabulations of The Panel Study of Income Dynamics, waves I through XIV.

homeownership continued to exceed the investment costs.

Given that the investment benefits of homeownership appear to decline for many households during periods of high inflation, how are households likely to respond? There is some evidence that households will behave as expected; that is, as the cost of homeownership rises, households will tend to reduce their desire for it. For example, Follain (1982), and Boehm and McKenzie (1982), in estimating the impact of inflation on housing consumption and tenure choice, arrive at the same conclusion: increased inflation reduces the probability of homeownership and the demand for housing. The increased out-of-pocket costs associated with inflation, given the standard mortgage, outweigh the potential for house value appreciation and tax savings for most households. Follain does identify one small segment of the population -- households in high tax brackets with high levels of housing consumption -- that may be expected to increase its level of housing consumption during inflationary times. Both find the effect of inflation to be substantial: a sustained increase of one percent in the rate of inflation is found to decrease the ownership rate by three to four percent, and simultaneously reduce aggregate housing demand by about four to five percent. Kearl (1979) estimates that inflation also reduces the volume of new residential construction, and did so to the tune of about 10 to 12 billion dollars over the period of 1966 to 1973.

On the other hand, these findings are predicated on a fairly

traditional view of the economic costs and benefits of homeownership. Households may have different criteria in making their housing decisions. There is little empirical evidence to indicate which cost factors households consider to be important, but intuitively one would think that the out-of-pocket costs weigh the heaviest. The second tier would probably consist of the non-cash investment benefits -- tax savings and capital gains -- because these are eventually realized as cash savings; annually for tax savings, and whenever the homeowner decides to sell or refinance for capital gains. The non-cash costs -- depreciation and the opportunity cost of equity -- can be expected to have the least bearing on homeowners' decisions because these are truly paper losses. The homeowner never directly parts with any cash for these costs. The previously mentioned work by Follain concurs with this notion that some housing costs are discounted by homeowners. In separating housing costs into two categories -- cash costs and expected capital gains -- he finds that housing demand is much more sensitive to carrying costs. (Follain, 1982; 581.)

It may well be that the typical household ignores these investment costs and considers only the cash costs and investment benefits when making its housing decisions. By considering only the cash costs and investment benefits of homeownership, a very different housing cost picture emerges. For all households in 1980, the investment benefits were about equal to the cash costs,

whereas they had been much less in 1970. (See Table 7.3.) For three of the household groups -- the elderly, upper-income households, and recent repurchasers -- the net benefits from homeownership increased between 1970 and 1980. For three other groups -- newly formed households, non-elderly low-income households, and recent purchasers -- the net benefits decreased.

It is significant that these findings perfectly mirror the changes in tenure choice noted in the previous Chapters. Households that experienced increased financial benefits from homeownership were the ones that increased their rate of homeownership, (given this definition of housing costs) while those that faced higher cash ownership costs in relation to investment benefits reduced their rate of homeownership.

The same is generally true for changes in housing consumption. Households that improved their housing between 1970 and 1980 -- measured in terms of percentage of households that lived in single family units, and the relationship between household size and the size of the housing unit -- are also those households that benefitted by this new measure of homeownership cost: upper-income households and recent repurchasers. Elderly households, however, do not show this level of increase in housing consumption.

This method of computing homeownership benefits may also help to explain the decline in mobility between 1970 and 1980. If homeowners' perceptions of their investment benefits are

Table 7.3

Comparison of Cash Costs and
Investment Benefits for Homeowners(a)
 (expressed as average percentage of household income)

		<u>1970</u>	<u>1980</u>	Difference: <u>1970-1980</u>
All Households	Investment Benefits	24.4	30.2	+5.8 (+24%)
	Cash Costs	16.1	20.6	+4.5 (+28%)
	Net Benefits	+8.3	+9.6	+1.3 (+16%)
Newly Formed	Investment Benefits	18.4	16.9	-1.5 (-5%)
	Cash Costs	22.0	25.0	+3.0 (+14%)
	Net Benefits	-3.6	-8.1	-4.5 (-125%)
Elderly	Investment Benefits	34.0	41.8	+7.8 (+23%)
	Cash Costs	17.7	20.1	+2.4 (+14%)
	Net Benefits	+16.3	+21.7	+5.4 (+33%)
Non-Elderly Low-income	Investment Benefits	32.9	37.1	+4.2 (+13%)
	Cash Costs	27.2	33.8	+6.6 (+24%)
	Net Benefits	+5.7	+3.3	-2.4 (-42%)
Upper-income	Investment Benefits	22.2	27.3	+5.1 (+34%)
	Cash Costs	12.6	14.9	+2.3 (+18%)
	Net Benefits	+9.6	+12.4	+2.8 (+29%)
Purchasers	Investment Benefits	18.9	20.2	+1.3 (+7%)
	Cash Costs	23.4	29.9	+6.5 (+28%)
	Net Benefits	-4.5	-9.7	-5.2 (-116%)
Repurchasers	Investment Benefits	22.5	29.1	+6.6 (+29%)
	Cash Costs	23.6	28.3	+4.7 (+20%)
	Net Benefits	-1.1	+0.8	+1.9 (+173%)

(a) Cash costs include mortgage payments, utilities, property taxes, maintenance and repairs, and insurance. Investment benefits include the imputed rent of the home, tax savings, and the (unrealized) capital gains resulting from the appreciation in value of the home.

Source: tabulations of The Panel Study of Income Dynamics, waves I through XIV.

heavily oriented toward cash costs and ignore opportunity costs, then homeowners would put a premium on retaining and retiring their older, lower-rate mortgages. Moving implies taking out a new mortgage and in all likelihood increasing cash outlays. Confronted with this choice, households may prefer to delay moving until interest rates settle down.

Are Homeowners Acting Like Investors?

For most households, homeownership is not a good investment during times of high inflation, at least according to traditional investment criteria. This finding, however, does not address the issue of whether the seemingly anomalous housing market behavior of many households during the 1970's was investment oriented. Because homeownership is not a traditional investment asset, households may have different investment criteria when they make their housing decisions. On the other hand, households may merely be making bad investment choices due to a lack of understanding of the financial effects of inflation. In any event, if homeowners have become more investment oriented, it should be evident in the way they make their housing decisions.

For example, several analysts have noted that homeownership's unique leveraging abilities make housing a particularly attractive investment during inflationary times.

Downs (1978) describes this "leveraging game" as consisting of borrowing most of the capital to purchase a home and then letting inflation produce a modest capital gain against the total asset value, which is a huge capital gain when compared to the buyer's small equity investment.

Though this strategy may make sense financially, consumers haven't pursued it. According to figures from the Federal Home Loan Bank Board, homebuyers on average put down a larger portion of the purchase price during the 1979 to 1981 period when the rate of inflation was in double digits than during 1971 to 1972 when inflation averaged under four percent. (Federal Home Loan Bank Board Journal, various issues.)

Down payments as a proportion of purchase price increased largely because of changes in the characteristics of homebuyers. Repurchasers generally make higher downpayments than first-time buyers because they have equity from the sale of a previous home. (U.S. League of Savings Associations, 1982; 30.) The homebuying population was increasingly composed of repurchasers over the latter 1970's. But it is precisely these repurchasers that one would expect to have a sophisticated investment orientation. They have greater flexibility in the size of the downpayment that they can make, yet from 1977 to 1981 about 70 percent of the repurchasers put down at least 20 percent of the purchase price as a downpayment. These increases in downpayment to home value ratios don't appear to result merely from changes in lending

policies of thrifts or banks over this period since first-time buyers continued to put down smaller downpayments. Over this same 1977 to 1981 period, less than half of the first-time buyers put down as much as 20 percent of the purchase price when they bought a home. (U.S. League, 1982; 30.)

Since households were leveraging their homeownership investments less rather than more with the increased inflation of the late 1970's, their investment strategy may have been to quickly build up equity in their homes and then liquidate it through refinancing or sale. Since inflation forces homeowners to build up equity rapidly in their homes, the "leveraging game" quickly loses its value unless the homeowner periodically "releverages". A leveraging strategy is predicated on the owner holding little equity in the home while realizing a substantial capital gain. As equity builds up, this capital gain is spread over greater homeowner equity, producing a lower rate of return. To overcome this, the homeowner can reduce the amount of equity held, either by taking out a second mortgage, refinancing the entire home, or selling the home and only putting a little down when a new one is purchased. The equity removed from the home can then be used to leverage some other investment.

In fact, homeowners were taking actions to convert some of the equity in their homes to cash. The previously mentioned survey conducted by the U.S. League indicates that repurchasers were using only a portion of the proceeds realized from the sale

of a previous residence toward the downpayment of a new home; in both 1979 and 1981, this figure was about 45 percent of the capital gain realized. (U.S. League of Savings Associations, 1982; 30.) Likewise, Seiders found that household borrowing against equity in their homes picked up sharply in the late 1970's. He estimates that borrowing against home equity accounted for nearly half of home mortgage debt formation during the 1975 to 1977 period; which was about double the proportion it had been between 1970 to 1975. (Seiders, 1978.) A survey conducted by Advance Mortgage Corporation confirms this increase in borrowing against equity by homeowners. This study found that by 1981, two out of every five mortgages issued by financial institutions were second mortgages. (Yudis, 1982; A56.)

Using the equity in one's home as collateral for a loan is rapidly increasing in popularity. A recent report predicts that the equity access account may become the predominant form of consumer credit in the 1980's. (Synergistics, 1983; 55.)

The growth in loans made against home equity are popular for borrowers because they carry lower interest rates than other types of consumer loans, and attractive to lenders because they are fully secured. To a large extent equity loans have replaced unsecured personal loans as a form of personal credit. Second mortgage loans made by consumer finance companies increased on average over 50 percent per year over the period of 1977 to 1980. Other personal loans made by these same finance companies showed

Table 7.4

Second Mortgage Lending by Consumer Finance Companies 1977-1980
(percent change over previous year-end)

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	average annual change: <u>1977-1980</u>
second mortgage loans	43.0	58.9	75.9	41.3	54.8
other personal loans	9.3	6.4	4.4	-20.2	-0.1

Source: National Consumer Finance Association, 1982.

a slight decline over this same period. (See Table 7.4.)

What are homeowners doing with this cashed-in equity? Using data from a national consumer credit survey, Seiders (1978; 13) found that about six of ten homeowners assuming junior (second) mortgages or refinancing their first mortgage did so primarily to improve their housing; either to improve their current home or to use as a downpayment on a second home. An additional two out of ten did so to pay bills or to purchase other consumer goods, while the remaining 20 percent used the money for other reasons not specified by Seiders. Advance Mortgage Corporation found that supplementing an assumable first mortgage was a common reason for taking out a second mortgage. Other reasons given were: purchasing a second home, consolidating debts, or financing home improvements. (Yudis, 1982; A56.)

While some of these activities are consumption oriented -- paying off bills, buying consumer goods, consolidating debt -- the others are not so clear. Households may buy a second home

for its investment potential or to enjoy during vacations. For most, it is likely some combination of the two. Improvements to one's current home have the same mixed motivation. With home improvements, however, an investment orientation is not as warranted. A recent study by a home building supplier found that generally less than 50 percent of home improvement expenditures are recaptured upon sale. (Alcan Aluminum Company, 1983.) While the home supplier points to this increased value as an incentive for undertaking home improvements, from an investment perspective, an outlay that loses half of its value would not be looked upon favorably. Clearly there needs to be other satisfaction to the owner to justify the home improvement.

With the limited available information it is difficult to determine how much of the increasingly popular home equity loans are used for consumption purposes and how much for investment. There is no question that a substantial portion is used to finance increased consumption for homeowners; actions that are to be expected in times of high rates of inflation and high mortgage rates.

For recent homebuyers, the high mortgage rates "tilt" the real value of the payments toward the early years of repayment. These high payments can be expected to force many recent homebuyers to cut back in other areas. Once the house has appreciated in value, which it does very quickly during times of high inflation, this equity becomes a source of funds to

compensate for the deferred consumption. For other homeowners, it is merely a windfall produced by inflation. It nonetheless serves as a convenient nest egg to fund those purchases for which there never seems to be enough money.

While some households were tapping into the built-up equity in their homes, the overwhelming majority were just letting it sit. Both mortgage debt and home equity grew rapidly through the 1970's as house values inflated. The mortgage debt increase was caused by increased house prices as well as an increase in equity loans. But the increase in home equity -- fueled by the persistent inflation over the decade -- was much greater. Home equity loans and second mortgages didn't even begin to offset the general increase in home value appreciation. (See Table 7.5.)

In fact, this increase in home equity was part of a larger shift on the part of households away from traditional savings and investment in financial assets and toward building home equity as an asset. As shown in Table 7.5, households were decreasing the share of income they were devoting to checking and savings accounts over the latter part of the decade, while home equity in relation to income continued to grow throughout the decade.

Since inflation most directly affects the investment aspects of homeownership, most observers have assumed that households have adopted a new investment mentality in making their housing decisions. The evidence points to the contrary.

First, housing decisions don't appear to be conforming to a

Table 7.5

Homeowner Assets and Liabilities

	Average Home Mortgage Debt <u>Outstanding</u>	Net Equity Held by <u>Homeowner</u>	Home Equity as Percentage <u>of Income</u>	Savings as Percentage <u>of Income</u>
1970	7,290	9,810	112%	98%
1973	9,090	15,010	143%	103%
1976	11,290	21,010	166%	111%
1978	14,680	26,820	178%	107%
1980	18,510	32,790	185%	100%

Sources:

Column 1 -- Total home mortgages as reported in the Board of Governors of the Federal Reserve System, Flow of Funds Accounts -- Second Quarter, 1983, p.65, divided by the number of owner-occupied housing units from the Annual Housing Survey, Part C, Table A-1, various years.

Column 2 -- Column 1 subtracted from the median value of owner-occupied homes as reported in the Annual Housing Survey, Part C, Table A-1, various years.

Column 3 -- Column 2 divided by the median household income as reported in the Statistical Abstract of the U.S., various years.

Column 4 -- Total checkable deposits, currency, and savings deposits as reported in the Board of Governors of the Federal Reserve System, Flow of Funds Accounts -- Second Quarter, 1983, p.65, divided by the number of households and the median household income as reported in the Statistical Abstract of the U.S., various years.

traditional investment calculation. If households were considering investment costs and benefits of homeownership, especially opportunity costs, they undoubtedly would be making different decisions than they made during the 1970's.

Still, their behavior closely conforms to an alternative calculation of homeownership cost; one that emphasizes the more direct costs and benefits while ignoring the indirect costs.

This implies that households make their housing choices like they make any other consumption choice; if the product becomes cheaper they buy more of it, and if it becomes more expensive they buy less. Those for whom the cost of homeownership declined bought bigger and better homes, or switched from renting to owning, while the reverse is true for those for whom the cost increased.

Secondly, the ways that households have been using their built-up equity also suggests that homeownership is viewed in large part for its consumption benefits. Inflation, combined with the standard fixed-rate mortgage, forces high initial payments and a rapid build-up of equity. Many households are tapping into this equity, primarily to compensate for reduced consumption in previous years. They use this equity as collateral for the loan because they can get better terms than with an unsecured consumer finance loan. Many others have not refinanced, but are still in a sense using their home equity to finance consumption. For these households, increases in home equity have permitted them to decrease the portion of their income they typically would devote to savings or other financial investments. While this home equity can certainly be considered an alternative investment, it usually isn't being treated as such by the homeowner. The standard mortgage forces this situation, and homeowners go to great lengths to reduce its investment potential and convert it into funds for consumption. An increasing number of households are refinancing or taking out a

second mortgage to diminish their investment equity. Many more were taking a different route to achieve the same goal. They were leaving the equity intact and diverting other investments for consumption. The end result is essentially the same: households creatively manipulating a situation to retain a desired level of consumption by avoiding an unintended over-investment in homeownership.

8. Summary and Conclusions

Overview of Approach

The sustained increase in house prices, mortgage interest rates, and other costs of owning a home during the 1970's put housing affordability into the forefront of public policy concerns by the latter part of the decade. The fact that changes in homeownership costs and changes in the rate of inflation closely parallel one another is no accident; inflation is the single most important influence on the cost of homeownership.

Though the contention that inflation greatly influences the cost of buying and owning a home is not at issue, the nature of this influence is. Inflation simultaneously detracts from and enhances homeownership affordability. The standard mortgage instrument, characterized by a fixed interest rate and flat dollar payments, is very susceptible to changes in the rate of inflation in the larger economy. As higher rates of inflation are translated into higher mortgage interest rates, the "real" value of mortgage payments becomes very high during the early years of mortgage repayment, and quickly tails off as inflation erodes the value of the later payments. This creates an obstacle for homebuyers who can't afford the high early payments.

On the other hand, inflation enhances the tax benefits of homeownership. While inflation increases mortgage interest rates,

these interest payments are tax deductible, so that the effective (after-tax) interest rate can be much lower. Also, inflation increases the rate of appreciation of home values. Capital gains from homeownership are also given favorable tax treatment -- through provisions permitting their deferral or even exemption -- so that the eventual tax liability is likely to be much lower than it otherwise would have been.

The bottomⁱⁿ line is that inflation increases both the costs (mortgage payments, utility costs, etc.) and benefits (tax savings, capital gains) of owning a home. Whether the net effect is positive or negative depends on a lot of factors. The important point is that there is no single result: inflation makes homeownership more affordable for some households and less affordable for others. To gauge the effect on any particular household, it is necessary to consider the characteristics of that household and the specifics of their homeownership expenditures.

There are many individual elements in the homeownership cost package; while most are costs to the owner, some are benefits that offset costs. Some of the costs are cash payments, while others are indirect costs. A listing of these costs and benefits is provided in Table 8.1.

The magnitude of these individual homeownership cost components is dependent not only on the home but also on the characteristics of the household. Low-income households, because

of their lower marginal tax brackets, will be able to benefit less from the tax benefits of homeownership. This means that, all else being equal, housing costs will be higher for these households.

Table 8.1

Components of Homeownership Costs

<u>Costs</u>	<u>Benefits</u>
mortgage payments*	shelter
utilities*	tax savings
property taxes*	capital gains
maintenance and repairs*	
insurance*	
transaction costs*	
opportunity cost of equity	
depreciation	
capital gains taxes	

*denotes an out-of-pocket (cash) expenditure

Younger households, who are more likely to be first-time buyers, are also likely to have higher housing costs. Having purchased a home more recently, they will be paying higher mortgage interest rates without necessarily having higher rates of appreciation in home values as compensation. Since first-time buyers generally have more severe limitations in their incomes and assets, they have less flexibility in the type of home they can buy or in the downpayment they can make, potentially increasing their mortgage payments.

Finally, when the household bought their home is likely to influence homeownership costs. Since mortgage interest rates and

house prices climbed toward the end of the 1970's, recent homebuyers will generally have higher costs. However, they also have the potential for greater tax benefits since mortgage payments are almost all interest in the first few years of repayment. High-income buyers may compensate for the higher costs of moving to a better home with the increased benefits they realize.

The Changing Nature of Housing Costs

The ability of many households to afford housing was greatly diminished by the level of inflation in the U.S. economy during the 1970's. Households that were able to purchase homes paid a much higher portion of their income for for less desirable homes; others that owned were unwilling or unable to move because of escalating mortgage interest rates, while others were simply frozen out of the ownership market because of the high costs.

Why does inflation have such a pervasive and dampening effect on the housing market? This can best be understood by examining what inflation does to the components of homeownership costs. First and foremost, inflation increases the out-of-pocket costs of homeownership. Mortgage interest rates, property taxes, utility costs, and other cash homeownership payments increase with inflation, and as a group these expenditures have increased more rapidly than household income.

The benefits of owning a home also increase with inflation. The tax benefits of homeownership increase because higher mortgage interest rates and property tax rates produce larger deductions from taxable income, and these deductions become worth more as inflation catapults households into higher tax brackets. A second benefit of homeownership is the appreciation in the value of the home. During the 1970's, home values consistently increased more rapidly than the general rate of inflation, providing windfalls for homeowners.

But while the benefits of homeownership increased with inflation, the indirect costs of owning a home more than offset these benefits. Inflation drives up the return on all investments -- not only homeownership -- so the opportunity cost of the household's equity in its home increases with the rate of inflation. And since inflation causes rapid appreciation in home values -- with this appreciation being an increase in the owner's equity -- the opportunity cost of equity for the homeowner increased dramatically over the 1970's.

The homeownership affordability experience of particular types of households was often substantially at odds with the general experience. Factors that influence a household's housing costs are: the duration of occupancy, income (and therefore marginal tax rate), and stage in the family life-cycle (which largely determines future income and housing needs).

Households that fared particularly poorly during the 1970's

were first-time buyers and low-income homeowners. First-time buyers not only had to overcome increased downpayments, which increased in response to the increase in house prices, but also high monthly mortgage payments as mortgage interest rates picked up toward the end of the decade. The result was not only high housing costs, but costs that were composed almost entirely of cash payments. Since these households did not have proceeds from the sale of a previous home to help defray these high cash costs, the homeownership cost burden was a considerable obstacle to homeownership.

Low-income households had different problems. Because of their low incomes, tax savings -- one of the two major benefits of homeownership -- were often non-existent. Secondly, the increases in cash homeownership costs put a tremendous burden on the already tight budget of low-income households.

But while many groups were hurt by the way that inflation changed the relative costs and benefits of homeownership, others were helped. In particular, upper-income and elderly homeowners enjoyed comparative advantages from inflation. Upper-income homeowners benefitted greatly from inflation-induced tax savings and appreciation in house values. Throughout the 1970's, these benefits more than covered the cash costs of homeownership. Though elderly homeowners did not have high enough incomes to realize much in the way of tax savings from homeownership, their large investment in their homes did pay off through capital

gains. By 1980, the typical annual appreciation in the price of homes for this group was in excess of the cash ownership costs.

Other researchers who have studied the costs of homeownership during the 1970's have used a single-dimensional approach and therefore have come up with different conclusions. Diamond (1980), Villani (1982), and Hendershott and Hu (1981), in making assumptions about the typical housing costs faced by the typical homebuyer conclude that the benefits derived from homeownership were substantial enough to lower the overall costs of owning a home. There are three problems with their method of analysis.

The first is that homebuyers are only a small fraction -- typically less than ten percent -- of the homeowner population in any given year. Though the experience of homebuyers is of obvious concern in gauging housing affordability, there are many other types of households that must be considered to fully understand the impact of inflation.

Secondly, these researchers did not use micro-data to calculate actual homeownership costs and benefits, but rather relied on aggregate averages. In actuality, when faced with changes in housing costs and benefits households have a wide range of decisions that they can make to adjust their housing costs. Also, the characteristics of homebuyers changed substantially during the 1970's, and therefore it is inappropriate to estimate average costs for the average

household.

Finally, all three of these studies conclude their analysis in the 1977 to 1979 period. From a housing market perspective, this period is unique in American history. The heavily regulated thrifts were sluggish in adjusting mortgage rates to the underlying rates of inflation, while home prices were appreciating at record levels. This produced a windfall for all types of homeowners; one that is not matched in the recent past and is very unlikely to be matched in the foreseeable future.

Homeownership costs are dependent on the characteristics of the homeowner, characteristics of the home, and the general economic climate -- including lending practices and tax policy -- at any point in time. To fully comprehend the nature of housing affordability it is essential to disaggregate the analysis along these three dimensions.

Household Responses to Changing Housing Costs

Households have been slow to modify their behavior in the face of changing housing costs. Because these costs have been so volatile, many households undoubtedly adopted a wait-and-see attitude before making drastic changes in the choice of housing.

By 1980, however, it was quite apparent that housing choices were changing for many types of households. Changes in the choice of tenure, housing consumption, and mobility by this date

signalled a revision in the way that households were making their housing choices. Households that were most hurt by homeownership cost increases -- low-income homeowners and first-time buyers -- responded by cutting back. The homeownership rate for low-income households began declining in the early 1970's, a period when the overall rate of ownership was increasing. Newly formed households increasingly chose to rent rather than purchase their first unit, and previous renters became an increasingly smaller portion of the homebuying population.

Households in these groups that did decide to buy were buying lower quality units. Mobile homes and condominiums were increasingly substituted for single family detached homes when compared to their counterparts in the early 1970's. While the size of homes was generally increasing in relation to household size by the end of the decade, for low-income homeowners and first-time buyers home sizes were staying the same or getting smaller.

Inflation was working to the benefit of some groups, though. For upper-income homeowners, elderly owners, and repurchasers, the investment benefits of homeownership exceeded the investment costs, thereby subsidizing consumption costs. These groups increased their level of housing consumption. The ownership rate for upper-income and elderly households increased more rapidly than the national average, while the portion of homebuyers that were previous owners (ie. repurchasers) increased between 1970

and 1980.

Not only were these households more likely to become homeowners, but they were buying better housing. The portion living in single-family detached homes increased over the decade, and for upper-income homeowners and repurchasers house sizes were getting much larger in relation to household sizes.

The net result of the changes in the way that households were making their housing choices is that the profile of homeowners and homebuyers changed over the 1970's. The median income of homebuyers increased over 70 percent between 1977 and 1981 as upper-income households increasingly turned to ownership and lower-income households increasingly fell out of the ownership market. The net worth of homebuyers more than doubled over this period as previous owners with equity in their homes increasingly replaced renters as the principal homebuying group. And finally, the age of the typical homebuyer increased as the ownership rate for the elderly increased while decreasing for newly formed households.

Implications of Changing Housing Costs

Inflation can produce wild swings in a household's housing costs because of the way it distorts the costs and benefits of homeownership. Having recently experienced a bout of high rates of inflation, households are likely to modify their housing

choices in the future.

Lower-income households will find the added volatility in homeownership costs an additional reason to avoid homeownership. For these households, inflation raises the costs of homeownership without the offsetting increases in benefits. Without savings or expectations of higher income to serve as a buffer for these potential increases, lower-income households may be wary of making an investment this risky. This may reduce the already tenuous commitment of lower-income households to homeownership.

First-time buyers are in a different situation. Their problems are saving for the downpayment, and making the monthly payments for the first few years after purchase. After this point, rising incomes and level mortgage payments should provide a sufficient buffer to offset increases in other homeownership cost components.

Upper-income households -- the principal beneficiaries of inflation -- have the most to lose from changing rates of inflation. These households have made long-term housing decisions -- and long term mortgage commitments -- based on assumptions of future tax benefits and future capital gains from owning this property. If the rate of inflation declines, thereby reducing the expected capital gains, these household will be holding an investment with relatively high carrying costs and a low yield. Obviously, the owner doesn't have to hold this investment to term, but there are costs associated with selling

it. First, there is the possibility of a capital loss. Since the home has reduced investment benefits for the current owner, it also has reduced benefits for other owners. Secondly, since this investment is also the household's residence, selling the home implies moving the family, paying broker's fees, as well as other costs associated with buying a new home if the household so chooses.

A final implication of volatile housing costs is that houses are being built that are inappropriate for future housing needs. Households that were buying homes during the late 1970's were increasingly upper-income households that were trading up for bigger and better houses. Tax benefits and anticipated capital gains reduced the costs of homeownership, so this group could afford to buy bigger homes with more amenities. During the mid to late 1970's, developers increasingly targeted this group for their construction activities. But building for this group ran counter to the needs of the rest of the population, which, with smaller families and incomes not keeping pace with inflation, was looking for smaller, affordable homes.

In essence, inflation caused the wrong signals to be sent out to the construction industry. Whereas most households could afford less housing, the leading edge of housing consumers wanted more, and the construction industry was more inclined to serve this affluent group. This has unfortunate consequences for the future. According to a recent housing outlook report by the

M.I.T. / Harvard University Joint Center for Urban Studies (forthcoming, 1984; Chapter 8), matching the existing housing -- which was designed for fewer large families -- with the current trend toward more but smaller households is one of the key challenges to U.S. housing policy for the 1980's. This aberration in the latter 1970's that caused the construction industry to concentrate its resources on large expensive homes only serves to exacerbate this problem for future homebuyers.

Federal Initiatives and Housing Affordability

Inflation in and of itself is not the only culprit in the housing affordability problem. Certain federal policies -- namely tax policy and the design and management of mortgage instruments -- have compounded the effects of inflation on the costs and benefits of homeownership.

Federal tax policy is designed to promote homeownership by reducing housing costs. It does this by permitting the deduction of certain housing expenses from taxable federal income. Those that benefit the most from these tax regulations are households (1) with high housing costs, specifically those with large mortgage interest payments, property taxes, and capital gains; and (2) in high marginal tax brackets so that they benefit from these deductions.

The group assisted most by these tax regulations is

high-income homeowners living in expensive homes. This is hardly a group that needs subsidized housing costs. Two other groups that benefit from current tax policy are recent homebuyers, because such a large portion of their housing costs are deductible mortgage interest payments, and the elderly, who can take advantage of the once-in-a-lifetime capital gains exemption.

But the groups that are most in need of homeownership assistance -- lower-income homeowners and would-be homebuyers -- receive almost no benefits from tax policy. For lower-income households, either homeownership tax credits or direct cash subsidies would be a more substantial inducement to homeownership. A tax credit would allow savings in tax payments irrespective of the tax bracket of the household. However, for very low-income households, this tax credit may be greater than their tax liability, in which case a cash subsidy would be a more effective inducement.

Would-be homebuyers may be hampered by either downpayment requirements, or monthly housing costs after purchase. Tax credits or cash subsidies are a way of reducing monthly housing costs, while the proposed individual housing accounts would assist prospective homebuyers in saving for a downpayment. These accounts are similar to individual retirement accounts (IRAs): prospective homebuyers could make contributions to these accounts, which would be tax deductible or would qualify for tax credits, while the interest earnings would be tax-free. The

preferential tax treatment would make it easier for households to save for a downpayment. (Leigh, 1983; 72.)

To a considerable degree, the homeownership affordability problem is an artifact of the standard fixed-rate, fixed-payment mortgage instrument. Since the standard mortgage anticipates the rate of inflation over the life of the mortgage, and is amortized through constant nominal payments, the borrower is forced to make high real payments during the early years of repayment. In addition, the lender is exposed to considerable risk by estimating the rate of inflation over a long period of time -- up to 30 years -- and then setting an interest rate that locks it into this figure.

In spite of the fact that the standard mortgage has many serious shortcomings when the rate of inflation is high or uncertain, it continues to be the most popular mortgage instrument. The reasons for this are threefold. The first is inertia at the federal level. Federally chartered thrift institutions have been authorized to introduce only two alternative mortgage instruments -- the variable rate mortgage and the graduated payment mortgage -- in spite of the fact that the benefits of other types are well documented. Also, the secondary mortgage markets, and the FHA and VA mortgage insurance and guarantee programs have been slow to extend their coverage to alternative mortgage instruments. (Leigh, 1983; 29-48.)

Secondly, banks and thrifts have been slow to introduce and

aggressively market the alternative mortgage instruments that have been authorized, partly because they are not as secure or as fungible as standard mortgages, and partly because of the seeming stodginess of the thrift industry when it comes to innovation or daring.

Finally, borrowers appear to be reluctant to accept alternative mortgage instruments. (Leigh, 1983; 35.) If this reluctance is indeed the case, it may be that consumers are willing to pay for the security of fixed nominal payments, or it may be that the only other commonly offered mortgage -- the variable rate mortgage -- forces the borrower to assume considerable risk with very minimal compensation in terms of lower interest rates. Consumers may show more interest if they were educated in the advantages and disadvantages of other mortgages, and if banks priced these instruments commensurate with the risk that the borrower is assuming.

What are the characteristics of a good mortgage instrument in periods of high and uncertain inflation? The experience of the past decade is that there are three dimensions of the standard mortgage that could be improved: the level of monthly payments, the sharing of risk between the lender and borrower, and the potential for equity sharing between the homebuyer and some other equity holder.

The tilting of real mortgage payments is a serious problem with the standard mortgage. However, reducing payments in the

early years of the mortgage may produce negative amortization, meaning that the borrower increases the level of debt over time.

Negative amortization, however, should not necessarily be a concern in periods of high inflation. Inflation is also driving up the value of the home, so the increase in debt should be weighed against the increase in equity before it is assumed that the lender is increasing its risk exposure.

The level of mortgage interest rates -- or any other interest rate -- is determined by two factors: a "real" interest rate which serves to induce lenders to loan their money rather than to use it for some other purpose, and an inflation premium which compensates the lender for the reduced purchasing power of future dollars. Inflation is essentially offset by the appreciation in value of the house. Whether the borrower compensates the lender now or in the future for the decline in the purchasing power of the loan is largely irrelevant from a risk perspective; it is merely a cash-flow issue. However, for low or moderate income households with few assets trying to make high mortgage payments, the cash-flow implications can be quite severe, and a source of many of the homeownership affordability concerns.

Related to the issue of loan repayment is the issue of interest rate risk. With the standard mortgage, because of its fixed interest rate and long term, lenders assume all of the risk. The one distinguishing feature of the variable-rate

mortgage -- currently the only widely used alternative to the standard mortgage -- is its shifting of most of the risk of interest rate volatility to the borrower.

The issue of interest rate risk with mortgage instruments is not so much who should bear it, but rather one of developing options for risk-sharing, and pricing these options appropriately. Households with stable incomes are likely to want the stable mortgage payments of the standard mortgage, and be willing to pay a premium to avoid the risk of volatile mortgage payments. Households with rising incomes, especially those with current income and asset constraints (first-time buyers are a good example) are likely to want the lower initial payments, and be willing to risk higher future payments which can be offset by growth in their income.

Finally, there is an increased need for mortgage instruments that facilitate equity sharing during periods of high and uncertain inflation. High levels of inflation simultaneously produce high interest payments and high rates of appreciation in house values. While households enjoy the rates of appreciation, the high interest payments can often keep them out of the homeownership market. Lower-income and younger households are those most affected. By being frozen out of the ownership market, these households not only lose any potential for asset accumulation that is associated with homeownership, but also many other positive factors. For example, many communities have a

limited or non-existent rental housing market. Renters are essentially excluded from these neighborhoods. There also are social status implications associated with homeownership. Homeowners also have more freedom to change the use of interior space, which influences their level of satisfaction with their home.

Ways in Which Future Trends are Likely to Affect Housing Affordability

While rising rates of inflation have had the most significant influence on housing affordability during the 1970's, there are other factors that will modify housing costs and housing decisions over the next ten years. The most important of these include:

- the deregulation of financial institutions;
- moderating rates of inflation and changes in the investment returns from homeownership; and
- changes in the composition of housing demand.

The inability of thrifts and other financial institutions to respond to changes in the economy was a prime motivation for the federal government's actions in deregulating this industry, beginning in the late 1970's. These changes will have a tremendous impact on the housing industry and on homebuyers.

First of all, housing will no longer have the protected

status that it has enjoyed since the days of the Great Depression. Interest rates will be more closely tied to capital market conditions. Housing will largely have to compete on an equal footing with other credit seekers. The positive side of these developments from the perspective of the housing industry is that homelenders will be able to respond more quickly to changing market conditions. The increase in market interest rates in the late 1970's produced massive disintermediation as thrifts and banks were capped in the interest rates that they could offer savers. Now these institutions are able to respond with a variety of plans that offer higher returns. Mortgage borrowers will have direct access to the capital markets as providers of housing credit are more directly tied to national credit markets. There also is likely to be a wider variety of intermediaries involved in the housing finance field. While commercial banks are already expanding their role in originating and servicing mortgages, it is quite likely that insurance companies, pension funds, and investment banks will expand their role as investors in home mortgages.

What will these developments mean for homebuyers and homeowners? First, higher mortgage rates can be expected to stay with us. By offering depositors below market returns on their savings accounts (with limits on the alternative investment options open to the small saver), thrifts were able to offer "subsidized" mortgage interest rates. Now that mortgage lenders

will be competing for funds with other credit seekers, mortgages will be offered at rates comparable to other forms of credit. [1] On the other hand, with home mortgage lenders more closely integrated into national credit markets, the supply of mortgage funds will be assured. When mortgage funds were in short supply in the early 1980's, thrifts rationed not only by interest rates, which were frequently capped by usury laws, but also by requiring unusually large downpayments. Households that wanted to buy a home under these conditions had to turn to creative financing techniques, with the seller often holding an implicit second mortgage. These sort of disruptions hopefully will be avoided in the future.

The 1970's were a case study in what happened to housing costs with rising rates of inflation. Rates of inflation have lowered considerably in the 1980's, and expectations are that they will continue to hold at moderate levels for the near future. What does this situation hold for homeownership costs?

The investment components of homeownership costs have been shown to be the most volatile because they are the most sensitive to inflation. Capital gains and tax savings increased --

1. Though housing will be competing with other sources of credit, there are some proposed tax and regulatory incentives that would keep housing first among equals for potential investors. These include the development of mortgage backed securities to increase investor interest in the secondary mortgage markets, and trusts for investment in mortgages would further increase investment in secondary market instruments by liberalizing the tax treatment of these instruments. (See Leigh, 1983; 58-60.)

especially for upper-income households -- with the high rates of inflation of the 1970's, and likewise they can be expected to decline and stabilize with the declining rate of inflation. Tax benefits of homeownership may be further decreased by the flat tax / alternative minimum tax proposals, which limit the deductions that can be taken under federal income tax procedures. Since most of the tax benefits from homeownership are in the form of income tax deductions, these restrictions would certainly reduce the investment benefits of homeownership for some households. Upper-income households will be less likely to purchase large, expensive homes since, as the investment benefits of homeownership decrease, their costs increase. Lower-income households largely would be unaffected by reductions in the investment benefits of homeownership, since they are unable to take much advantage of them under any scenario.

Finally, as the demographic characteristics of households continue to change, so will the pattern of housing demand. This in turn can be expected to influence housing affordability. The demographic trends that are most likely to influence housing demand are the following. [2]

1. Smaller households. Many more households will be single

2. Many of these trends are discussed in the M.I.T. / Harvard University housing outlook report in Chapter 7, "The Changing Context of Housing Policy", (forthcoming, 1984).

persons, couples with fewer children or without children, and single-parent families.

2. Households with increased purchasing power. The growth in two-earner families will continue, as will the growth of households composed of unrelated individuals who pool their resources.
3. The number of elderly households will continue to grow.
4. Regional shifts in population. Household growth will continue in the south and southwest, with losses in the northeast and north central regions. Non-metropolitan areas will continue to grow, while many urban areas will lose population.
5. Decline in the homeownership rate. During the 1970's, the homeownership rate declined for low-income, single-parent, and newly formed households. By 1982, it dropped for all households, and the Census Bureau projects lower than expected homeownership rates through the 1980's. It estimates that by 1990 ten million American Families who'd otherwise be homeowners -- by all historical tests of income, education, and social status -- will be stuck as apartment renters, many of them permanently. (Harney,

1983; A57-A58.)

What all this means for housing costs and homeownership affordability is not entirely clear, but potentially these shifts in housing demand will affect the rates of appreciation of house prices, the availability of certain types of homes, and therefore the cost of homeownership. For example, smaller homes in non-metropolitan areas in growing regions will undoubtedly increase in value at much faster rates. Households looking to buy these types of homes may find them to be unaffordable. On the other hand, homeowners trying to sell large homes in declining regions may find few interested buyers, and therefore have to accept a lower price than they had anticipated. It will take some time for the housing stock to adjust to changing consumer preferences, and in the meantime housing availability and housing prices will reflect this difficult transition.

Lessons Learned (and Relearned) From Inflation in the Housing Market

The experience of the 1970's has generated many lessons on the design and implementation of federal housing policy. Some of these lessons supercede the concern over housing affordability, and unfortunately, some reinforce previous experiences that we seem to have to relearn each time a new policy initiative is

developed.

1. Housing policies have to be tailored to meet the needs of the households specifically affected. The concern over housing affordability is different for different types of households. For upper-income households, it generally is not a problem; this group has largely benefitted from inflation and housing costs. For first-time buyers it is a downpayment and short-term "mortgage tilt" problem, as housing costs are high relative to income for the first few years of mortgage repayment. For the elderly, it is a cash-flow problem; they generally have a lot of equity but still may be facing problems making the out-of-pocket payments given their limited cash reserves. For low-income households, housing affordability is a more intractable concern; it may be any or all of the problems other groups are facing.

In this context, it is important for policy-makers to understand the dimensions of the problem and then to design policies that are specific in their impact. An across-the-board approach, such as a general tax subsidy, may harm as many groups as it assists. Any housing cost initiative should first determine: "What groups does this help?", "How does it help them?", and "What does it do to the overall operation of the housing market?"

2. Encouraging homeownership through broad-based tax subsidies that are aimed at reducing the cost of homeownership may neither

reduce housing costs nor promote homeownership. Income tax reductions have long been the cornerstone of federal homeownership policy. This is based on the assumption that if homeownership costs are lowered, more people will buy homes. There are, however, two other considerations.

The first is that these tax breaks will be at least partially capitalized into higher housing prices. Tax breaks lower the cost of owning, so in a competitive housing market, households are willing to pay more for that privilege. The question is, to what extent are housing costs lowered, as opposed to current owners receiving a windfall because their home is worth more to potential buyers?

The second consideration is that since homeownership tax breaks are principally income tax deductions, they are worth more to households in higher tax brackets. Lower-income households, in low marginal tax brackets, receive almost no benefits from these tax subsidies, yet are faced with higher housing costs because the tax breaks have been capitalized into higher housing prices.

The net effect of tax breaks on homeownership costs depends on how many households are helped, how many are harmed, and the degree to which these households are helped or harmed. The net effect on the rate of homeownership depends likewise on the relative proportions of these two groups. Upper-income households have traditionally had high rates of ownership, so no

policy is going to increase the ownership rate very much for this group. It is reasonable to assume that policies that lower housing costs for upper-income households and raise them for lower-income households will have a negative net effect. In fact, homeownership rates fell for many types of households in the late 1970's when tax breaks were theoretically at historically high levels.

3. Housing costs are very sensitive to national economic trends.

An accepted truism in the housing industry is that housing is a bellwether of national economic conditions. As economic conditions worsen, housing producers, the thrift industry, homebuyers, or all three are likely to feel the effects before the rest of society.

Under these conditions, the role of public policy ideally is not to help the housing industry avoid these hard times, but rather to smooth them over; to make the periods of transition easier. The history of federal involvement in the housing finance industry has produced just the opposite result: it has made it difficult for thrifts to adjust to changes in the larger economy.

Federal involvement in the thrift industry was greatly expanded during the 1930's after the Great Depression had forced the closing of many thrifts. The orientation of federal efforts in regenerating this industry was to provide more institutional

safeguards and greater insulation from some of the more volatile influences of the national economy.

During the 1960's, the federal role in housing finance was slightly altered. During this period the thrift industry was increasingly used as a vehicle to manage the national economy. Interest rate caps for small savers were instituted, which helped insure an inexpensive source of funds for investment, thereby keeping a handle on the level of inflation.

Recent experience attests to the fact that overinvolvement by the federal government in the thrift industry produced undesirable results. Only after most of the damage was done was it decided that a more effective strategy would be to create an environment where the housing actors have maximum latitude to adjust to changes in the economy. The deregulation of the thrift industry, even with all of its negative effects, seems to be a step in the right direction in that it allows thrifts to compete more effectively with other financial institutions. The federal government also could have encouraged the introduction of alternative mortgage instruments to ease downpayment and cash flow problems for homebuyers. Nothing yet has been done to help the construction industry weather the storm of high interest rates. One strategy might be the development of a revolving fund to bridge the time between the high construction loan payments and the eventual sale. Consumer demand and home prices have remained quite strong in spite of inflation, so if

undercapitalized developers had access to affordable capital, their completed homes would still generate sufficient funds to repay the high construction loans.

4. Should homeownership be encouraged? The high rates of inflation of the latter 1970's dramatically underscored the volatility of the investment returns from homeownership. This riskiness is a very serious problem for households that can't afford uncertain housing costs, such as lower-income households. And lower-income households are doubly hurt, not only by the general volatility of homeownership costs, but also by the fact that they cannot benefit much from the investment benefits of homeownership, though they still must pay these higher costs. In essence, the increased risk in homeownership costs during inflationary times is almost certainly going to result in higher costs for these households.

Government encouragement of homeownership for lower-income households, without consideration for the inherent riskiness of the investment aspects, may be a disservice.

However, there may be ways of reducing this financial riskiness while still encouraging homeownership. The key is separating the consumption from the investment aspects. Many lower-income households find homeownership attractive because of the security of fixed mortgage payments (compared to rental payments that increase over time), the potential for greatly

reduced housing costs after the mortgage is paid off, the ability to make changes to their home without interference by a landlord, and the generally greater social status associated with homeownership. None of these attractions have to do with the investment aspects. There exists the potential at least to separate these more volatile investment aspects of homeownership -- that generally have less value to lower-income households -- and sell them to investors, thereby reducing the homeownership costs to occupants.

A policy such as this would need a great deal of federal involvement, especially in establishing a market for these investment components. But it would seem to be a more productive course than to blindly encourage homeownership for lower-income households without reducing the financial risk that this population is taking.

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