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The Future of Manufactured Housing

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I. MANUFACTURED HOUSING: ORIGINS AND EVOLUTION

Image 1: Tired-looking trailers in mobile home parks. Humble homes swept into darkened skies by raging tornadoes.

Image 2: Affordable and attractive housing nestled in well-landscaped yards. Homes that blend in with surrounding single-family detached units.

These are the two contrasting images of manufactured housing. The first image many people carry in their minds; the second is promoted energetically by the industry. Indeed, both images partly describe this rapidly growing segment of the American housing stock. Manufactured housing has its roots in the recreational vehicle industry: in early years manufactured homes were mobile and temporary. Today, manufactured housing is occupied by millions of households on a year-round basis. One of the most remarkable aspects of the manufactured housing industry is its rapid evolution over its short history.

From Mobile to Manufactured Housing

In the 1930s and 1940s, mobile homes were viewed as recreational housing and were indeed highly mobile. The original intention of manufacturers was to provide temporary, recreational housing to households with mobile lifestyles and temporary housing needs. Many units were used as permanent homes, however, even as the units remained mobile. Housing shortages after World War II increased the use of mobile homes as permanent housing. Families often moved these units from camp to camp as employment and whimsy led, keeping the wheels and axles in place for easy transport.

Because they grew out of the recreational vehicle industry, mobile homes were initially subject to little or no regulation for construction or installation. Manufacturers were a mix of small firms turning out a few units a month and large automobile companies producing mobile homes on the side. As mobile homes became a permanent housing choice for more people, government officials began to acknowledge this reality and concerns about public health and safety arose. These concerns led to federal legislation regulating the construction of mobile homes.

In 1974, Congress passed what is now known as the National Manufactured Housing Construction and Safety Standards Act, which directed HUD to develop national building standards and a federal oversight program for the construction of manufactured homes. In June 1976, the Federal Manufactured Home Construction and Safety Standards (or the "HUD Code") became law. Homes built under the HUD Code are higher quality, safer, and more durable than earlier models. Most importantly, the HUD Code distinguishes manufactured housing from other forms of housing. While manufactured homes are built to a uniform national building code, site-built homes, modular housing and other types of factory-produced homes (not in compliance with HUD standards) are generally built under local housing codes adapted from one of four model codes. In contrast, the HUD Code is mandatory for all new manufactured homes and pre-empts all state and local building codes.1

Reflecting the mobile home origins of the current manufactured housing industry, the HUD Code has several distinguishing features, the most prominent of which is the chassis requirement. Unlike other forms of housing built to state or local construction codes, units built to the HUD Code must have an integral chassis and must be transported on their own axles and wheels from the factory. Because units travel over roads, sizes are limited by state transport restrictions. Unit lengths are generally under 80 feet and unit widths range between 14 and 18 feet in different states.

Today, about half of the manufactured homes produced are single-section units -- a complete dwelling unit in a single "box" – and most of the remaining units are double-sections. Double-section units are built in tandem in the factory but are only joined together on site when they are installed. A few manufacturers also make triple-section units.

Although the manufactured housing inventory still contains many units that pre-date the HUD Code and many others that were built soon after implementation of the Code, the stock is changing as the product evolves and new placements increase. Indeed, the rapid growth of the manufactured housing stock makes this one of the most dynamic segments of the housing market today. From 1974 to 1993, year-round occupied manufactured units increased by an average of 2.2% per year, while all other year-round occupied units increased only 1.5% per year (Exhibit 1). Much of the growth of the manufactured housing stock has occurred over the past ten years. Since 1985, manufactured housing increased at 2.2% annually, while growth in the rest of the inventory was only 0.7% each year. As a result of these trends, close to 6 million households (or 6% of all households) now live in manufactured housing.

Exhibit 1.
Year-Round Occupied Stock, 1974-1993

	Manufactured Homes	All Other Homes	Total
Total Units (thousands)			
1974	3,714	67,116	70,830
1985	4,754	83,671	88,425
1993	5,655	89,068	94,723
Annual Growth Rates (percent)			
1974-1985	2.3	2.0	2.0
1985-1993	2.2	0.7	0.9
1974-1993	2.2	1.5	1.5

Source: 1974, 1985, 1993 American Housing Surveys.

Design Changes

The recreational trailer roots, the chassis requirement of the HUD Code, and the need for units to be transportable on their own axles over roads have all contributed to a manufactured housing "look" that historically has been instantly recognizable. Units have been long and thin, with flat or gently curving roofs (sometimes with a raised forward section), vertical metal siding, small windows, skirting, and a high floor level. Certainly the recreational origins of manufactured homes contributed to these design characteristics, and when the units were actually mobile, the profiles and choices of materials were sensible.

Single-section units have an additional design perplexity: the interior/exterior dichotomy. Industry designers have very cleverly reworked the interior spaces of single section units so that from the inside the units do not have a linear feel. From the outside, though, the long and thin look still dominates, and has even intensified as units have increased in length to 80 feet. Transportation constraints limit the ability of manufacturers to modify the box in the factory, but on-site additions can break up the linearity if designed carefully.

Affordability concerns have also guided material choices. In an effort to make the American homeownership dream available for $25,000 or less, manufacturers have substituted many less expensive choices for traditional housing building materials. Sheet metal, for example, is often used after it is stamped to look like vertical cedar siding. Similarly, decisions on interior finishes often rest on a material's ease of assembly and affordability rather than on aesthetics or long-term durability.

The roots of manufactured housing have also affected the siting of units. Older units, whether located on an individual rural site or in a cluster of other mobile units, are often arranged in orientations or rows that evoke images of parking lots. Such siting patterns, as well as the close spacing of units, look markedly different from site arrangements found in typical post-war suburban developments. These aesthetic concerns, along with the costs that arise when new developments enter a locality and increase demand for municipal services, often prompt strong resistance to manufactured housing communities by neighborhoods and towns. In particular, manufactured housing development often falls victim to the widespread tendency for communities to limit the construction of less expensive (and hence more affordable) housing. Fearing that manufactured housing serves to lower the value of neighboring site-built homes, many jurisdictions attempt to specifically limit the placement of HUD Code units.

Groups disagree on whether restrictive local regulations reflect a legitimate concern about the adverse implications of manufactured homes, or are simply another example of "snob-zoning" targeted to limit production of housing affordable to low- and moderate-income households. Existing empirical studies suggest that concerns about the adverse implications of manufactured housing may be exaggerated. In particular, several studies of local housing price data uncovered no noticeable effect of manufactured homes on the sales price of neighboring properties.2

The rapid growth of consumer demand for better-quality, multi-section units serves to further blunt local resistance. Well-designed multi-section manufactured homes, built with conventional siding and roofing materials and situated in professionally-landscaped communities, are almost indistinguishable from site-built homes. Design changes have contributed to greater acceptance of manufactured housing, but often at the cost of affordability. The challenge for designers and planners is to develop manufactured housing as an acceptable alternative to site-built housing while still maintaining the affordability that lies at the heart of the product's market appeal.

Industry Operations

Today, the manufactured housing industry includes firms that produce, sell, finance, deliver, and install housing units to consumers. Manufacturers produce units in factories at a typical production rate of 10-13 "boxes" each day, with a single-section unit consisting of one box, and a multi-section unit consisting of two or more boxes. A given factory usually produces single-section or multi-section units, but rarely both. The construction process is monitored by HUD-approved independent inspectors to insure that the unit complies with applicable HUD Code standards.

Only a small number of companies currently build a large share of the nation's manufactured homes. Historically, the industry began with many small regional manufacturers, and their experience was in vehicle production, not housing. Large manufacturers of automobiles and recreational vehicles also entered the field. Today, the number of manufacturers has shrunk to 100 companies with approximately 250 production facilities, while the five largest manufacturers produced 43% of all units in 1994.3

Once built, most units are shipped to dealers at retail sales centers where they are displayed and sold to consumers. Recognizing the growing consumer demand for higher-quality, multi-section units, retailers in some areas display model units and consumers place customized orders. Purchasers who place their unit on their own land usually buy from a retail center, and often purchase a home "built-to-order." In many cases, developers and owners of manufactured housing communities act as dealer r representatives and handle sales in their communities directly.

If the unit purchase is financed, the financing is almost always arranged by the retailer or dealer. Several large finance companies currently dominate the manufactured housing lending market. Most consumers receive personal property loans rather than real estate mortgage loans, reflecting the industry's origins in automobile and recreational vehicle production.

After a buyer purchases a unit, the home is transported to the site and placed. The most common installation method uses concrete block piers, although some homes are set on continuous foundations or over basements. Once placed, the wheels, axles and hitch are removed, a plumber and electrician connect the unit to site utilities, and an installer completes the work by adding skirting, entry stairs and porches, and often a carport. Unit installation remains a problem for the industry. Recent efforts at regulatory reform have been unsuccessful.

Installation-related problems are a major source of consumer complaints as improper installation undermines the quality, durability, and safety of manufactured units. Unlike unit production, unit installation is not regulated by the HUD Code. Although many states have adopted a model installation code developed by the American National Standards Institute, it often remains unclear to consumers whether the manufacturers, dealers, or installers are responsible for correcting unit defects. The National Commission on Manufactured Housing proposed substantial reform of regulations governing installation, but to date these reforms have not been enacted. Reform efforts have stalled in large measure because the various segments of the industry are unable to agree on a plan to address these concerns.4

A Diverse Stock for the Future

Currently, the manufactured housing inventory contains both smaller, single-section mobile homes and larger, multi-section manufactured units. Lower-quality units built in the 1950s and 1960s often stand next to higher-quality units built in the 1990s. Today, this diverse stock fills a variety of market niches. Newer, better-quality units are now attractive housing options for young first-time homebuyers or elderly households seeking retirement housing. Older, lower-quality manufactured homes represent an important source of basic low-cost shelter for millions of low-income families and individuals. This diversity contributes to the contrasting images of manufactured housing and its role in the national housing market. Because the industry has the ability to serve many distinct market segments, it is likely that manufactured housing will continue to be an important component of the nation's future housing stock.

II. STOCK CHARACTERISTICS

Manufactured homes vary widely in size, shape, appearance, and arrangement across the landscape. While older units contain physical features commonly associated with the industry's earliest mobile homes, many newer homes have sizes and designs that make them almost indistinguishable from conventional site-built housing. Data from the biennial American Housing Survey (AHS) document how manufactured housing has been changing over time.

Quality

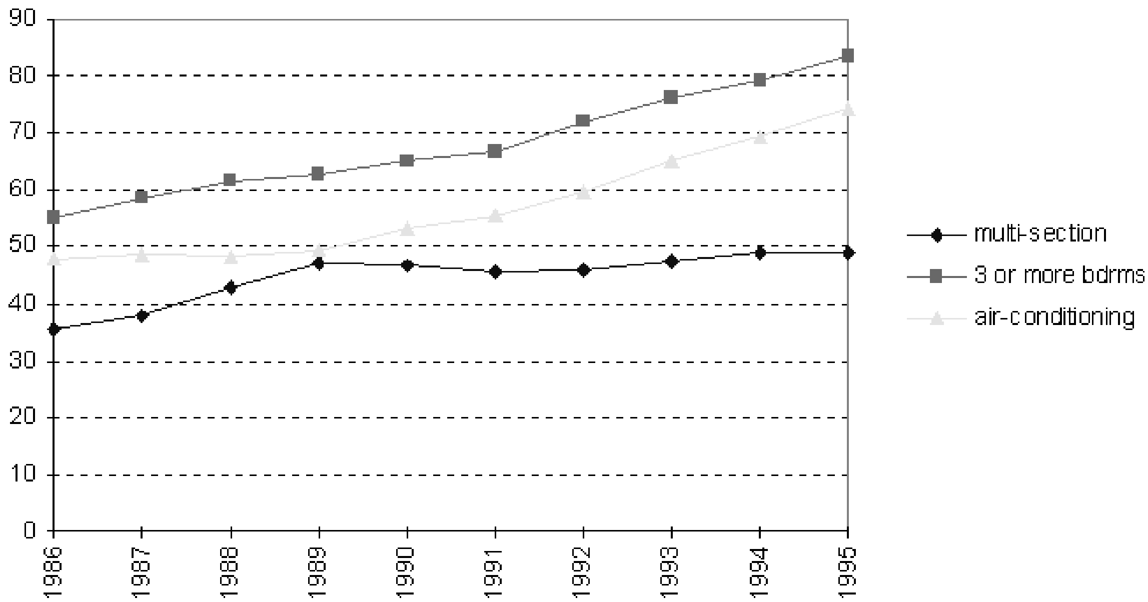
In 1985, less than half of the inventory (48.5%) had been built since 1975 (the last year before the HUD Code took effect). By 1993, nearly 60% of the total inventory and almost 63% of owner-occupied manufactured homes had been built since 1975. The renter-occupied stock is older than the owner-occupied stock, with only 44% of the rental stock built since 1975.

In general, the shift in age of the total inventory indicates overall improvement in the stock, since the newer units are higher quality and more spacious. The average size of manufactured homes in 1985 was 949 square feet; in 1993 it was 1,073 square feet. AHS data suggest that added improvements have become more prevalent among manufactured units: from 1985 to 1993, the share of owner-occupied units with a garage increased from 23% to 30%, and the share with a porch, balcony, deck or patio increased from 66% to 77%.

The Census Bureau's reports on yearly manufactured housing placements confirm this trend toward larger, higher quality units. The average size of newly placed manufactured homes has grown steadily from 1,015 square feet in 1981 to 1,355 square feet in 1995, and the percent of placements that are multi-section have gone from 36% in 1986 to 49% in 1995 (Exhibit 2). Today's units tend to have more bedrooms (three is the norm for new units) and a large percentage have central air conditioning installed as a standard feature.

The current stock still contains older, lower-quality units that were built prior to the adoption of the HUD Code. Manufactured homes produced today, however, are comparable to site-built homes in terms of maintenance, wind safety, fire safety, and thermal efficiency. Unlike the mobile units of the past, today's manufactured homes are rarely moved once they are anchored on a housing site or set on a permanent foundation. Because many buyers upgrade their manufactured home by adding garages, porches and permanent heating or cooling systems, the cost and complexity of moving a manufactured home is often prohibitive.

Exhibit 2. Manufactured Housing Quality Indicators



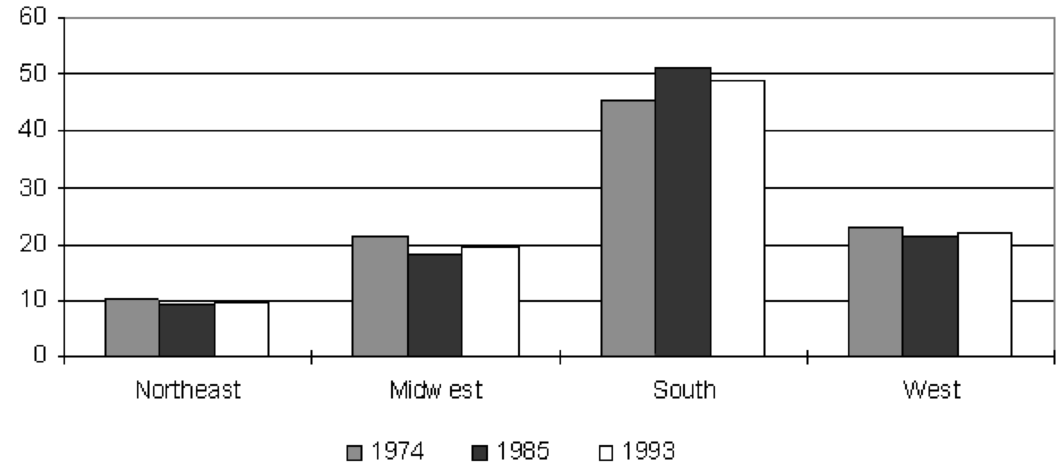
The HUD Code appears to have extended the performance and longevity of manufactured units. Pre-HUD Code mobile homes often had a useful life of as little as ten years. Athough further study is warranted, homes built today to HUD Code standards have a life expectancy of three to four decades or even longer, depending on the ability of the home owner to properly maintain the unit.

Finally, the HUD Code has also improved the overall safety of manufactured homes. Indeed, HUD Code manufactured homes often meet or exceed the safety standards prescribed for homes built to minimum applicable state and local code standards. This is especially true in light of recent upgrades to the Code, primarily in the areas of wind resistance and thermal performance. As older units are removed from the inventory over time, the differences between the quality and safety of manufactured homes and site-built homes will diminish further.5

Location

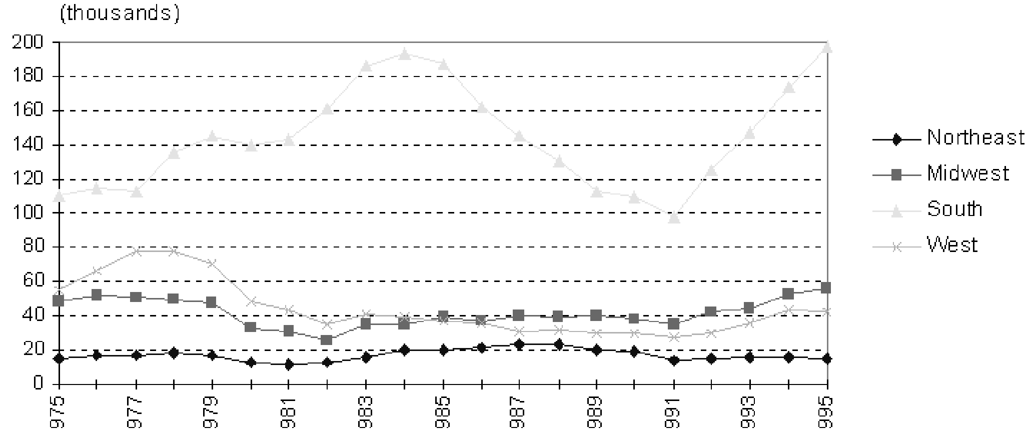
Manufactured housing is located predominantly in the South. The AHS shows that 49% of the total occupied stock was in this region, up from 45% in 1974, but below the 1985 share of 51% (Exhibit 3). Changes in distribution over time reflect the changing economic conditions of the different regions; the decrease in share in the South from the mid-80s coincides with periods of recession in oil-producing Southwestern states.

Exhibit 3.
Distribution of Year-Round Occupied Manufactured Housing
(percent)



Even though manufactured housing continues to advance in other regions, the health and long-term growth prospects of the industry remain firmly rooted in the South. The large drop in Southern placements in the 1980s and the sharp increase in the 1990s are driving total placement numbers across the country (Exhibit 4).

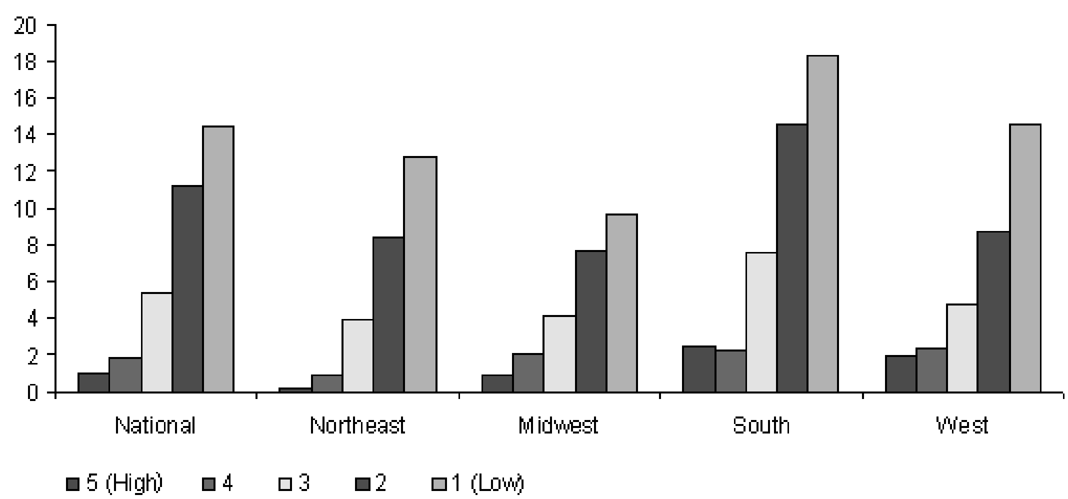
Exhibit 4.
Number of Manufactured Housing Unit Placements: 1975-1995
(thousands)



In each region, the largest share of manufactured housing is located in rural areas. The AHS divides locations into center city areas, urban suburbs, rural suburbs, non-metropolitan urban areas, and non-metropolitan rural areas. In 1985, 39% of the stock was located in urban areas, while 61% of the stock was located in rural areas. Over time, the movement of manufactured units to more decentralized areas has increased. By 1993, the share in urban and suburban areas had dropped to 30% while the share in rural areas had climbed to 70%.

In certain areas of the country, manufactured housing is becoming a substantial part of the housing stock. Out of a total of over 3,100 counties in the U.S., manufactured homes represent at least 20% of the housing stock in almost 600 counties (Exhibit 5 is unavailable on-line). Many of these counties are classified by the U.S. Department of Agriculture as areas with persistent poverty (where poverty rates in the county are consistently over 20%), as retirement destinations (where the population over age 60 has increased more than 15% between 1980 and 1990), and as commuting counties (where over 40% of workers commute to other counties). Most of these counties are located far from metropolitan centers and have low population densities. Indeed, the share of manufactured housing within the total housing stock increases steadily as county density decreases in every region of the country (Exhibit 6). 6

Exhibit 6. Manufactured Housing Share of 1990 Housing Stock by Density Class
(percent)



Sources: U.S. Bureau of the Census, 1990 Decennial Census and the Joint Center county database.

Land Tenure Arrangements

Manufactured housing offers a variety of unit and land tenure arrangements. In 1993, 79% owned their units, 17.5% rented their units, and another 3.5% of the occupants were characterized as non-cash renters. Unlike other owners, owners of manufactured units often rent their land. In 1993, about 47% of owner-occupied manufactured homes were located on owned land, up from 40% in 1985.

Placements on owned land are greatest among higher-income households. For households with incomes in excess of 160% of the area median, 59% of manufactured housing owners in 1993 also owned their land. For households with incomes less than 40% of the area median, the share of land owners was 41%. Consistent with the higher income of owners, units on owned land are bigger and have more amenities and add-ons than units on rented land. In 1993, a typical unit on owned land was 1,172 square feet and had 5.3 rooms, while a unit on rented land was 989 square feet and had 4.7 rooms.

Most units on rented land are located in mobile home parks or manufactured housing communities.7 Land tenure patterns differ by region of the country. Interestingly, despite the number of land-lease retirement communities in the South, units in the South are more likely to be located on owned land. Units in the other three regions are more likely to be located on rented land (Exhibit 7). Land tenure also varies by location in metropolitan areas. In 1993 almost 86% of the stock on owned land was located in areas designated by the AHS as "rural." Units on rented land were much more likely to be located in urbanized areas, with 33% of these units located in central cities or suburbs in 1993.

Exhibit 7.
Share of Owner-Occupied Manufactured Housing Units on Owned Land
(percent)

	1985	1993
Total	39.7	46.7
Northeast	40.8	41.9
Midwest	30.6	37.9
South	45.0	54.1
West	33.9	40.6

Source: 1985 and 1993 AHS.

Repair and Renovation

The AHS examines nine categories of renovation and repair activity that households may perform over a two year period. These categories identify major repairs, improvements, or alterations made to the stock, but exclude routine maintenance activities (such as painting or minor repairs). Expenditures within any one of these nine categories therefore indicates significant modifications to a home that may greatly affect the longevity, quality, and market value of the unit. AHS data indicate that owners of manufactured housing are less likely to perform major repairs, improvements, or alterations, and are more likely to do the work themselves than owners of site-built housing (Exhibit 8). It is unclear whether these patterns arise because owners of manufactured homes have lower incomes, because they have a greater interest in do-it-yourself activities than other owners, or because the manufactured housing inventory, on average, is in better condition and requires less upkeep than site-built housing.

These questions aside, it is clear that current renovation decisions will determine whether today's manufactured homes will continue to provide good-quality housing in the years ahead. In general, renovation and repair decisions are influenced by a household's space needs, income, and the costs of renovating an existing unit or relocating to a new unit.8 To better understand renovation and repair behavior within the manufactured housing sector, future research should explore what specific household and stock characteristics increase the likelihood that owners will remodel. Future research should also investigate how renovation and repair activity varies across the many different groups that live in manufactured housing.

Exhibit 8.
Renovation and Repair Activity, 1991-1993

	Perform work *(% of all households)*		Perform work oneself *(% of households who perform work)*		Average expenditures *(1993 dollars, households with expenditures>$0)*	
	All owners	MH owners	All owners	MH owners	All owners	MH owners
Roof *(partial or whole replacement)*	15.9	8.0	23.9	46.7	2200	1062
New Addition	4.0	3.5	44.3	77.1	5265	1829
Kitchen *(remodel or addition)*	8.2	5.5	51.0	79.7	2890	806
Bathroom *(remodel or addition)*	10.0	7.3	55.8	74.0	1722	570
Siding *(replacement or addition)*	5.2	2.6	29.5	58.1	3050	1595
Doors & Windows *(bought and installed)*	11.7	6.4	44.9	65.4	1183	516
Major Equipment *(replacement or addition)*	9.9	6.8	33.1	40.4	2114	1052
Insulation *(addition)*	6.3	4.1	28.6	65.8	624	372
Other *(repairs over $500)*	19.8	11.5	33.7	50.0	2405	1400

Source: 1993 AHS.

III. OCCUPANT CHARACTERISTICS

The U.S. housing market presents consumers with a ladder of housing opportunities, with more modest and affordable housing choices at the low end of this ladder and better-quality, more expensive residences at the high end. Households who move up this ladder typically trade lower-quality units for higher-quality homes and move from renter to homeowner status. Movement along this ladder often corresponds with household life cycles: as households form, mature, dissolve, or reform, they tend to move between housing types. In many markets, "starter homes" are an important first step on this ladder; owners trade these initial homes for bigger or better ones later. As household heads reach their elderly years, some trade their bigger units for smaller, more manageable retirement units.

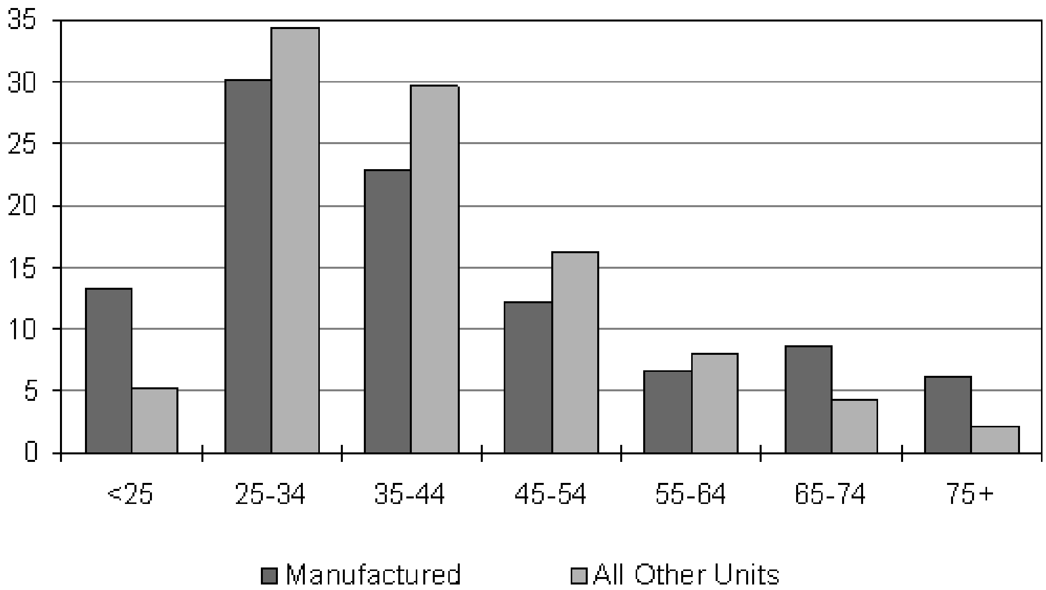
Continuing patterns from the past, manufactured housing appeals to first-time homebuyers, older homeowner households, and for many who will trade their units for conventionally-built single-family detached homes. By serving several distinct market segments, the manufactured housing industry is an increasingly important part of the American housing market.

Household Characteristics

Manufactured housing has historically contained large shares of both very young and elderly households. In 1974, 42% of manufactured unit owners were under age 34 while 18% of other unit owners were in the same age bracket; in 1993, 25% of manufactured unit owners were under 34 compared to 14% of other owners (Appendix A-1). As a group, owners of manufactured units have always been younger than other owners. The median age difference has narrowed over time as the number of manufactured unit owners over age 75 nearly tripled from 1974 to 1993, increasing the share of the manufactured unit population in that age category from 6% to 12%. Over the same period, the number of other owner households over age 75 doubled in size and their share increased less sharply--from 7.5% to 10.5%.

Although manufactured housing is purchased by buyers of all ages, recent purchasers of manufactured housing are still more likely to be younger and older than homebuyers of other unit types (Exhibit 9). Over 13% of households who bought their manufactured unit during the period 1992-1993 were under age 25; this share is over two times as large as the share among all other recent buyers (5.3%). While 15% of recent buyers of manufactured units were over age 65, only 6% of other recent buyers fell into the older age categories. The AHS also reports that 51.4% of recent manufactured unit purchasers are first-time home buyers, while 36.5% of all other recent buyers have never owned a home before.

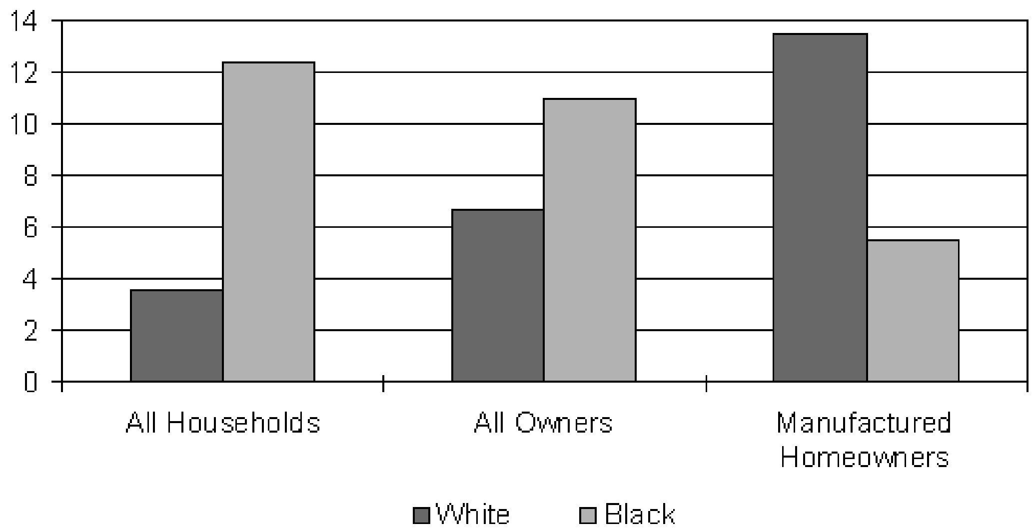
Exhibit 9.
Recent Home Buyers By Age
(percent)



The family type distribution of recent buyers of manufactured homes shows that these households are more likely to be single, but just as likely to be married or single with children when compared to other recent buyers (Appendix A-2). Recent purchasers of manufactured units have significantly lower education levels than buyers of site-built homes. In addition, a large share of households move into single-family detached housing from manufactured units. In 1993, 56.4% of all owner-occupied households who moved from a manufactured home within the past year moved into a single-family detached unit. These data suggest that many households acquire and then trade manufactured units as they move up the housing ladder.

White households constitute a large and growing share of the owners of manufactured housing. From 1985 to 1993, the number of white households increased by less than 4%, while the number of white households owning manufactured homes increased by nearly 13% (Exhibit 10). In contrast, the number of black households owning manufactured homes increased by only 5.5% from 1985 to 1993, a figure that is well below the overall growth of black homeowners (11%) or total black households (12.5%) for the same time period. These differential growth rates deserve further study; they suggest that the manufactured housing industry is not reaching a minority population that is rapidly growing and becoming an increasingly important component of the demand for site-built housing.

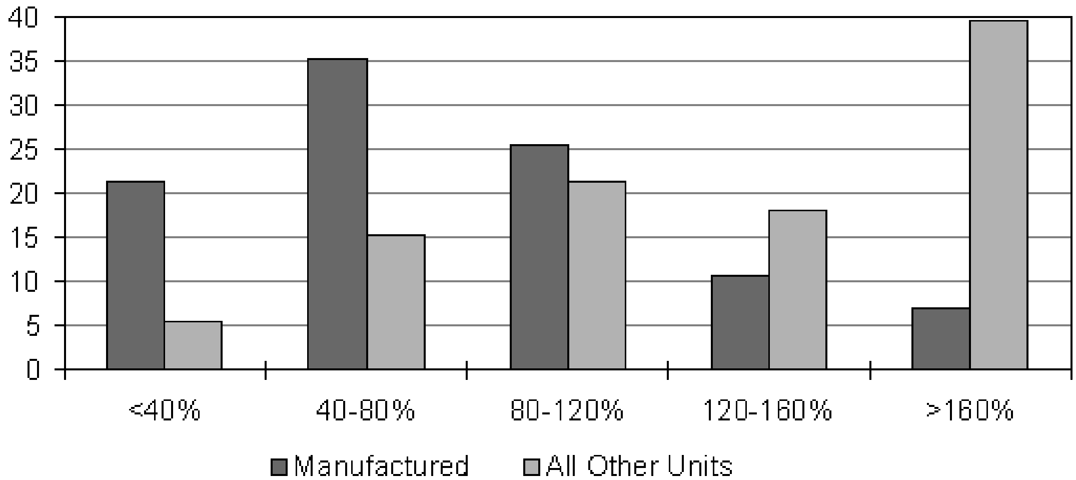
Exhibit 10.
Household Growth By Race: 1985-1993
(percent change)



Income Characteristics

Given the diversity of product characteristics, manufactured homes are purchased by households with a wide range of incomes. Even so, the most distinctive feature of manufactured housing today remains its dominance among lower-income home purchasers. The income distribution of recent manufactured unit home buyers in 1993 is strongly skewed toward the lower income categories (Exhibit 11). While 57% of recent buyers of manufactured homes had incomes below 80% of local medians, only 21% of all other recent home buyers had incomes below this level. Only 18% of manufactured unit home buyers had incomes above 120% of local medians, while 58% of all other home buyers had incomes in these categories.

Exhibit 11.
Recent Home Buyers By Income Category
(percent of total)



Note: Income categories are shares of the income distribution relative to area median incomes.

Despite the growth in size and quality of manufactured homes, there is little evidence yet of a major shift in the income profile of households purchasing manufactured housing. The sense that manufactured housing is reaching higher income buyers may stem from the widening of the income distribution of purchasers. Though changes in the income distribution of buyers were modest, shares with incomes under 40% or over 160% of local medians grew slightly from 1985 to 1993, while shares in between held steady or fell (Appendix A-3).

Median income levels among owners of manufactured homes have risen over time in current dollars, but inflation-adjusted median income levels have actually fallen since 1974 (Exhibit 12). In contrast, inflation-adjusted median income levels among all other homeowners have risen over the same time period. The median family income level for households who bought their manufactured unit between 1992 and 1993 was less than half the median income level for recent purchasers of other unit types.

Exhibit 12.
Median Family Incomes

	Owners				Renters		
	1974	1985	1993	Recent Buyers 1993	1974	1985	1993
Manufactured Units							
current dollars	*8,749*	*16,200*	*20,000*	*20,000*	*6,900*	*10,800*	*15,000*
1993 dollars	24,359	21,756	20,000	20,000	19,211	14,504	15,000
All Other Units							
current dollars	*13,000*	*28,000*	*38,000*	*42,178*	*7,800*	*14,500*	*19,000*
1993 dollars	36,195	37,602	38,000	42,178	21,717	19,473	19,000

Source: 1974, 1985, 1993 AHS.

Judging by income figures and other demographic data, renters of manufactured housing are some of the most transient and low-income households in America. In 1993, the median income of renters of manufactured units ($15,000) was lower than for all owners and all other renters. Renter incomes also fell 22% from 1974 to 1993, while the incomes for owners fell 18% and the incomes for all other renters fell 12.5%. AHS data on manufactured unit renters show that they were not only lower-income but also included larger shares of whites, younger households, and households with children. Over 48% of all renters moved into their unit from 1992-1993; this mobility measure is higher than for all other renters (36%), manufactured unit owners (13%), and all other owners (7%).

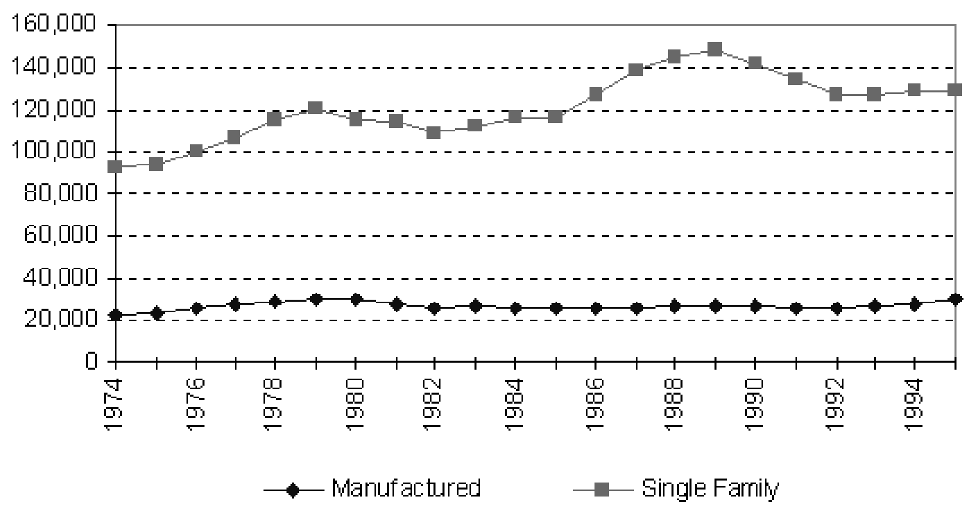
IV. COSTS

Manufactured homes are significantly less expensive to purchase and operate than other forms of housing. However, the total cost of owning manufactured housing over time (which includes the potential for equity accumulation) remains unclear. Unfortunately, little is known about how the values of manufactured homes change over time. One common perception is that while initial acquisition costs are low, manufactured homes depreciate rapidly and therefore offer owners little potential for equity growth. Although this important subject deserves further study, it does appear that low purchase prices, low downpayments, and affordable monthly mortgage payments are attractive to many low- and moderate-income households facing limited choices in both the owner and renter markets.

Purchase Prices

Purchase price comparisons between typical site-built and manufactured homes are difficult to make because the two housing forms have different unit characteristics and land tenure arrangements. Moreover, the sales price data for manufactured homes typically report only the price of the structure, while sales prices for single-family homes typically combine structure and land costs. Available data show that average sales prices for new, single-family units have historically been nearly four times higher than prices for new manufactured homes. Average sales prices for both have grown in constant dollars over the past 20 years (Exhibit 13).

Exhibit 13.
Average Sales Prices, 1974-1995
(1989 dollars)



Price trends for manufactured units reflect changes in production costs, unit sizes and unit quality over time, while the series for single-family units also reflects changes in land values. Data for the past 20 years show that when unit size differences are removed, prices per square foot have shown an overall decline for both manufactured and single-family units (Appendix A-4). In fact, the drop in price per square foot for manufactured units (19%) was two-and-a-half times greater than the drop for single-family units (7.6%). Available price indexes for new single family homes that adjust for both size and quality show an even greater price decline of 9.1% over the same time period. The price drop for a manufactured housing unit of constant characteristics would probably be even larger than 19%, therefore, if adjustments could be made for improvements in unit quality over time.

Although simple comparisons of sales price data during any one year may exaggerate price differences, estimates that combine structure, transport, installation, land, and site development costs suggest that the total purchase price of a manufactured home may be as little as 75% of the cost of a site-built home of comparable size and quality. In 1995, a typical manufactured home with an average size of 1,356 square feet sold for $36,300, or $21.80 per square foot (not including land or installation costs). Since production of low-end site-built or modular homes rarely costs less than $30 per square foot, manufactured housing enjoys a substantial price advantage. Moreover, in most areas land costs significantly add to the overall cost of housing. Rented or smaller lots further reduce the purchase price of manufactured homes relative to site-built housing.

In a comprehensive study of the manufactured housing industry, the University of Michigan developed more precise comparisons of the total initial cost to purchase various types of manufactured and site-built housing. The study estimated that in 1991, the purchase price of a typical new 1,440 square foot multi-section manufactured home in Michigan totaled $76,560. This estimate included $38,560 to purchase the unit, $8,000 for installation costs, and $30,000 for a one-third acre lot of land. In contrast, a 1,440 square foot site-built home on a one-third acre lot could be purchased for $114,680 (including $30,000 for the cost of land).9

Some argue that the HUD Code permits the construction of a home that is inherently inferior to site-built homes and that comparisons such as those presented in the University of Michigan Study are biased. This view rests in part on exaggerated concerns about the differences between manufactured homes built to the HUD Code and those built to applicable local building codes. Certainly, the HUD Code offers advantages that permit cost savings. The National Commission on Manufactured Housing estimated that material costs were $1,623 (or 12% in related calculations) less for a representative single-section unit built to the HUD Code than for an identical unit built to minimum standards in the BOCA code. Almost half of this difference was attributed to different window standards: at the time the calculations were performed, the HUD Code allowed single-glazed metal windows, while the BOCA Code (widely used in Eastern states) requires insulated vinyl windows. A related study completed for the Commission concluded that only modest changes would be required for the "typical" manufactured home to comply with standards set for modular housing production under the Uniform Building Code (UBC), a code widely used in Western states.10

Many manufactured housing providers argue that cost advantages arise in part because the HUD Code is performance-based, rather than prescriptive; this feature enables manufacturers the flexibility of meeting applicable building codes in the least costly manner. Some point out that HUD Code advantages are offset by the requirement that units be built on a chassis, capable of transporting the unit on the highway. Though the chassis requirement may provide an efficient means for transporting a factory-built unit to different locations, the manufactured housing industry has argued that the chassis requirement often needlessly adds to production costs for many units that are permanently sited. Moreover, the recent increase in thermal standards have further reduced the material cost advantage of manufactured housing as compared to site-built housing.

While differences between the HUD Code and codes governing site-built housing remain, building code standards probably account for only a small portion of the difference between the sales price of manufactured housing and comparable site-built housing. Instead, it is likely that cost differences are rooted in the production process. Manufactured unit construction is less exposed to weather problems. Moreover, because building tasks can be made relatively more predictable and repetitive along a factory line, the process is more efficient and manufacturers can use a less skilled work force. Product standardization also allows manufacturers to lower their material costs through high-volume buying, while the pre-emptive nature of the HUD Code reduces the costs of securing applicable approvals from local code officials.

Also important is the fact that a typical manufacturer offers only a limited number of floor plans and design options. In part this discipline is enforced by limits on unit heights, widths and lengths dictated by cargo requirements on public roadways. While unit customization occurs and is becoming more prevalent, manufacturers still control the total amount of variation across their product by restricting consumer choice to a limited set of amenities and standardized designs.

In contrast, site-builders and modular home manufacturers are often forced by competitive pressure to customize designs to better fit sites and consumer preferences. Customizing that departs from standard floor plans can add significantly to cost by requiring design revisions, additional approvals for compliance with local building codes, and additional material and labor costs associated with custom work. Modular builders, as well as high-volume site builders, could in theory achieve efficiencies in material acquisition and work scheduling comparable to those attained by manufactured housing producers. These savings, however, are often diluted in practice by the pressure to customize in areas such as windows, doors, siding, roofing, cabinets, and floor coverings, and by extraneous factors like the weather.

Monthly Housing and Financing Costs

In large measure because of lower unit and land costs, monthly cash costs paid by occupants of manufactured housing are typically lower than cash costs for single-family detached unit owners and multi-family unit renters (Exhibit 14). These monthly out-of-pocket costs for owner-occupied households include monthly mortgage payments, real estate taxes, property insurance, utility and fuel costs, and trash collection costs. For owners of manufactured homes placed in parks or otherwise on land owned by others, monthly costs also include land rent. Monthly cash costs for renter-occupied households include monthly contract rent payments as well as utility and fuel costs.

Exhibit 14.
Monthly Housing Costs, 1993
(median 1993 dollars)

	Single-family detached units	Manufactured units			Multi-family units
	Owner-occupied	Owner-occupied		Renter-occupied	Renter-occupied
		Owned land	Rented land		
All Households	520	230	348	361	483
Households with Mortgages	806	488	509	NA	NA
Households without Mortgages	236	159	255	NA	NA

Source: 1993 AHS.

Comparison of monthly costs is complicated by the fact that owners of site-built homes typically finance their purchase of land and structure in one transaction, while many owners of manufactured homes typically place a newly purchased unit on land purchased through a separate transaction. Costs associated with land acquisition, including costs for resources encumbered by land transactions, are not included in AHS estimates of out-of-pocket costs. These AHS estimates show that owners of manufactured homes who also own their land have the lowest out-of-pocket housing costs of all groups, at $230 per month in 1993. In contrast, median monthly housing costs for single-family detached unit households were $520 and $483 for multi-family unit renters.

Historical data on inflation-adjusted monthly housing costs show that while cash costs for owners of single-family detached units have risen over the past decade, costs for owners of manufactured homes have actually decreased. These trends again reflect the fact that land costs are not included in out-of-pocket cost calculations for owners of manufactured units who also own their land. In contrast, land costs are typically added to the costs of owning a site-built home. Monthly costs in 1993 for single-family homeowners were $520, up from $463 (in 1993 dollars) in 1985. In contrast, average monthly cash costs for all manufactured homeowners in 1993 were $298, down from $328 (in 1993 dollars) in 1985.

Out-of pocket cost comparisons are complicated further by other differences between manufactured and site-built housing. The lower initial cost of purchasing a manufactured home may be offset somewhat by higher operating and maintenance costs, and by the need to purchase the land up front in a separate transaction. Differences in the characteristics of occupants also influence out-of-pocket cost estimates. For example, low out-of-pocket expenditures may simply reflect the limited ability of the many low-income occupants of manufactured homes to pay more. In this sense, the low monthly costs may indicate that manufactured housing occupants use lower amounts of heat, electricity, or other utilities, or they may forego needed maintenance to reduce their cash costs.

Financing constitutes another important source of monthly cost differences. Unlike site-built housing, most manufactured housing is financed as personal property rather than as real estate. This practice stems from the tendency of both borrowers and lenders to separate unit acquisition from land purchase or lease transactions. Consumers who place a unit on leased land can typically obtain financing for unit purchase and installation costs. Many home buyers who place their units on land they own or plan to purchase would benefit if they could get financing for the unit and land as a single package. In practice, however, unit and land purchases are typically financed in two separate transactions.11

Reflecting the perceived shorter useful life span of manufactured homes and the lower-income and potentially riskier profile of borrowers, manufactured home loans typically have higher interest rates and shorter terms than conventional mortgage loans. According to several national surveys of mortgage lenders, interest rates on manufactured home loans historically have been 3% higher, on average, than conventional mortgage rates.12 Interest rates on manufactured home loans have generally followed fluctuations in national mortgage rates since the mid-1980s. During the 1980s, nominal interest rates of 14% or 15% were typical, with loan terms of about 15 years. Manufactured home lending rates have fallen along with the general mortgage market in the 1990s. Most recently, personal property loans have become available at rates of 9% to 11%, often with terms of 25 or 30 years.

For many potential borrowers, especially low- or moderate-income households with downpayment constraints, the availability of low-downpayment (but admittedly higher cost) consumer loans opens up opportunities for homeownership not available in the conventional housing market. For these credit-constrained borrowers, the combination of lower rates and longer terms has had a dramatic impact on monthly loan costs. For example, a $40,000 loan at 14% for 15 years requires monthly payments of $533, while the same loan amount at a 10% interest rate with a 25-year term requires payments of $363. Better financing terms for manufactured housing over the last ten years (as well as increased production efficiency) may help explain why the cash costs of owning a manufactured home have fallen, even as the size and quality of these homes have increased.

Most manufactured home loans were written by finance companies in the 1980s. Although finance companies are still a dominant force in manufactured housing lending, other lenders have entered the field and have increased the level of competition. Real estate loans, usually with terms comparable to conventional single-family mortgages, have also become more available, although they still comprise only 10% of manufactured housing loans. The entrance of more lenders into the market has increased financing availability and has helped propel industry growth in recent years.13 Additional lenders and improved financing terms in the future can only help the industry's continued growth.

Stock Durability and Values Over Time

Because the manufactured housing inventory is young, it is unclear at this time how the stock's durability--and hence the long-term cost of owning a unit--compares with conventional site-built housing. Almost 60% of the manufactured stock has been built since 1975; almost 98% of this stock has been built since 1960 (Exhibit 15). Close to the entire inventory is therefore less than 35 years old. In contrast, 58% of the total U.S. housing stock has been built since 1960, and only 32% since 1975. The vast majority of the manufactured stock also remains in good condition. The 1993 AHS reports that 90% of units built since 1960 are structurally adequate--a figure comparable to the 94% of total U.S. year-round occupied stock in similar condition. The stock must age more before it becomes clear how different manufactured housing units, especially those built to the HUD Code, can bear the wear and tear of variable climates and household use.

Exhibit 15.
Distribution of 1993 Year-Round Occupied Stock by Year Built
(percent)

	Manufactured Units	Total U.S.
After 1975	59.3	32.1
1970-74	23.1	10.7
1960-69	15.2	15.2
1950-59	1.8	13.1
1949 & earlier	0.6	29.0
	100.0	100.0

Source: 1993 AHS.

In part because the manufactured housing inventory is so young, little research currently exists on the durability and longevity of the stock. The work that has been done remains exploratory. Most studies estimate that units can be expected to last 30 to 40 years.14 In principle, the life span of a unit will depend on initial unit quality, the extent to which the unit is properly and securely placed on its lot, and the ability of the occupant to maintain the unit over time. Due to overall quality improvements, newer manufactured homes will probably remain in the inventory longer than older units--especially those older units built prior to the introduction of the HUD Code in the mid-1970s. Recognizing that even the first homes built under the HUD Code are now only 20 years old, future research faces the difficult challenge of improving estimates of manufactured housing longevity by accounting for quality differences among units of different model years and manufacturers.

Understanding the durability of manufactured homes is an important ingredient in assessing the overall costs of ownership. As with any long-lived asset, a complete accounting of the cost to own a manufactured home depends on the durability and the resale value of the unit over time. When a home appreciates in value, the homeowner realizes equity buildup that can somewhat offset the costs of owning and operating a unit.

The high visibility of older and obviously low-valued manufactured homes suggests that this form of housing has limited potential for equity buildup. There are few studies that carefully track the resale value of manufactured homes over time. One notable exception is a University of Michigan study that examined the sales prices of 455 manufactured homes that sold twice over the period 1987-1990. Although this "repeat-sale" methodology is widely utilized in analysis of site-built housing, the Michigan study is apparently the first to use this approach to examine the appreciation of manufactured homes.

The Michigan study discovered that, on average, homes in their sample sold for more than their purchase price. While few units experienced unit appreciation in excess of the general rate of inflation, the Michigan study established that there was an active resale market for manufactured housing, and that depending on other factors (age and size of the unit, location, and the characteristics of the community in which the unit was located), unit appreciation (both nominal and inflation-adjusted) was possible.15

Specific manufactured home characteristics that promote value appreciation are unclear. Conventional wisdom suggests that the inherent value of land and higher amenity levels should increase the values of units on owned land. If so, the steady increase in placements on owned land over the past decade should start to boost resale values.

An important trend in community ownership may have a stabilizing effect on values of units located in land-lease communities. Community ownership is increasingly changing from individual "Mom-and-Pop" operations to corporations and real estate investment trusts (REITs). These entities structure the communities as annuity investments and count on a steady, predictable income stream over time. Although their investment strategies include regular rent increases, these organizations understand the interrelation of land rent and unit values. In order to maintain stable occupancy and competitive rent levels, these organizations have focused on improving the quality of management and the range of services offered to homeowners in their communities.

As professional ownership and management of manufactured housing communities expands, land-lease arrangements should become more predictable and better understood. Over time, units in good locations and active markets may hold or increase in value, even though they are not connected to the land. Anecdotal evidence from professionally-owned and managed communities suggests that this may already be occurring. Further research is required to help the industry better understand how manufactured housing appreciates or depreciates in value. With this knowledge, the industry will be better able to market its products to consumers concerned with the value of their housing investments over time.

V. FUTURE TRENDS

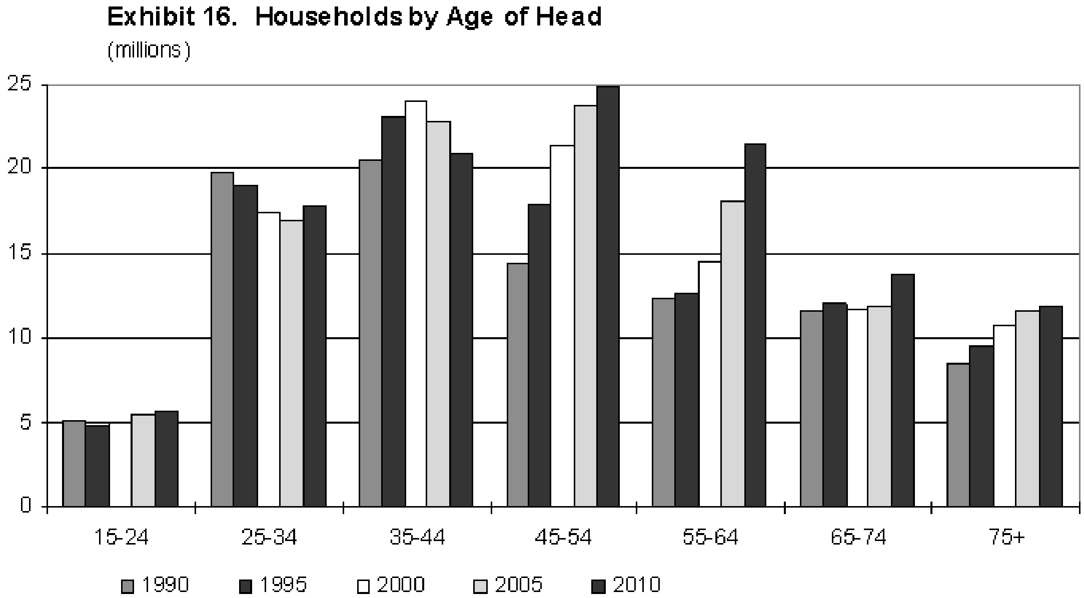
Changes occurring in the nation's population and economy provide an important backdrop to the manufactured housing industry. The aging of the baby boom generation towards retirement and the movement of the echo-boom generation (the children of the baby boomers) towards home buying ages promise great growth for an industry that has an established market among elderly and very young households. Other significant trends are the long-term shift of population away from the Frostbelt to the Sunbelt states, and the decentralization of people and jobs away from center cities to the fringes of metropolitan areas. These shifts increase housing demand in regions of the country where manufactured housing has had a long-term presence and a high degree of acceptance.

Changes in the nation's economy and income distribution present challenges to the housing industry in general and opportunities for the manufactured housing industry in particular. Changes in the distribution of household income presents housing producers with a segmented market: the growing number of higher-income households will demand better-quality homes while the growing number of lower-income households will require decent housing at affordable prices. Manufactured housing can serve a broad variety of household needs because units span a wide range of quality levels and are highly affordable. Flexibility and affordability are some of manufactured housing's greatest assets: the industry has considerable potential for growth if current population trends continue and if the industry promotes its unique strengths.

Household Trends

Steady national household formation rates support growth for all segments of the housing market, including manufactured housing. Contrary to the alarms sounded within the housing industry, household growth is likely to continue steadily and then will increase more rapidly by the year 2010. Even with the baby-bust generation moving into the prime household formation years, an average of 1.2 million new households will form each year -- close to the pace recorded in the 1980s. Although slowing slightly to 1.1 million near the year 2000, household growth will pick back up again to 1.2 million as the echo-boom generation moves into its 20s and 30s in the first decade of the next century16.

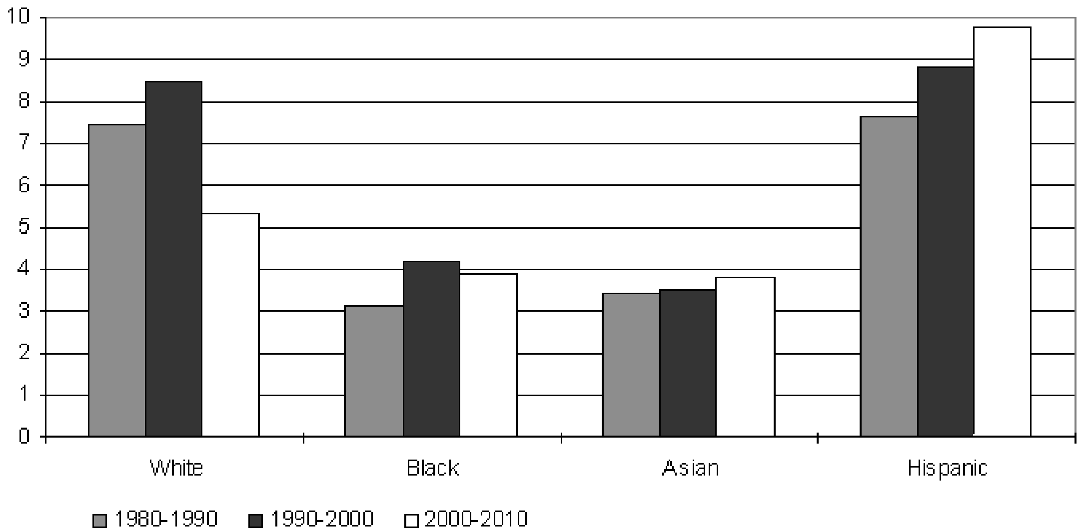
Driving major changes in household composition across the nation is the aging of the baby boom generation. As this group grows older, the strongest household growth will be among 45-54 year-olds and thereafter among 55-64 year-olds. The number of households with heads over age 75 will also continue to rise, accounting for one in every ten households by the year 2010. The 25-34 year-old age group, which has been declining in number since 1990, will finally begin to increase again in 2010 with the arrival of the echo-boom generation into this age range (Exhibit 16).



Along with shifts in age will come changes in family composition. Today, older baby-boom households are moving into the "empty-nest" stage of the life cycle when they no longer have minor children living at home. Married couples without minor children will become the fastest-growing family type by the year 2000. Married couples with children under the age of 18 will grow more slowly, as will young single-parent households. Single-person households, however, will continue to increase in number-- especially among older age groups. Of the 6.9 million new single-person households added over the next 15 years, more than a third will be age 65 and over. In contrast, the number of single-person households under age 45 will drop by almost half a million, or 6%, between now and 2010.

Another major trend in the country's population is increasing racial and ethnic diversity. White population growth is slowing, while minority populations (including all Hispanics, as well as African-Americans, Asian-Americans, and Native Americans) are growing relatively quickly (Exhibit 17). While intermarriage blurs ethnic and racial distinctions, the minority share of the overall population is expected to expand from 24 percent in 1990 to 32 percent in 2010.

Exhibit 17. Population Growth by Race and Ethnicity
(millions)



These national household trends favor the growth of manufactured housing. With the leading edge of the baby boom now in its 50s, there will be growing demand for recreational and/or retirement housing. These trends suggest that if manufactured housing can continue to build on its share within the recreation and retirement markets, the industry can expect substantial growth over the next 15 years.

The concurrent movement of the echo-boom generation into prime home buying years will further boost industry expansion if it maintains its share within the first-time home buyer market. People who have lived in manufactured housing units previously appear more inclined than the rest of the population to buy and to move into other manufactured units; by solidifying or even spreading its market activity today, the manufactured housing industry can help ensure continued expansion in the future.

Minority households represent an attractive target for industry expansion. The U.S. population will become increasingly diverse in the next 15 years. Current AHS data on racial characteristics of owners of manufactured homes show that the rate of growth of black households in manufactured units has not kept pace with the rate for white households in the last decade. It is unclear whether this disparity reflects the inability of blacks to secure land for unit placements or discriminatory actions by manufactured housing retailers and finance companies. In any event, manufacturers have no reason to promote or sustain racial differences in purchasing patterns for manufactured housing. The predicted rise in minority households in the next several decades suggests that the industry would benefit if it more aggressively sells its product to minority households currently underserved by manufactured housing.

Spatial Trends

Following a pattern begun in the past quarter century, the U.S. population continues to move in substantial numbers to the South and West. This shift is expected to continue over the next 15 years (Exhibit 18). Should current growth patterns continue, 60% of the total U.S. population will live in these regions in 2010, with more than one-quarter residing in California, Texas, and Florida alone. The shares of the population living in the Northeast and Midwest will also continue to fall, although somewhat more gradually.

Exhibit 18.
Regional Share of U.S. Population: 1980-2010
(percent)

	1980	1990	1995	2000	2010
Northeast	21.7	20.4	19.6	18.8	17.7
Midwest	26.0	24.0	23.5	23.1	22.1
South	33.3	34.4	35.0	35.2	35.7
West	19.1	21.3	21.9	22.9	24.4
	100.0	100.0	100.0	100.0	100.0

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-20 and Joint Center projections based on Series P-25.

Along with the general shift toward the Sunbelt states, there is a similarly strong movement of people and jobs away from high-density center cities to lower-density suburbs and outlying places. This decentralization process has been operating for centuries, pushing the boundaries of metropolitan areas far from the center city and prompting rapid development of out-lying counties. Due to this trend, population growth in the nation's center cities lags far behind gains in the suburbs (Exhibit 19). Indeed, many of the largest central cities of the Northeast and Midwest actually lost population over the past 15 years.

Exhibit 19.
Distribution of Population Growth Across U.S. Metropolitan Areas

	Thousands of People			Average Annual Change Per 1,000 People	
	1980	1990	1994	1980-90	1990-94
Large MSAs	111,744	125,259	130,686	11.4	10.6
Center City	37,116	38,709	38,795	4.2	0.6
Surburb	74,628	86,550	91,891	14.8	15.0
Other MSAs	60,769	67,279	71,040	10.2	13.6
Non-Metro	54,036	56,171	58,615	3.9	10.6
Adjacent	32,936	34,862	36,523	5.7	11.6
Non-Adjacent	21,100	21,309	22,092	1.0	9.0
Total	226,549	248,709	260,341	9.3	11.4

Notes: Large MSAs (Metropolitan Statistical Areas) defined as those with population over one million in 1990. Adjacent counties have a common border with a metro area.

Source: Joint Center for Housing Studies, The State of the Nation's Housing, 1996.

Non-metropolitan areas continue to grow erratically. After a surge in the 1970s, population growth in non-metro areas fell off sharply during the 1980s. A prolonged recession led to substantial out-migration from rural areas, especially those not adjacent to metropolitan areas. In the first part of the 1990s, however, non-metro population growth picked up again. While non-metro areas adjacent to metropolitan borders led the gains, more remote areas catering to recreational and retirement markets also showed strong growth.

The decentralization of development may well accelerate in the 15 years ahead. Continued advances in telecommunications will encourage many companies to move some or all of their business operations to lower-cost (usually lower-density) locations. Aging baby boomers are also looking for better-quality homes in lower-density areas, as well as second homes for vacation or retirement. Even recent immigrants to the United States -- who now contribute much of the population growth in the larger center cities – are likely to join in the general movement to the suburbs as they enter the economic mainstream.

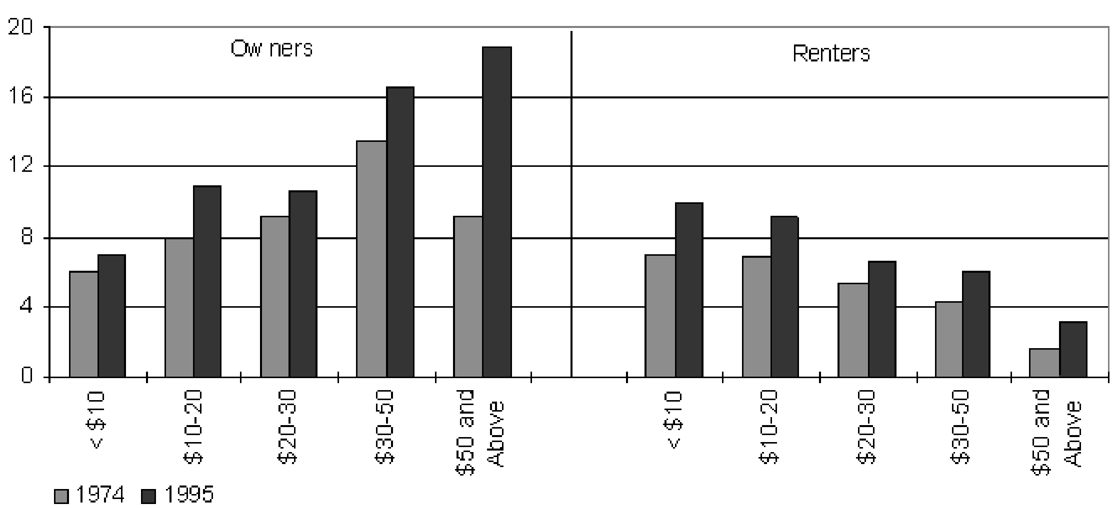
These patterns of population movement bode well for the manufactured housing industry. Manufactured housing is already well-established in some of the fastest growing regions of the country. Manufactured housing is already widely used and more highly accepted in Southern states; the movement of people to these areas promises further industry expansion. Prospects for growth are especially bright because domestic migrants tend to be young households. Manufactured housing has traditionally been attractive to young first-time homebuyers.

Income Trends

Over the past two decades, the changing wage structure of the U.S. economy has altered the distribution of income. Since the 1970s, the wages of those with a high school education or less have steadily eroded relative to the wages of those with at least a college education. As a result, the labor force is increasingly divided between well-educated, high-skilled workers who are able to take advantage of improved earnings prospects, and less educated, low-skilled workers who are unable to advance up the economic ladder.

Consistent with the widening wage gap, the numbers of high-income owners and low-income renters are both climbing rapidly. Over the past 20 years, the number of renter households with incomes of $10,000 or less has grown from 7.0 million to 10 million, an increase of 43% (Exhibit 20). At the same time, the number of owner households with incomes above $50,000 has more than doubled, surging from 9.2 million to 18.9 million.

Exhibit 20. Households by Tenure and Income
(millions of households, thousands of 1989 dollars)



Changes in the nation's wage and income distribution are particularly evident among younger workers. From 1970 to 1994, the median income of households with heads aged 25 years or less fell 19%. At the other end of the spectrum, the incomes of the elderly rose over that same period. Although many older households -- particularly elderly women -- still live in poverty, most have received increases in retirement income, Social

Security, and other benefits that buffer them from the most severe consequences of the changing economy.

Related to shifts in the country's wage and income distribution are changes in the country's industrial structure. While employment and production in manufacturing industries once drove the nation's economy, the bulk of the nation's employment growth occurred in the service and retail trade sectors from 1970 to 1990.17 Across the nation, yesterday's stable moderate-income factory production job has become today's data processing or retail management job. Households will show growing numbers in white-collar service jobs in the years ahead.

The changing structure of the economy and the growth in both the number of higher- and lower-income homeowners presents the manufactured housing industry with numerous avenues for expansion. The industry offers housing consumers options on unit and land tenure that are not commonly available in other segments of the market. Today, manufactured housing occupancy comes in many different forms: seasonal and retirement housing; an owned unit in a land-lease park; an owned unit on someone else's (non-park) land; a completely rented unit. Recently, developers have been using manufactured housing in fee-simple suburban subdivisions. All these occupancy types cater to different lifestyles and suit different household preferences. Manufactured housing can be an attractive housing form for those seeking more choice in their property ownership arrangements.

With an adaptable and low-cost product, the industry is well-equipped to serve the needs of households at both ends of the income distribution. The high end of this scale will contain growing numbers of affluent elderly households. Already a popular choice among retirees, manufactured housing may become more attractive to a wider share of these higher-income households if consumers learn that manufactured housing can be a quality product at less cost than a comparable site-built house. Because they are nearing the ends of their lives, elderly households may have fewer interests in the appreciation benefits one accrues from land ownership. Manufactured units in land-lease communities may continue to grow in appeal to higher-income elderly households seeking quality housing, flexible tenure, new units with fewer maintenance problems, independent living, or the social benefits that arise from a community of peers.

The low end of the income distribution will contain growing numbers of young households. Many in this range seeking homeownership status will face high purchase prices in the general housing market. The manufactured housing industry can help these households move up the rungs of the housing ladder by offering good quality, affordable units. These units would be attractive to those who would otherwise remain unable to own their own home, or to those living in areas with limited availability of good quality and affordable rental housing.

VI. INDUSTRY AND POLICY ISSUES

The rapid changes in the industry and increasing placements of manufactured housing units are generating new discussions concerning industry practices and regulations that affect the public interest. Housing consumers carry a range of demands; foremost among these may be housing affordability, safety, and choice, as well as housing product information and guarantees. Meeting demands for housing affordability is often difficult because the public's desire for affordable housing frequently conflicts with other concerns over stock quality and neighborhood property values. Practices by the industry and regulations affecting its operation must address the public's many demands if the industry is to join national efforts to promote homeownership and to meet the challenge of continued growth.

Unit Sales

Unlike site-built homes, most manufactured housing units are sold through dealers or retailers. This approach to home sales works well in many respects, but perhaps could be improved if suppliers offer more information to consumers and better consumer protections. Currently, there is an incentive for high-pressure sales techniques by retailers and dealers. Many retailers display inadequate concern for proper installation. Retailers also have an incentive to sell add-ons that improve their profit margins rather than options that might be better for the purchaser. Finally, when the retailers control access to financing (which they often do), they have little incentive to offer alternatives to the purchasers. Suppliers of manufactured housing will ensure deeper customer satisfaction with their products if they help promote consumer education about the industry and the housing it provides. The public's image of the industry may improve and respect for manufactured housing may increase if the industry works as a whole to educate consumers about the model types, quality levels, installation methods, servicing requirements, prices, and financing options available.

Unit Installation

The quality of installation of manufactured housing affects the safety, habitability, longevity and financing of units. Manufacturers recognize that installation is one of the weakest links in the delivery chain because they do not oversee work performed by the nearly 5000 independent retailers who typically arrange for unit installation. Regulation and oversight of installation is not covered by the HUD Code, but is instead addressed by a patchwork of state regulations. The American National Standards Institute (ANSI) has developed a model installation code that many states have adopted, but standards and compliance continue to vary across states.

Even where clear installation standards exist, consumer protection against defects that may arise from improper installation remains an issue. Responding to consumer demand for quality assurances, manufacturers often offer multi-year warranties for their homes.

Manufacturers typically regard damage from improper installation as the responsibility of retailers and installers, however. Unfortunately, few installers and retailers warrant their own work; state regulations governing training, licensing and registration of retailers and installers are often non-existent or poorly enforced. As a result, a homeowner often does not know who is responsible for correcting installation-related defects. Even if the source of the problem is clear, many home buyers are unable to obtain compensation from the poorly capitalized firms that typically move in and out of the installation business.

The varying extent and quality of local oversight of installation procedures were a major focus of the National Commission on Manufactured Housing. In an interim report, the Commission unanimously recommended that the industry develop minimum installation standards and that states perform a minimum level of installation inspections. In its Final Report, the Commission recommended that retailers be required to offer a five-year warranty covering installation-related structural damage to complement the proposed five-year manufacturers warranty on production-related defects. Moreover, the Commission proposed the creation of a system of industry-financed state recovery funds to cover claims of homeowners if a manufacturer or retailer goes out of business or otherwise fails to make repairs required by the warranty.18

Though initially endorsed by representatives of the manufactured housing industry on the Commission, the proposed reforms met with tremendous resistance from retailers and installers. Critics noted that the proposals further expanded the reach of the federal government into state regulatory matters, even though the Commission was highly critical of HUD's ability to oversee existing national regulations for manufactured housing. Some objected to proposals that manufacturers be required to provide purchasers with additional installation-related information. Furthermore, some argued that the proposed regulations would impose high costs on retailers and installers who currently do not warrant their work, and would impede industry-sponsored self-regulation.

Unfortunately, industry representatives eventually withdrew their support from the proposed reforms. As of this date, the Commission's recommendations have yet to be enacted. Apparently, the proposed reforms reached too far and pushed too quickly against an industry that is only beginning to focus on how best to address legitimate consumer issues concerning quality assurances.19 Even so, various parties should continue to seek acceptable methods for addressing installation problems. Reform is in the best interest of manufacturers, retailers, and others concerned with the growth of manufactured housing. By addressing legitimate consumer complaints and by weeding out less reputable segments of the industry, efforts to address installation problems will help overcome the public perception that manufactured housing is an inferior product.

Unit Financing

One of the most striking features of the manufactured housing industry is the large share of units that is financed as personal property rather than as real estate. Although about half of the units placed in recent years have gone on owned land, only 10% of the financed purchases were done with real estate loans. The industry's evolution out of the automobile and recreational vehicle industry has led to the development of a separate financing industry for manufactured housing grounded in personal property finance. In fact, Ford and General Motors are still two of the largest manufactured housing lenders through their consumer finance divisions.

Personal property loans are not necessarily undesirable; they often offer speedy approvals and more flexible underwriting standards. The loan interest can even be tax-deductible, as with real estate mortgages. Nevertheless, many purchasers could benefit from having their unit titled as real estate and financed with a real estate loan.20 Such an option would be especially beneficial for consumers who face difficulties securing financing for an associated land purchase. Because they offer lower rates and longer terms, real estate loans would be more affordable and would allow the joint financing of unit and land.

Two barriers currently block the wider provision of real estate financing for manufactured housing. First, real estate lenders have little experience with manufactured housing lending and cannot compete against established industry lenders and their streamlined approvals process. Second, buyers do not receive information about real estate loans because retailers control the access to financing. Although the situation may be somewhat different for units purchased through developers in communities or sub-divisions, most units are purchased through dealers, and the sales process resembles the process typically used to sell cars. Most dealers offer financing through the manufacturer's finance subsidiary or through a pre-arranged correspondent who lends for a major finance company. Only three or four companies control most of the available financing, even as private financing has become more affordable.

Although real estate loans would be advantageous for some purchasers, they would not be helpful or affordable for everyone. For some, flexible underwriting and low downpayments make personal property loans the most desirable option. Further development of a bifurcated lending system that combines the best features of personal property loans and real estate loans will enable purchasers to choose the type of financing that works best for them. For such a system to work, consumers must have sufficient information on the advantages and disadvantages of alternative financing methods--information that is often not readily available to potential manufactured home buyers.

Given the potential growth of this segment of the housing market, many lenders are already taking a hard look at how to approach manufactured home finance. A fully-functioning, bifurcated financing system will greatly promote the expansion of consumer choices and the increased use of manufactured housing in the future. Industry leaders should help develop the real estate branch of the system, introduce more competition, and educate consumers about manufactured housing finance.

Construction Codes

Manufactured housing is distinguished from all other conventional and factory-built homes because it is constructed to a national, pre-emptive building code administered by HUD. Critics have argued that HUD Code requirements are less stringent than the standards used by states and localities to regulate other forms of residential construction. As a result, critics say that homes built to the HUD Code are inherently inferior to other forms of housing built to stricter state and local standards.

Overall assessments of the quality of the HUD Code relative to other housing codes are difficult to perform because the codes are complex. In a 1993 report from the University of Michigan, researchers compared HUD and BOCA Code requirements and found that HUD Code standards were less demanding in some areas and more demanding in others. For example, the report states that minimum ceiling heights, hallway widths, and thermal protection levels in the HUD Code were "less restrictive" than BOCA Code requirements in Michigan, while fire safety requirements for ceilings and furnaces, exterior exit facilities, and wind load requirements were "more restrictive."21 In an effort to quantify differences between the codes, the National Commission on Manufactured Housing compared material costs for units built to minimum HUD and BOCA Code standards. They found that at the time the analysis was performed, the HUD Code granted material cost savings of almost 12%. Upgrades to thermal and energy standards in 1994, however, have reduced some of the material cost advantages of the HUD Code.

Comparisons are complicated further by the fact that the HUD Code is fundamentally different from the others. Standards in the HUD Code are generally performance-based: requirements specify stress, strain, and load levels; materials and building assemblies that can meet these performance criteria are allowed in construction. In contrast, state and local codes (and the model building codes upon which they are based) are generally prescriptive: they specify more explicitly the types and sizes of materials that builders must use.

Noting the different orientation of the HUD Code, the National Commission focused its concern on the process of code revision and how this process can be improved. Commission members noted that the HUD Code tends to become out-of-date because the procedures for making code changes are highly bureaucratic and time-consuming. While model codes are updated yearly, regular evaluations and efforts to revise the HUD Code do not occur. When changes are proposed, revisions to the HUD Code can take three years or even longer to adopt. In addition, the Commission found flaws in how the industry measures compliance with the HUD Code's performance standards. Currently, the Code does not contain uniform guidelines for testing or evaluating materials and building assemblies to meet established performance standards. Without such guidelines, designers and engineers can develop widely different evaluation methodologies, and assessments of code compliance become open to dispute.

Responding to these issues, some groups have proposed that the manufactured housing industry adopt one of the model codes as the basis for the HUD Code. People within the industry countered that if such a step were taken, the industry would lose the ability to develop cost-saving, technological building innovations encouraged by the performance-based nature of the HUD Code. Some consumer groups argue that the process of developing model codes is also flawed: builders and consumers are not fully represented in model code organizations, who often make changes to model codes without full consideration of all parties' interests or the costs imposed by new guidelines. The National Commission recommended that the industry review and update the HUD Code every two years, through a consensus committee that would represent all interested parties and fall under the administration of an outside organization. Commission members disagreed, however, over who this outside organization should be and the composition of the consensus committee.22

Debate has also risen within the manufactured housing industry over one of the key elements of the HUD Code: the permanent chassis. Many manufacturers have been suggesting for years that regulators remove the chassis requirement because units typically do not move after their initial placement. The construction of a chassis often adds unnecessary costs for those home purchasers who site their units permanently. Others have also argued that removal of the requirement would give the industry more design flexibility: without a permanent chassis, units could be more easily stacked or developed with full basements.

A number of voices have argued against elimination of the chassis requirement. Some owners of manufactured units in land-lease communities want to keep the requirement because a chassis typically provides the most efficient and least costly method of removing a unit from a site at the end of a land lease. Some states and consumer groups argue that the chassis clearly and visibly distinguishes manufactured housing from other factory-built forms of housing: without a chassis, other factory-built homes might pass as manufactured housing and escape the building requirements of state and local codes. Some housing producers in other sectors of the housing industry argue that if the chassis requirement is eliminated, then the federal pre-emption of state and local building codes should be eliminated as well. They reason that if a key distinction between manufactured and other forms of housing is removed, then manufactured housing should be subject to the same regulations that apply to the rest of the housing industry.

Through its research, the National Commission claimed that it is technically feasible to produce a manufactured unit with a removable chassis that is comparable in cost and quality to a unit with a permanent chassis. Commission members recognized that manufactured units with removable chassis (and with appropriate standards regulating their construction) could provide another source of affordable housing in the country. The debate on the chassis requirement remains, however, unresolved. How the HUD Code and its provisions emerge and change from current discussion will greatly affect unit production processes, unit designs, and consequently unit quality and unit costs in the future.

Zoning

Restrictive zoning policies hamper the industry's ability to provide affordable housing to households with lower incomes. In the past, when zoning laws were established in previously unincorporated areas, group placements of manufactured units were usually prohibited and new placements of individual units were restricted. Reasons for these actions were many: siting and aesthetic characteristics of manufactured housing were seen as detrimental to property values of site-built housing in adjacent areas; utilities and sewage treatment in manufactured housing communities were inferior to new standards; the stock was seen as lower-quality housing that rapidly depreciates to the detriment of surrounding properties; and manufactured housing has traditionally housed lower income people.

Available research summarized earlier in this report suggests that many concerns about the adverse effects of manufactured housing on local communities are exaggerated if not simply false. Although manufactured housing has slowly become more acceptable to state and local regulators and to many within the general public, further progress remains. Greater acceptance has come in part from changes in the product. In 1995, almost half of the units shipped were multi-section units. When these units are placed on their sites their appearance is closer to site-built housing than to the long and narrow single-section units which predominated in the past. Manufacturers have also learned how to ship units with hinged roofs to increase roof pitch and have been able to change exterior cladding to match local preferences.

As the product evolves, it is possible that communities will abandon zoning policies that categorically prohibit manufactured housing. Some communities have put aside long-held reservations about manufactured housing and have taken steps to allow its development. The California state legislature has passed a number of laws over the past 15 years permitting manufactured units in single-family zoned neighborhoods. These laws have eliminated the variances, conditional use permits, and public hearings formerly required in some areas for manufactured housing. The legislature has also barred deed restrictions that prohibit manufactured homes.23

Some localities have made adjustments to their zoning codes to allow manufactured housing, but have included requirements for multi-section units, for minimum roof pitch, and for permanent foundations. While these requirements can be met by the industry, and while they encourage the placement of units that are more comparable to site-built housing, they increase costs appreciably to eliminate the most affordable units.

As the industry works to improve its product, land use policies should acknowledge the changing character of manufactured housing and include this housing form in residentially-zoned areas (instead of confining it in commercial areas). Policies should recognize the multiple groups manufactured housing can serve, and allow family and elderly land-lease communities into local areas as well as placements in single-family subdivisions. Land-use policies must also find suitable ways to include single-section and lower-end units within larger communities, to preserve and expand the availability of the most affordable stock for households with fewer resources.

Manufactured Housing and the National Homeownership Strategy

Today the nation is in the midst of a national homeownership boom. Driven in large measure by favorable demographic trends and a shift of population to lower density areas, this boom should boost homeownership rates to all time record levels by the year 2000. This boom signals the success of millions of households in achieving one of the cornerstones of the American dream. Owning one's own home benefits individual families by promoting households' financial security; homeownership benefits larger communities by furthering neighborhood stability and by fueling economic growth.

To further homeownership growth and to extend ownership opportunities to low- and moderate-income households, private sector groups in the housing industry have joined forces with non-profit organizations and public officials. The coalition's approaches and commitments are set forth in a comprehensive National Homeownership Strategy designed by HUD in collaboration with housing experts around the country.24 The manufactured housing industry has joined this coalition and efforts to raise national homeownership levels.

The coalition's Strategy rests on three broad underlying approaches to promoting homeownership: 1) increasing housing affordability by reducing housing production costs; 2) breaking down financial and regulatory barriers to homeownership faced by minority groups; and 3) educating the public about homeownership. Specific proposals relating to manufactured housing include: 1) establishing installation standards and product warrantees; 2) expanding financing options; 3) strengthening the role of states in manufactured housing regulation; and 4) encouraging zoning and land use development policies more conducive to manufactured housing.

By joining national efforts to increase homeownership, the manufactured housing industry has garnered widespread support from groups in the public, private, and non-profit sectors to further the use of its product. Such broad support and understanding is essential if the industry is to move beyond its poor public image and realize more of its potential to provide affordable housing for millions of households.

NOTES

1The four model codes in widespread use today include the Council of American Building Officials (CABO) One and Two Family Dwelling Code, the National Building Code of the Building Officials Conference of America (BOCA), the Uniform Building Code (UBC) of the International Conference of Building Officials, and the Standard Building Code (SBC) of the Southern Building Code Congress International. For a more detailed discussion of the origin of the HUD Code, see the National Commission on Manufactured Housing, Final Report, 1994.

2 See for example Thomas E. Nutt-Powell, David Hoaglin, and Jonathan Layzer, "Residential Property Value and Mobile/Manufactured Homes: A Case Study of Belmont, New Hampshire," Joint Center for Housing Studies of the Massachusetts Institute of Technology and Harvard University, Working Paper 86-1 (1986). For a summary of studies conducted in California, Georgia, Michigan and North Carolina, see Kate Warner and Jeff Scheuer, "Manufactured Housing Impacts on Adjacent Property Values," Manufactured Housing Research Project, University of Michigan, Report 4 (1993).

3 Urban Land, January, 1996, vol. 55 no.1, p. 27.

4 For a discussion of installation issues, see the National Commission on Manufactured Housing, Final Report, 1994.

5 For a detailed review of performance of manufactured housing see Robert Johnson, "Manufactured Housing Quality," Manufactured Housing Research Project, University of Michigan, Report 1, 1993.

6 Joint Center tabulations of manufactured housing stock shares by county density class use 1990 Census data on the housing stock. County density classes were created by ranking all counties in the country by population density (using 1984 population density figures). The most dense counties containing the first 20% of the total population were assigned the highest density class (#5). Counties next on the density ranking containing another 20% of the population were assigned the next highest density class; this process continued until there was a total of five density classes. Based on this methodology, each density class contains an equal number of people but a different number of counties.

7 Foremost Insurance Company conducts a survey of newly purchased and insured units, and in their surveys, new owners placing a unit on non-park leased land ranges between 12% and 19% of all placements from year to year.

8 See Stacy Poulos, "The Drive to Remodel: An Analysis of Remodeling Behavior," Joint Center for Housing Studies, 1996.

9 See Robert Johnson and Jeff Scheuer, "Manufactured Housing Costs and Financing," Manufactured Housing Research Project, University of Michigan, Report 2, 1993.

10 For a review of these issues, see the National Commission on Manufactured Housing, Final Report, 1994. This study's discussion of code and cost issues has also been informed by a cost analysis by Steven Winter Associates and a document entitled "Standard Options Paper" prepared for the National Commission, as well as a technical memorandum written by Peter Werwath for the Joint Center for Housing Studies.

11 See Robert Johnson and Jeff Scheuer, "Manufactured Housing Costs and Financing," Manufactured Housing Research Project, University of Michigan, Report 2, 1993.

12 See Posset, Richard W., "Exorcising Interest Rate Mysticism: A Comparative Cost of Home Financing," The Versatile Companies, Tulsa, Oklahoma, October 1994.

13 See Suchman, Diane R., "Manufactured Housing: An Affordable Alternative," Urban Land Institute, Paper 640, March 1995.

14 See "Affordability/Durability Paper," National Commission on Manufactured Housing, October 22, 1993, and Kate Warner and Robert Johnson, Manufactured Housing Research Project, University of Michigan, Report 3, 1993. See also Carol Meeks, "Manufactured Home Life," Manufactured Housing Institute, 1995. This study estimated the "habitable life" of manufactured housing stock (the amount of time any unit remains in the inventory) to be as long as 70 years.

15 See Kate Warner and Jeff Scheuer, "Manufactured Housing Values," Manufactured Housing Research Project, University of Michigan, Report 3, 1993.

16 See The State of the Nation's Housing, 1996, Joint Center for Housing Studies.

17 John Kasarda, "Industrial Restructuring and the Changing Locations of Jobs," State of the Union: America in the 1990s, Reynolds Farley, ed., Russell Sage Foundation, 1995.

18 See the Final Report of the National Commission on Manufactured Housing, especially Appendix D ("Text of the Interim Report") and Appendix A ("Comments of Minority Members").

19 For a discussion of the creation and subsequent collapse of the Commission's consensus on regulatory reform, see Robert W. Wilden, "Manufactured Housing: A Study of Power and Reform in Industry Regulation," Housing Policy Debate, Volume 6, Issue 2.

20 Units financed with personal property loans are almost always titled as personal property, and not as real estate.

21 See Kate Warner and Robert Johnson, "Manufactured Housing Quality," Manufactured Housing Research Project, University of Michigan, Report 1, 1993.

22 For a more detailed discussion of the Commission's analysis of code issues and recommendations, see the National Commission's Final Report, Chapter 2 ("Procedures and Process for Standards Development...") and Appendix A ("Comments of Minority Members").

23 "Community Profile," Manufactured Housing Institute, Vol. IV No. 1., Winter 1995.

24 See "The National Homeownership Strategy: Partners in the American Dream," U.S. Department of Housing and Urban Development, May 1995. [JL1]

Appendix A-1.
Age Distribution of Households
(percent)

	Manufactured Units					
	Owners				Renters	
	1974	1985	1993	Recent Buyers 1993	1974	1985
Number of households *(thousands of units)*	3,168	3,905	4,481	571	435	716
Median *(years)*	41	45	47	36	28	30
<25	16.3	13.6	4.1	13.3	36.5	36.1
25-34	25.3	18.5	21.2	30.1	28.4	25.3
35-44	13.4	16.8	20.3	22.9	12.3	18.7
45-54	13.0	13.6	15.3	12.2	10.9	9.4
55-64	14.0	14.2	13.2	6.6	5.1	3.9
65-74	12.2	15.5	14.0	8.7	4.0	3.5
75+	5.8	7.8	11.9	6.2	2.8	3.1

	All Other Units					
	Owners				Renters	
	1974	1985	1993	Recent Buyers 1993	1974	1985
Number of households *(thousands of units)*	42,678	52,215	56,757	4,006	22,922	29,515
Median *(years)*	51	51	50	37	36	35
<25	2.0	2.9	0.7	5.3	18.8	22.2
25-34	16.0	13.8	13.3	34.3	28.9	26.4
35-44	19.3	22.2	23.5	29.7	13.6	17.9
45-54	22.0	17.4	20.6	16.3	11.9	9.9
55-64	19.5	18.9	16.2	8.1	10.6	8.5
65-74	13.7	15.6	15.2	4.3	9.8	7.7
75+	7.5	9.1	10.5	2.1	6.4	7.6

Note: Before 1984, the AHS counted manufactured homes with permanent room additions as one structures. After 1984,
manufactured units with one or more permanent rooms are included as manufactured homes.

Source: 1974, 1985, 1993 American Housing Surveys.

Appendix A-2.
Family Type and Racial Distribution, Educational Characteristics of Households
(percent)

Manufactured Units

	Owners				Renters		
	1974	1985	1993	Recent Buyers 1993	1974	1985	1993
Number of households *(thousands of units)*	3,168	3,905	4,481	571	435	716	986
Single	18.6	25.7	25.0	20.7	24.2	22.1	21.8
Married with Children	36.0	31.2	25.6	33.2	29.3	27.8	24.0
Married without Children	36.5	29.1	30.4	28.6	27.3	16.3	12.9
Single with Children	4.7	6.0	7.7	8.9	9.4	18.1	21.8
Other	4.2	7.9	11.3	8.5	9.9	15.7	19.5
White	94.3	90.1	89.2	89.5	89.9	89.3	85.1
Black	3.5	6.0	5.5	1.9	6.3	4.5	6.4
Hispanic	1.6	3.1	4.6	7.6	3.1	5.5	7.0
Other	0.6	0.9	0.7	1.1	0.6	0.7	1.4
Education Beyond High School	18.0	18.9	23.5	32.8	15.2	19.4	22.6

All Other Units

	Owners				Renters		
	1974	1985	1993	Recent Buyers 1993	1974	1985	1993
Number of households *(thousands of units)*	42,678	52,215	56,757	4,006	22,922	29,515	30,422
Single	12.48	16.59	18.02	15.1	32.06	35.61	35.36
Married with Children	41.85	31.45	28.73	36.34	23.77	18.53	16.27
Married without Children	34.82	38.07	37.29	29.09	21.79	14.19	12.74
Single with Children	4.1	4.8	5.3	8.4	11.7	15.4	17.4
Other	6.8	9.1	10.6	11.1	10.7	16.3	18.2
White	89.3	87.1	85.1	85.2	74.6	69.3	64.6
Black	7.2	7.7	7.9	5.5	16.5	17.5	19.2
Hispanic	2.7	4.9	6.7	9.0	6.8	12.5	15.7
Other	0.9	0.3	0.4	0.3	2.0	0.6	0.6
Education Beyond High School	30.1	41.0	48.8	60.1	29.9	37.9	42.7

Note: Before 1984, the AHS counted manufactured homes with permanent room additions as one-unit structures. After 1984, manufactured units with one or more permanent rooms are included as manufactured homes.

Source: 1974, 1985, 1993 American Housing Surveys.

Appendix A-3.
Income Distribution of Owner-Occupied Households
(percent)

	Manufactured Units			All Other Units		
	1985	1993	Recent Buyers 1993	1985	1993	Recent Buyers 1993
Number of households *(thousands of units)*	3,905	4,481	571	52,215	56,757	4,006
<40%	19.9	21.5	21.4	11.7	12.2	5.5
40-80%	32.4	32.2	35.4	19.0	20.0	15.3
80-120%	26.6	24.7	25.5	21.0	20.2	21.4
120-160%	12.7	11.1	10.7	17.3	16.1	18.1
>160%	8.4	10.5	7.0	31.1	31.5	39.7

Note: Income categories are shares of the income distribution relative to area median incomes.

Source: 1985 and 1993 American Housing Surveys.

Appendix A-4.
Average Housing Prices

	Average Sales Prices				Average Square Feet		Average Sales Price/Square Foot				Quality-Adjusted Index	
	(current dollars)		(1989 dollars)				(current dollars)		(1989 dollars)		(current $)	(1989 $)
	MH	SF	MH	SF	MH	SF	MH	SF	MH	SF	SF	SF
1974	9,300	38,900	22,220	92,940	NA	1,695	NA	22.95	NA	54.83	NA	NA
1975	10,600	42,600	23,388	93,993	NA	1,645	NA	25.90	NA	57.14	NA	NA
1976	12,300	48,000	25,677	100,202	NA	1,700	NA	28.24	NA	58.94	NA	NA
1977	14,200	54,200	27,861	106,342	NA	1,820	NA	29.78	NA	58.43	NA	NA
1978	15,900	62,500	29,209	114,815	NA	1,755	NA	35.61	NA	65.42	58.8	108.0
1979	17,600	71,800	29,492	120,314	NA	1,760	NA	40.80	NA	68.36	67.6	113.3
1980	19,800	76,400	29,832	115,111	NA	1,740	NA	43.91	NA	66.16	74.6	112.4
1981	19,900	83,000	27,387	114,229	1,015	1,720	19.61	48.26	26.98	66.41	80.6	110.9
1982	19,700	83,900	25,552	108,824	1,000	1,710	19.70	49.06	25.55	63.64	82.6	107.1
1983	21,000	89,800	26,145	111,799	1,035	1,725	20.29	52.06	25.26	64.81	84.6	105.3
1984	21,500	97,600	25,659	116,481	1,060	1,780	20.28	54.83	24.21	65.44	88.3	105.4
1985	21,800	100,800	25,123	116,164	1,080	1,785	20.19	56.47	23.26	65.08	90.1	103.8
1986	22,400	111,900	25,343	126,602	1,110	1,825	20.18	61.32	22.83	69.37	94.4	106.8
1987	23,700	127,200	25,870	138,845	1,140	1,905	20.79	66.77	22.69	72.88	100.0	109.2
1988	25,100	138,300	26,309	144,964	1,175	1,995	21.36	69.32	22.39	72.66	103.6	108.6
1989	27,200	148,800	27,200	148,800	1,195	2,035	22.76	73.12	22.76	73.12	107.5	107.5
1990	27,800	149,800	26,375	142,121	1,205	2,080	23.07	72.02	21.89	68.33	109.1	103.5
1991	27,700	147,200	25,219	134,015	1,225	2,075	22.61	70.94	20.59	64.59	110.0	100.1
1992	28,400	144,100	25,100	127,359	1,255	2,095	22.63	68.78	20.00	60.79	112.1	99.1
1993	30,500	147,700	26,173	126,746	1,295	2,095	23.55	70.50	20.21	60.50	115.4	99.0
1994	33,500	154,500	28,030	129,271	1,330	2,100	25.19	73.57	21.07	61.56	120.0	100.4
1995	36,300	158,000	29,535	128,556	1,355	2,095	26.79	75.42	21.80	61.36	123.9	100.8
Chg '81-95	*82.4%*	*90.4%*	*7.8%*	*12.5%*	*33.5%*	*21.8%*	*36.6%*	*56.3%*	*-19.2%*	*-7.6%*	*53.7%*	*-9.1%*
Ave. Ann. Chg '81-95	*4.1%*	*4.4%*	*0.5%*	*0.8%*	*1.9%*	*1.3%*	*2.1%*	*3.0%*	*-1.4%*	*-0.5%*	*2.9%*	*-0.6%*

Notes: MH = manufactured housing; SF = new single-family detached housing; NA = not available.
Average sales prices for single-family detached units include the cost of land while prices for manufactured units do not.

Sources: U.S. Bureau of the Census, Construction Reports, Series C-20, C-22, and C-25.
The Quality-Adjusted Index for new single-family homes is from the U.S. Bureau of the Census, Construction Reports, Series C-25,