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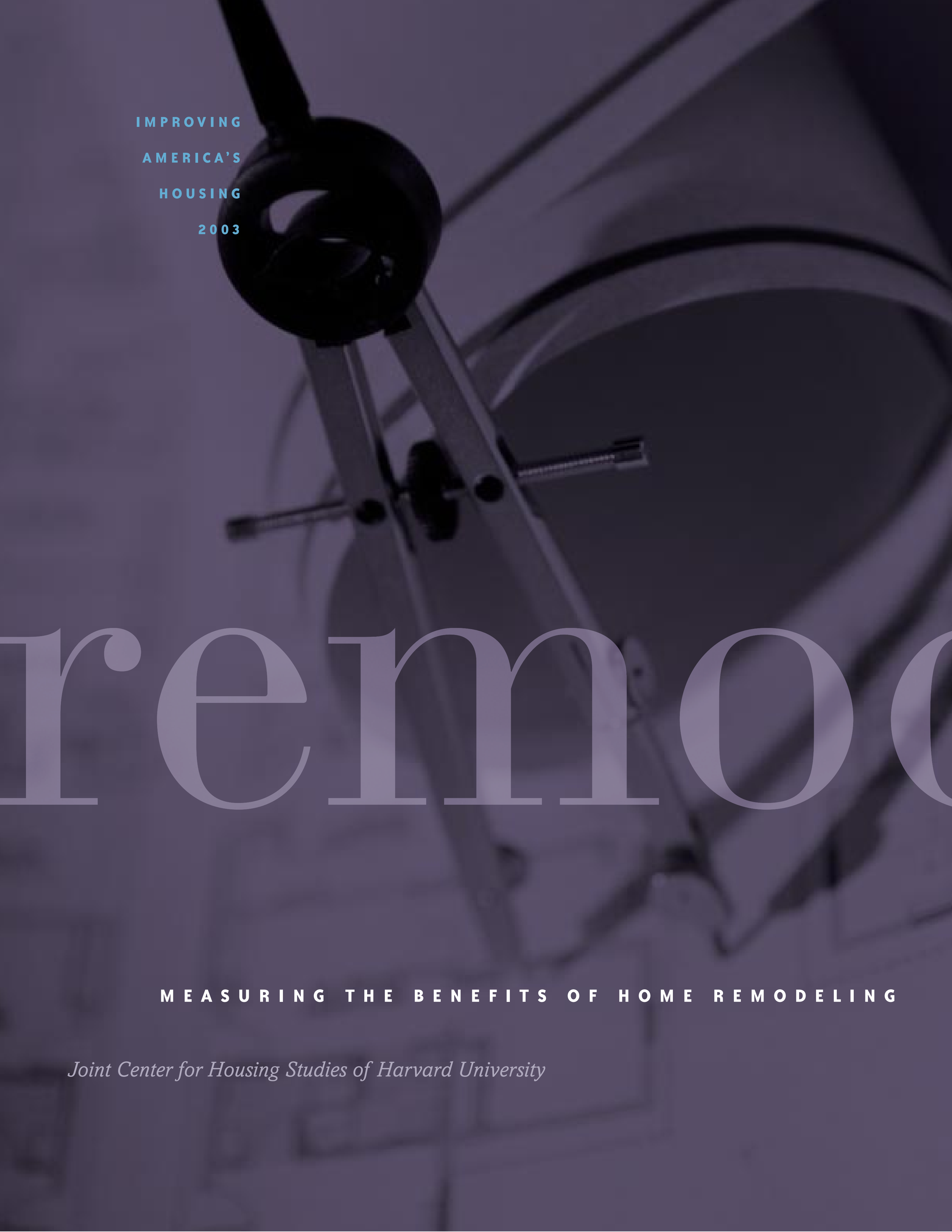

IMPROVING AMERICA'S HOUSING 2003

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MEASURING THE BENEFITS OF HOME REMODELING

Joint Center for Housing Studies of Harvard University

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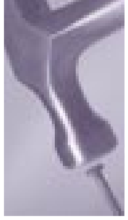

MEASURING THE BENEFITS OF HOME REMODELING

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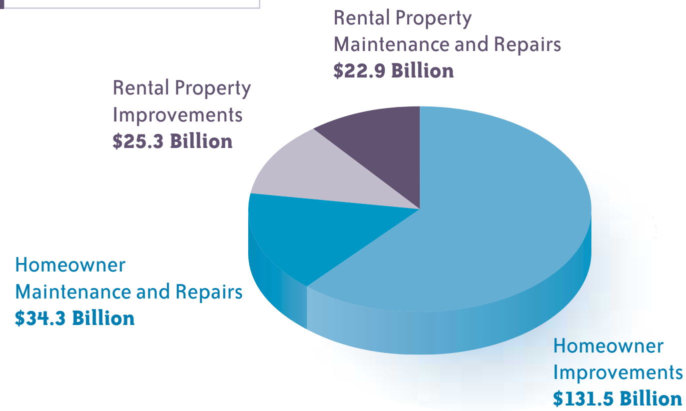
1 INTRODUCTION AND OVERVIEW

Home improvement has become the great national pastime. Whether remodeling a kitchen, adding a family room, installing replacement windows, or simply changing a light fixture, millions of Americans each year undertake some type of home project. For individual owners, investing in their homes in this way not only improves their comfort and safety, but also their ability to build wealth and achieve financial security. For society as a whole, home improvement spending bolsters annual growth of the economy at the same time that it preserves and enhances the nation's $13 trillion housing stock.

REMODELING AND THE ECONOMY

While trending up throughout the second half of the 1990s, spending on home remodeling (defined here as total expenditures for improvements, maintenance, and repairs) picked up pace toward the end of the decade. When the Joint Center for Housing Studies published its first report in this series, 1995 remodeling expenditures were estimated at about $150 billion. At the time our second report was published, 1999 expenditures had risen to about $180 billion. And by 2001, expenditures were up to $214 billion (Figure 1).

1 Remodeling Expenditures Hit $214 Billion in 2001



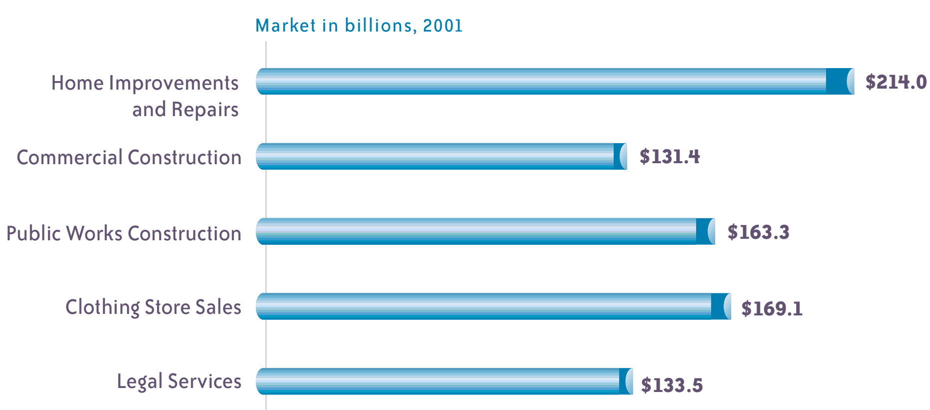
Source: Joint Center for Housing Studies (JCHS) tabulations of the 2001 American Housing Survey.

Indeed, the strength of home remodeling activity was instrumental in preventing the economy from falling deeper into recession in 2000-01. Like new residential construction, remodeling spending has directly benefited from several years of rising rates of homeownership, rapid increases in house prices, and low interest rates.

Even as economic growth averaged just 2.0 percent annually in 2000-01 (in inflation-adjusted terms), remodeling expenditures increased more than 6 percent. With so many other sectors in retreat, the $34 billion increase in home improvement spending accounted for 4.2 percent of the overall growth in economic activity.

Despite its size and growing importance, home remodeling is a “stealth” industry that flies beneath the radar of most macroeconomic analysts. Collectively, however, spending on home remodeling activities outpaces that in other several major industries—including legal services and clothing store sales (Figure 2). In fact, expenditures on home remodeling now exceed those in both the commercial and public works construction categories.

2 Home Remodeling Has Joined the Ranks of Major Industries

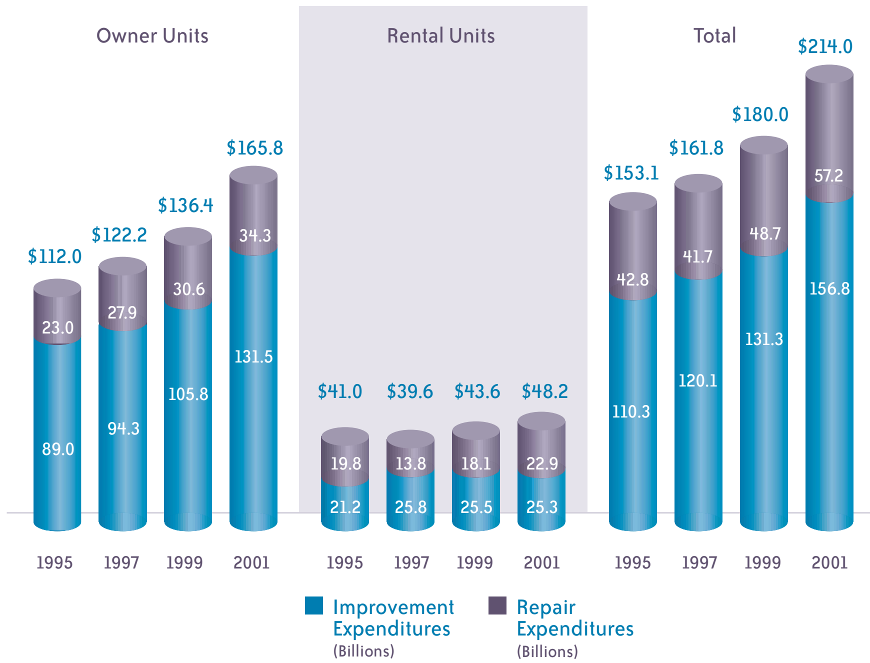


Sources: JCHS tabulations of the 2001 American Housing Survey, and US Department of Commerce.

Homeowners accounted for more than three-quarters of the $214 billion total in 2001, devoting over $131 billion to home improvements and over $34 billion to maintenance and repairs (Figure 3). Owners were also responsible for almost 90 percent of the spending gains from 1995 to 2001, with growth rates averaging almost 7 percent annually (4 percent when adjusted for inflation).

In 2000 and 2001, some 41 million homeowners undertook almost 100 million improvement projects, nearly two-thirds of which involved replacing structural elements or major systems. Replacements include a broad range of improvements to home exteriors (such as roofing, siding, windows and doors), interiors (such as built-in appliances, plumbing fixtures, flooring, paneling, and ceiling systems), and systems (such as electrical, plumbing, and HVAC). Homeowner spending on such projects averaged $50 billion annually over the period.

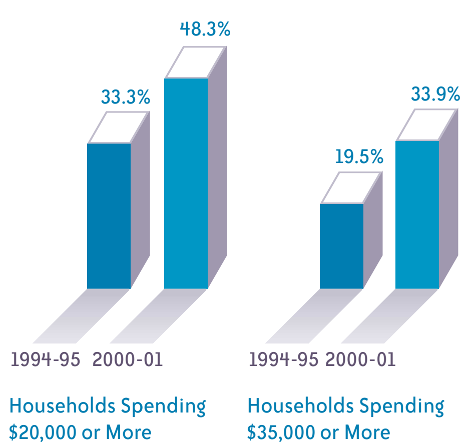
3 Homeowners Dominate Growth of Remodeling Expenditures



Sources: JCHS tabulations of the 1995, 1997, 1999, and 2001 American Housing Surveys; US Department of Commerce Survey of Expenditures for Residential Improvements and Repairs.

Homeowners also completed 7.6 million room additions and alterations (including decks and porches), with total spending averaging just under $25 billion annually in 2000-01. Improvements to structures other than the principal residence (such as adding a detached garage), improvements to the property (such as driveways and patios), and replacements following natural disasters accounted for another $30 billion in homeowner improvement spending.

4 High-Spending Owners Make Up a Growing Share of the Market



Source: JCHS tabulations of the 1995 and 2001 American Housing Surveys. Owner spending is adjusted for inflation by CPI-UX.

Meanwhile, rental property owners added another $48 billion to the total, with expenses about evenly split between improvements and maintenance and repairs. Spending on rental properties was not only much lower than that on owner-occupied homes, but also registered almost no gain in inflation-adjusted terms from 1995 to 2001.

While millions of households of all incomes complete at least one home improvement project each year, high-spending homeowners are responsible for an increasing share of overall expenditures. For example, the 6.3 percent of remodelers who spent $20,000 or more on home improvements accounted for almost half of the 2000-01 total, while the 2.7 percent of remodelers spending $35,000 or more accounted for over a third (Figure 4). This represents a dramatic increase in the high-end market since 1995, when comparable shares were a third and less than a fifth.

The importance of the high-end segment is clear from recent statistics on kitchen and bath remodeling. In 2000-01, homeowners undertook over 5 million bathroom projects and almost 4 million kitchen projects (Table A-1). Owners making major kitchen improvements or alterations (costing at least $10,000) accounted for almost $11 billion of the $14 billion spent each year in this category. Similarly, major bath remodels, additions and alterations (costing at least $5,000) contributed $8.3 billion of the $10.6 billion spent annually.

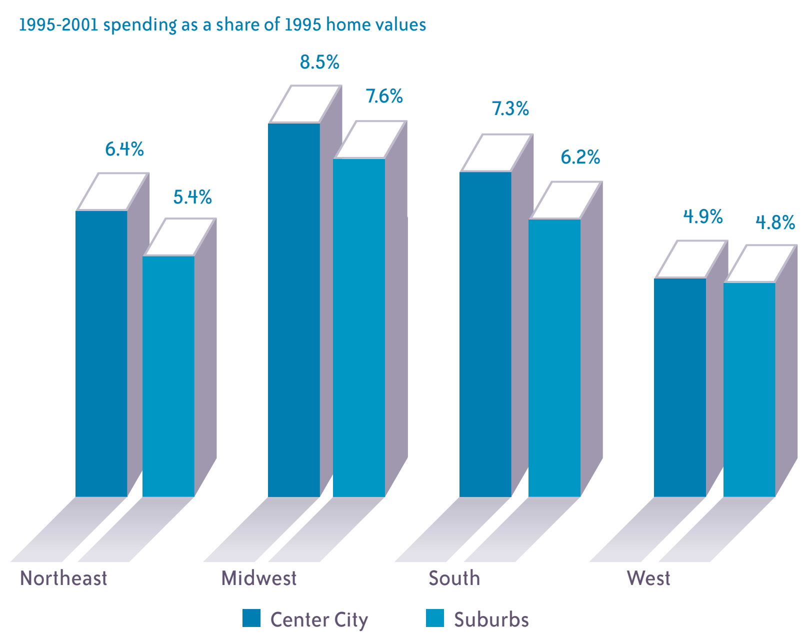
Investing in their homes contributes importantly to the financial well-being of owners, who now make up more than two-thirds of all American households. Although they do on occasion fall, home prices at the national level have risen in nominal terms each year over the past two decades—only rarely failing to outpace general inflation. This price appreciation has enabled many longer-term owners to accumulate substantial home equity, which typically accounts for more than half of their total wealth.

Families that spend more on home improvements also realize the greatest rates of price appreciation. In many regions of the country, homeowners recover as much 80-90 percent of the cost of home improvements in the form of higher home values. Little wonder then that homeowners spent almost $2,300 on average in 2001 to help protect and improve their most important financial asset.

While remodeling projects are increasingly equated with fashion-oriented upgrades to upper-end suburban homes, families living in lower- and moderate-income neighborhoods are also active in the improvement market. By making modest investments in basic systems and structural elements, these households are preventing their older—and typically more affordable—homes from deteriorating and falling out of the housing stock.

Consider the case of households who purchased homes prior to 1994. When improvement expenditures are measured as a share of initial home value, the typical homeowner spent on average some 6.5 percent on upgrades over the 1995-2001 period. What is more, much of this remodeling activity is occurring in the center cities of major metropolitan areas across the country (Figure 5). While this finding reflects the fact that center city homes have lower values, it also suggests that, after decades of neglect, many older homes are being upgraded to serve the needs of a new generation of homeowners.

5 Remodeling Activity is Critical to Center City Housing Markets



Source: JCHS tabulations of the 1995, 1997, 1999 and 2001 American Housing Surveys.

EMERGING TRENDS IN THE REMODELING INDUSTRY

The outlook is very favorable for businesses that comprise the home improvement industry—remodeling contractors, building product manufacturers, and materials suppliers alike. The aging of the housing stock, rising rates of homeownership, and continued growth in household incomes and home values all support a steady rise in expenditures.

On the demand side, minority homeowners are becoming a major growth market. From 1995 to 2001, minorities accounted for about 60 percent of the increase in households and 40 percent of the increase in homeowners. Over this same period, the number of minority homeowners reporting improvement expenditures increased an impressive 39 percent, compared with just 5 percent growth among white owners. Hispanics led the way with a dramatic 55 percent increase in the number of owners reporting home improvement expenditures.

Minorities are expected to make up close to half of the net increase in US households over the coming decade. Although their spending levels currently lag their growing presence in the homeowner market, it is only a matter of time before their expenditures catch up. Growth of the minority remodeling market will have an important influence not only the location of home improvement activity, but also the types of projects undertaken—and therefore the demand for particular products and the opportunities for professional contractors.

Continued growth of high-income and high-spending households will also bolster growth of improvement spending. Affluent households not only dominate spending for professionally installed projects, but they are also active in the do-it-yourself (D-I-Y) market. From 1995 to 2001, households with incomes over $120,000 accounted for 67.1 percent of the growth in spending on professionally installed home improvements and nearly 54.1 percent of the growth in D-I-Y expenditures. As the number of high-income families grows, ongoing innovation in product design insures that these high-spending households will set the pace for both the professional contractor and D-I-Y segments in the decade ahead.

The changing home improvement market has already led to significant consolidation among product manufacturers and distributors. More mergers and acquisitions are likely as many of the largest industry players—particularly those focusing on D-I-Y homeowners—increasingly offer installation services for their products. The critical shortage of skilled labor to provide those services will, among other things, open new opportunities for minority contractors to enter the industry. At the same time, though, intensifying competition is likely to force many professional remodeling contractors to join forces either with one another or with one of the major home improvement product distributors.

EMERGENCE OF THE HIGH-END MARKET

After a decade of record economic growth, the number of US households with high incomes has risen sharply. This increase has in turn pushed both home buying and improvement spending to new heights. Higher incomes have also made it possible for homeowners to turn increasingly to professional contractors for their remodeling projects. Even so, the do-it-yourself (D-I-Y) market remains strong as owners of all incomes continue to tackle a wide range of home improvements and repairs.

GROWTH OF HIGH-INCOME HOUSEHOLDS

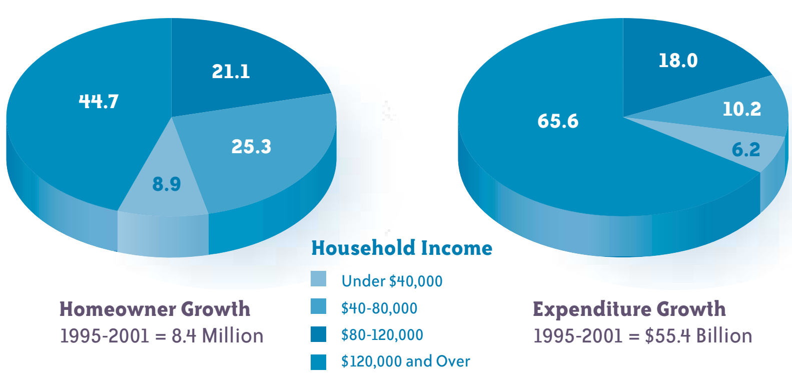
Over the past quarter-century, the US labor force has become increasingly divided between well-educated, higher-skilled workers who can take advantage of economic growth and less well-educated, lower-skilled workers who cannot. The number of owner households with incomes exceeding $120,000 has risen particularly rapidly, up 73 percent (3.8 million) between 1995 and 2001 (Table A-4). Although the gains were strong for all age groups, the baby boomers (aged 35 to 54) were responsible for 58 percent of this increase.

The rapid growth of higher-income households, together with historically low mortgage interest rates, has lifted home buying to all-time highs. In 2002, sales of new homes hit approximately 1.0 million units while sales of existing homes topped 5.5 million.

Homeowners with high incomes spend considerably more than other households on remodeling. American Housing Survey (AHS) results indicate that 64 percent of the nation's 9.0 million homeowners with incomes over $120,000 made improvements to their homes in 2000-01. Collectively, they spent nearly $69.5 billion—more than 25 percent of total improvement expenditures (Table A-4). With per household expenditures of $3,870 in 2001, these top-income families spent more than twice the average owner amount of $1,820.

Furthermore, owners earning over $120,000 per year more than doubled their home improvement expenditures from 1995 to 2001, contributing almost 66 percent of total inflation-adjusted spending growth. In contrast, households with incomes under $80,000 accounted for only 16.4 percent of the growth in home improvement spending (Figure 6).

6 High-Income Owners Account for Two-Thirds of Spending Growth



Sources: JCHS tabulations of the 1995 and 2001 American Housing Surveys. Owner income and spending are adjusted for inflation by CPI-UX.

EXPANDING MARKETS

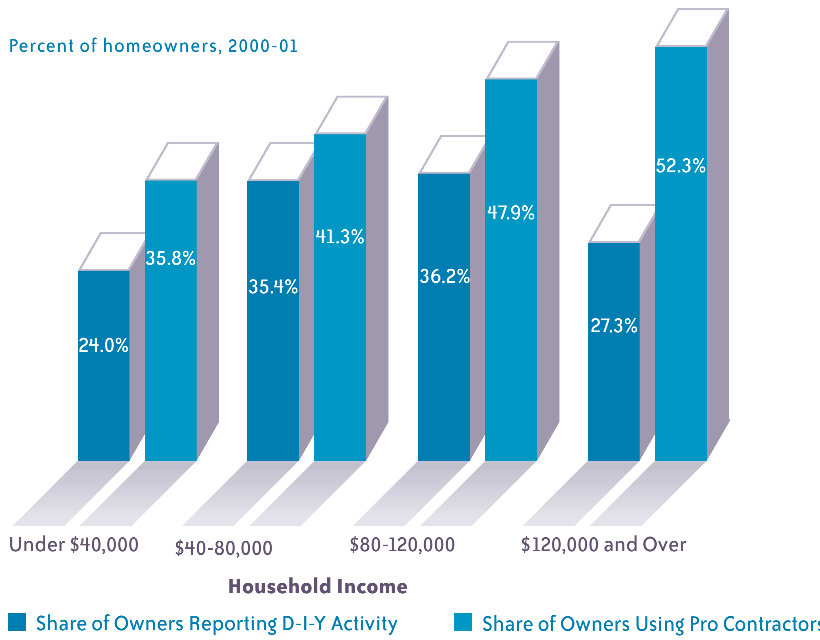
The increasing presence of high-income households in the home remodeling market is a boon for professional contractors. In 2000-01, some 52.3 percent of households with incomes over $120,000 reported hiring a professional contractor for a home improvement project (Figure 7). This share is 17 percentage points higher than that for households earning less than $40,000 and 11 percentage points higher than that for households earning $40,000-80,000.

With affluent households leading the way, the high end of the home improvement market has seen spectacular growth. In 2000-01, over 2.6 million households spent more than $20,000 on home improvements, and 1.1 million households spent more than $35,000. Indeed, households spending more than $20,000 were responsible for $127 billion (48 percent) of total expenditures, and some $104.5 billion (51 percent) of spending on professional contractors (Figure 8).

Even so, homeowners in all income brackets enjoy the challenge and potential savings of making improvements themselves. While estimated at just over 20 percent of total improvement spending, D-I-Y expenditures are somewhat understated in the American Housing Survey because homeowners typically don't factor in the value of their time when reporting project costs. In addition, 42 percent of all home improvement projects have a D-I-Y component. Although the share is highest for more routine maintenance tasks, as many as half of all major kitchen remodels, bath remodels, and room additions include significant D-I-Y activity (Tables A-1 and A-3).

Somewhat surprisingly, high-spending households are important players in the D-I-Y market. Over 40 percent of households making home improvements costing more than $35,000 reported some D-I-Y expenditures during 2000-01. Collectively, high spenders put $14.7 billion into do-it-yourself projects over the period, contributing 24.8 percent of total D-I-Y expenditures. By comparison, the 21.2 million households who spent less than $2,500 on home improvements accounted for only 12.7 percent of D-I-Y spending.

7 High-Income Households Are Most Likely to Hire Professional Contractors



Note: Some owners may report both D-I-Y and professional contractor activity.
Source: JCHS tabulations of the 2001 American Housing Survey.

8 High Spenders Have Buoyed Both the Professional and D-I-Y Markets

Improvement Expenditures 2000-01	Households with Expenditures (Millions)	Professional Expenditures (Billions)	D-I-Y Expenditures (Billions)
Under $2,500	21.2	$11.0	$7.5
$2,500-5,000	7.8	19.8	7.5
$5,000-10,000	6.3	32.0	10.9
$10,000-20,000	3.5	36.7	10.7
$20,000-35,000	1.5	29.9	7.8
$35,000 and Over	1.1	74.6	14.7
Total	41.3	$204.0	$59.1

Source: JCHS tabulations of the 2001 American Housing Survey.

desired improvements before purchasing their newly constructed homes.

HOME BUYING AS A TRIGGER FOR IMPROVEMENTS

While most owners make some improvements to their homes every year, home buyers are particularly likely to make major upgrades at the time of purchase. A recent survey by trade publisher Hanley-Wood suggests that about 75 percent of home buyers identify a list of desired projects at the time of purchase, and almost 90 percent begin work on these improvements within a year of moving into the home.

Trade-up buyers who purchase existing homes spend substantially more on improvements than first-time buyers. According to Joint Center research, these buyers put better than two-and-a-half times more into their homes in the first two years after purchase than owners who do not move (Figure 9). First-time buyers also outspend non-movers by some 60 percent.

Home improvement expenditures for both first-time and trade-up buyers rise with income, although the disparity persists. For example, trade-up buyers with incomes over $120,000 spent $7,690 annually on remodeling between 1994 and 2001—well above the $4,820 spent by first-time buyers and nearly 40 percent higher than the $3,460 spent by longer-term owners.

In part, these differences reflect the fact that trade-up buyers are likely to be in their peak earning years, at least relative to younger first-time buyers and somewhat older longer-term owners. With the recent strength of home price appreciation, many trade-up buyers have been able to accumulate substantial equity that they can then use to make improvements in their new homes. For many first-time buyers, however, rising home prices have meant that they must use most or all of their accumulated savings for the downpayment and closing costs, leaving little for immediate improvements.

RECENT BUYER SPENDING

According to the Hanley-Wood survey, close to half of recent buyers of newly constructed homes stated the primary reason for buying such a home was to avoid dealing with the maintenance, improvement and repair needs of older units. Surprisingly, though, many of these same buyers reported making a home improvement within the first two years of occupancy, with average expenditures ranging from $3,500 for first-time buyers to $5,100 for trade-up buyers. Equally significant, some 73 percent of first-time buyers and 68 percent of trade-up buyers said they had identified a list of desired improvements before purchasing their newly constructed homes.

Although spending less than buyers of existing homes, buyers of newly built homes are clearly interested in customizing their units beyond the options the builder provides. These improvements may include additional landscaping or storage space, as well as changes to the décor such as lighting fixtures, wall coverings, flooring, or window treatments. Although most builders offer a wide range of upgrades, the need to keep new homes affordable to a wide range of potential buyers has apparently led many builders to leave some customizing activities to the homebuyer.

Purchasers of existing homes, in contrast, are more likely to focus immediately on upgrading electrical, plumbing, or heating equipment, replacing doors and windows, or remodeling a bathroom or kitchen. Buyers of existing homes also anticipate these needs at the time of purchase, often completing the work before moving in.

9 Trade-up Buyers Spend the Most on Improvements

Source: JCHS tabulations of the 1995, 1997, 1999 and 2001 American Housing Surveys. Owner income and spending are adjusted for inflation by CPI-UX.

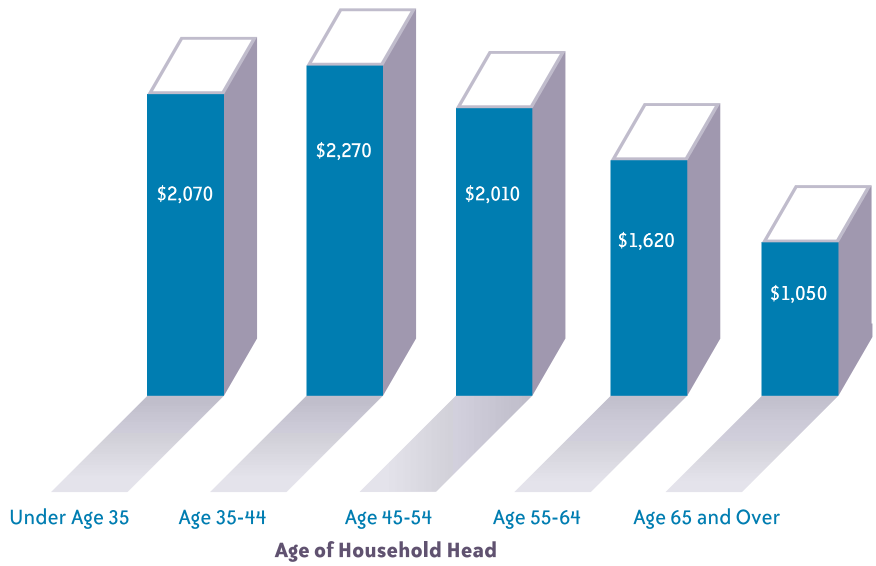
LONGER-TERM OWNERS

Because the incomes, composition, and tastes of households are constantly changing, home improvement is an ongoing phenomenon. And given that only about 7 percent of households purchase either a new or existing home in any year, longer-term owners make up a much larger share of the home improvement market than recent buyers.

Using AHS data, the Joint Center tracked a sample of 11,600 owner-occupied, single-family homes built before 1994. Longer-term owners (defined as those living in the same homes from 1995 to 2001) spent $1,740 annually on improvements over this period. While lower on a per household basis than those of recent movers, expenditures by longer-term owners make up more than 70 percent of total improvement spending.

10 Improvement Spending Drops Off as Homeowners Age

Average annual expenditures in 1994-2001



Source: JCHS tabulations of the 1995, 1997, 1999 and 2001 American Housing Surveys.

Joint Center research also indicates that home improvements made to existing homes depend not only on the characteristics of the buyer and the age of the unit, but also on the age of the seller. Older homeowners typically spend less than younger homeowners on remodeling. As a result, a home purchased from an older homeowner is unlikely to have been updated as recently as one purchased from a younger seller.

Among longer-term residents, average annual improvement expenditures peak for households aged 35 to 44 and then fall off steadily (Figure 10). Changes in family composition appear to be one important explanation for this age-related pattern. Adding a child, an elderly parent, or a spouse to the household often creates the need for more living space, especially for bedrooms and bathrooms. While some of these growing households simply move to larger homes, others stay in their current units and remodel. For stayers, the addition of another household member also leads to such remodeling projects as expanding the kitchen, adding a bathroom or other room, or finishing the basement or attic.

THE OUTLOOK FOR HIGH-END SPENDING

Even when the economy went into retreat in 2001-02, the number of high-income households held firm and sales of both new and existing homes set records. With the economy now poised for recovery, the growth of high-income—and of high-spending—households should keep home remodeling expenditures on the rise for the foreseeable future.

HOME EQUITY AND SPENDING GROWTH

The persistent rise in home prices over the past decade has given a substantial boost to homeowners' equity. In response, households have increasingly tapped this resource to finance their consumption of other goods and services—including home improvements. Unlike many other consumer items, though, home improvements and repairs not only enhance a household's quality of life, but also add to the market value of the home when it comes time to sell.

Continuing their recent runup, average prices of existing homes in 2002 rose 4.0 percent faster than inflation. Although slower than home price appreciation in the preceding two years, this pace is still high by historical standards and brings the total increase since 1995 to a whopping 49.3 percent (Figure 11).

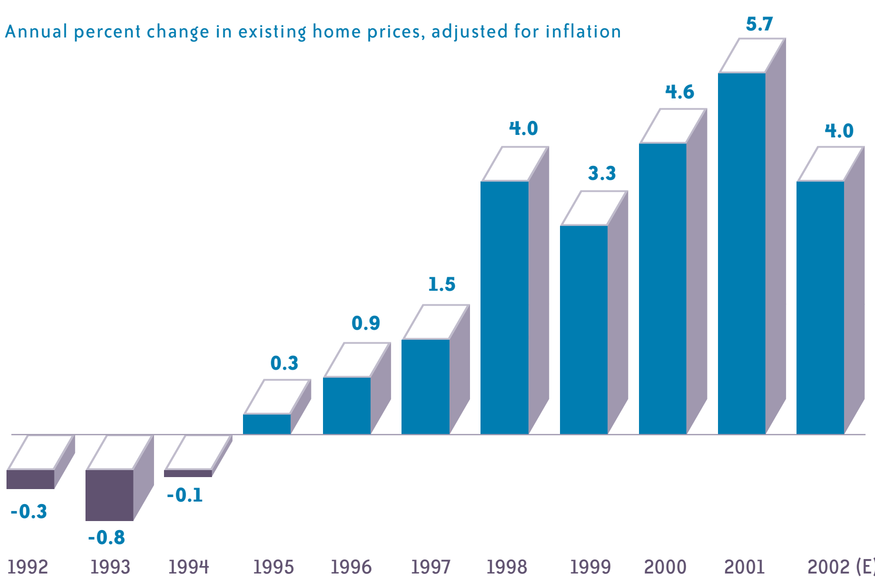
Robust demand pushed the sales price of a typical home in 2002 to a new high of $158,000. The aggregate value of homes in the United States set an all-time record of $13 trillion, posting an increase of more than $4 trillion in the past three years alone.

Rapid home price appreciation has been widespread, with all of the nation's 48 largest metropolitan areas reporting increases between 1995 and 2002. Indeed, prices were up more than 90 percent in Boston and San Francisco, and more than 70 percent in Denver, Minneapolis, and New York. Even after adjusting for general inflation, the gains have been substantial. Home price appreciation in only two large metro areas—Rochester and Buffalo, New York—lagged the rise in general inflation over the period.

While retreating to more sustainable rates in 2002, home price appreciation dipped below the pace of inflation in just three of the nation's largest metropolitan areas. In the spectacularly overheated San Francisco market, home prices were down 0.6 percent last year on an inflation-adjusted basis. Other declines occurred in Austin (down 1.2 percent) and Salt Lake City (down 0.4 percent).

11 Home Price Appreciation Has Slowed But Remains Robust

Annual percent change in existing home prices, adjusted for inflation



Source: Freddie Mac Conventional Mortgage Home Price Index, 2003:3 Release.

The sharp climb in home prices, together with record-low mortgage interest rates, has also stirred refinancing activity. Preliminary estimates indicate that total mortgage volume hit $2.5 trillion in 2002, up $500 billion from 2001. Home refinances led the way, rising almost $400 billion to a new peak of $1.5 trillion. While outstanding mortgage debt thus increased to nearly $6 trillion last year, households nevertheless continued to hold more than $7 trillion in home equity.

Homeowners increasingly draw on their home equity—either at the time of sale or when refinancing their mortgages—to fund debt consolidation, home improvements, or other consumer expenditures. Estimates by Freddie Mac and the Federal Reserve Board suggest that as many as half of the households that refinance take out cash in the process. A recent Federal Reserve Board survey indicates that 4.9 million households refinanced their homes between January 2001 and June 2002, cashing out $131 billion of their equity.

12 Longer-Term Owners Have Converted Their Growing Home Equity Into Cash

	Age of Household Head in 1995		
Average House Value	**25-34**	**35-44**	**45-54**
1995	$106,800	$122,800	$132,800
2001	$150,700	$175,400	$188,800
Change	$43,900	$52,600	$56,000
Average Mortgage Debt			
1995	$60,500	$55,700	$41,400
2001	$57,600	$54,300	$40,400
Change	-$2,900	-$1,400	-$1,000
Average Home Equity			
1995	$46,300	$67,100	$91,400
2001	$93,100	$121,100	$148,400
Change	$46,800	$54,000	$57,000
Net Cash-Out Refinancing			
Dollars	$7,600	$10,200	$10,100
Percent of Initial Value	7%	8%	8%

Source: JCHS tabulations of the 1995 and 2001 American Housing Surveys.

While a majority of these homeowners used part of the proceeds for debt consolidation, 43 percent reported spending some share on home improvements. Indeed, the Federal Reserve Board estimates cash-out refinancings contributed as much as $46.3 billion to home improvement spending over the period.

To illustrate how owners have benefited from home price appreciation, take the experience of a sample of households that purchased single-family detached homes before 1994 and still occupied them at the end of 2001. In 1995, the homes of owners in the 25 to 34 year-old age group were valued at $106,800 on average. By 2001, their homes had increased in value by an average of $43,900. At the same time, these households had reduced their mortgages by $2,900, even though they had also cashed out an estimated $7,600 in equity. Homeowners in older age groups saw even larger gains in home equity—as well as in the amounts they cashed out (Figure 12).

Joint Center analysis also suggests that the more equity they have, the more households spend on home improvement even after controlling for income. For example, households with incomes over $80,000 and home equity equal to 40-60 percent of their home value spend $4,320 on average each year on improvements—some 80 percent more than households of similar income but with home equity of 20 percent or less.

Just as rising prices and growing equity stimulate spending on home improvement and repairs, home improvement and repair spending helps to increase home values. Again, consider the example of longer-term homeowners. In 1995, the typical owner had a home valued at an inflation-adjusted $108,100. Over the six years to 2001, this homeowner made improvements amounting to 6.5 percent of the initial value. While the prices of homes in the sample generally appreciated over this period, owners who spent more on improvements saw greater appreciation than those who spent less (Figure 13).

While the statistical relationship between home price appreciation and remodeling activity appears to be strong, the causal relationship is ambiguous. Owners are motivated to improve their homes for both consumption and investment reasons. On the consumption side, owners may make improvements when they add a new household member or when their income or wealth increases. On the investment side, owners living in hot housing markets may decide to make improvements to capture the potential gains in equity from rapidly rising prices. As a result, price appreciation stimulates additional improvement spending, at the same time that improvement spending generates higher home values.

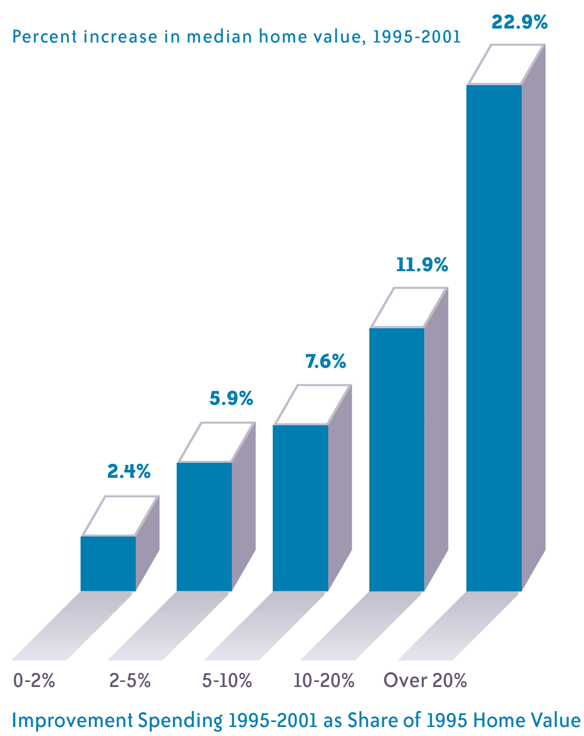
When asked why they remodel, however, owners typically emphasize consumption-related reasons. In a recent Hanley-Wood survey of remodelers, only 9 percent of households that recently spent more than $5,000 on home improvements indicated that resale value was "extremely important" in their remodeling decision, while 46 percent stated that resale issues were "not very important at all." Interestingly, some 73 percent of professional remodeling contractors questioned in this same survey rated potential resale value as an extremely important consideration in the homeowner's decision.

GEOGRAPHIC VARIATION IN RESALE VALUES

While improvements and repairs undoubtedly influence resale values, their specific impact depends on both the location of the home and the type of project completed. *Remodeling* Magazine's 2002 Cost vs. Value Report measures the payback on improvements by comparing the costs of typical remodeling jobs in the nation's top 35 markets with subsequent home values, as estimated by a panel of over 200 local real estate agents and appraisers.

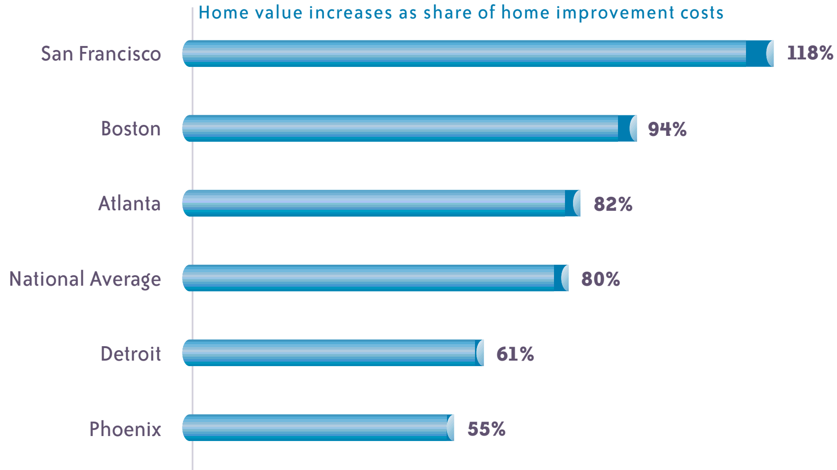
The results indicate that nationally homeowners recover much as 80 percent of their improvement costs through higher home prices, although the increase in value varies considerably from one area to the next. In booming markets like San Francisco, the return on improvements may well outrun the cost (Figure 14). In Boston, another hot housing market, cost recovery is estimated at more than 90 percent. In Detroit, however, home improvements do not give a comparable lift to house values, even though they cost less to make.

13 Improvement Pays Off in Greater Home Price Appreciation



Source: JCHS tabulations of the 1995, 1997, 1999 and 2001 American Housing Surveys.

14 Households Recover a Substantial Share of Their Home Improvement Costs



Source: *Remodeling* Magazine, Cost Versus Value Report, November 2002.

In Phoenix, a housing market with predominantly newer homes, cost recovery is also lower than in Boston and San Francisco. There, older homes must compete against a wide range of newly constructed and higher-quality units available for purchase. In this instance, the prices of newer housing serve to limit the sales price of even recently remodeled existing homes.

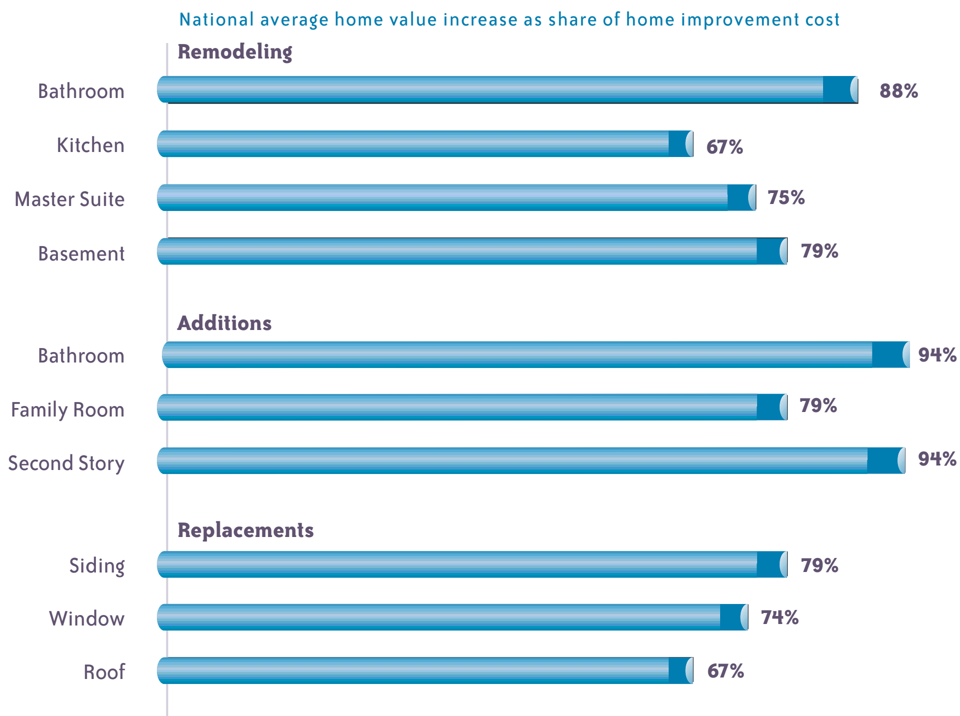
The type of project completed is also important in the equation. For example, homeowners recover nearly 90 percent of expenditures for bathroom remodeling. The cost recovery share for kitchen remodels is decidedly less, just as it is for a variety of replacements (Figure 15).

Whether or not a particular improvement increases a home's market value depends on many factors, including the age, location and characteristics of the unit—especially relative to other homes in the area. In particular, the relatively high return to bathroom remodeling undoubtedly reflects the fact that many homes were built at a time when only one bathroom—and a small one at that—was the standard. Today, homes with two or more bathrooms are very common and spaciousness is highly desirable. As a result, improving and/or adding a bathroom can significantly affect the sales price of a home. Projects such as roof repairs or other replacements, in contrast, may be important to structural integrity but add less to overall market value.

OUTLOOK FOR HOME VALUES

As economic growth picks up pace, home values should continue to appreciate—albeit more slowly than in recent years. Owners will therefore continue to build home equity. Unless mortgage interest rates spike up sharply or the economy takes an unexpected dive, there is every reason to believe that home sales and improvement spending will remain at near-record levels in 2003. Indeed, even if economic growth were to falter in the near term, the outlook for remodeling remains bright. After years of rapid price appreciation, owners have not only gained tremendous housing wealth but also greater awareness that maintaining and improving their homes pays off.

15 Paybacks Depend on the Type of Improvement Made



Source: *Remodeling* Magazine, November 2002.

01 DEMOGRAPHIC AND REGIONAL DRIVERS

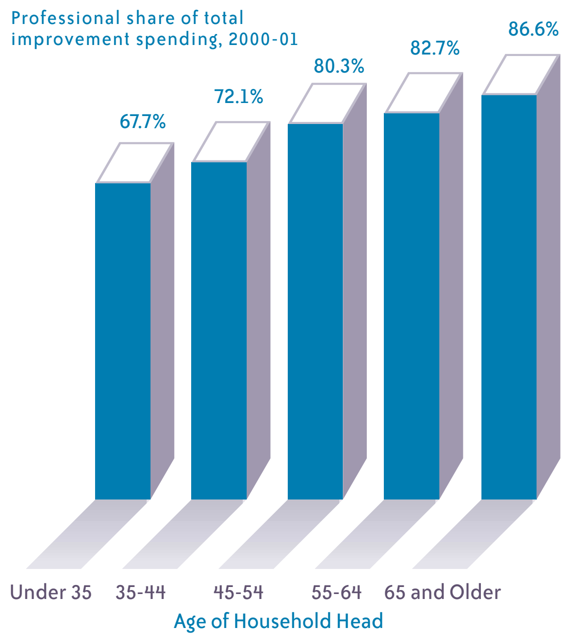
The composition of US households is changing rapidly, with the baby-boom generation now in its peak earning years and both the number and share of minority homeowners rising sharply. Meanwhile, the average age of the owner-occupied housing stock is edging up, expanding the need for maintenance and repair of older homes—particularly in the center cities of major metropolitan areas. All of these forces will continue to spur growth in remodeling expenditures over the coming decade.

During the 1990s, strong economic growth and favorable mortgage interest rates enabled increasing numbers of households to buy homes. From 1995 to 2001 alone, the number of homeowners rose almost 9 million—an increase of nearly 14 percent. Moreover, with baby-boom homeowners in their peak earning years, average improvement expenditures per homeowner over this period were up an inflation-adjusted 12 percent. Combined with the growing number of homeowners, these increases in per household spending lifted total home improvement expenditures 27 percent.

This growth in expenditures is consistent with long-term housing stock and spending trends. Over the coming decade, the average age of the US housing stock will continue to drift upward, in part because of the slowdown in new construction during the 1980s and early 1990s and in part because of recent efforts to preserve older homes. Owners of older homes spend more on improvements than owners of newer homes, regardless of their household characteristics. As a result, overall home improvement spending will continue to climb.

Current and future changes in household composition will help to determine just how large that spending increase is. Today, empty nesters (married couples with no minor children at home) and single persons account for 56 percent of the nation's 105 million households. As the baby boomers move into their mid-50s to mid-60s over the next decade, most of the nearly 12 million net new households formed will be one of these two household types.

16 The Aging Polulation Is a Boon for Professional Remodeling Contractors



Source: JCHS tabulations of the 2001 American Housing Survey.

On the negative side for the home improvement industry, empty-nesters and single-person households usually have little need for additional space. On the plus side, though, these types of households have high homeownership rates and the income to afford professional remodeling and repair services. Indeed, households aged 55 to 64—the fastest-growing group in the decade ahead—spend over 80 percent of their home improvement budgets on professional contractors (Figure 16). This share is 11 percentage points higher than that for households under age 45.

Another potential negative for contractors and home remodelers is that improvement spending drops sharply among the over-65 age group, especially among households that have lived in their homes for a long time. Nonetheless, when the aging boomers eventually sell their homes, the new occupants are likely to make major improvements. The stock of homes built between 1950 and 1969—over half of which is occupied by homeowners over the age of 55—will thus be a source of strong demand for both replacement and improvement spending since many lack such popular amenities as large kitchens, multiple bathrooms, and expansive family rooms.

REGIONAL AND METRO AREA SPENDING TRENDS

Almost half of home improvement spending in the country takes place in the 35 largest metropolitan areas. Based on American Housing Survey data, the Joint Center estimates that owners in these locations spent an average of $1,720 per year on home remodeling projects during the 1990s, more than 25 percent more than the $1,310 spent by homeowners living in smaller metropolitan areas. The highest spending per household is in San Francisco, where average annual expenditures exceeded $2,380 in the 1990s. The lowest reported spending is in the Norfolk metro area, where the average owner put just $970 annually into home improvements (Table A-6).

These geographic disparities reflect differences in the income and demographic composition of households, as well as the age and quality of the local housing inventory. The costs of completing specific home improvements also differ from location to location. For example, remodeling projects tend to cost more in higher-income areas, where the wages and salaries for home improvement contractors and remodeling professionals are also higher. According to *Remodeling* Magazine's 2002 Cost vs. Value Report, the cost of updating a bathroom that is at least 25 years old (by replacing the fixtures and adding ceramic tile floors and other amenities) ranges from $12,190 in San Francisco to only $7,570 in Norfolk (Table A-6).

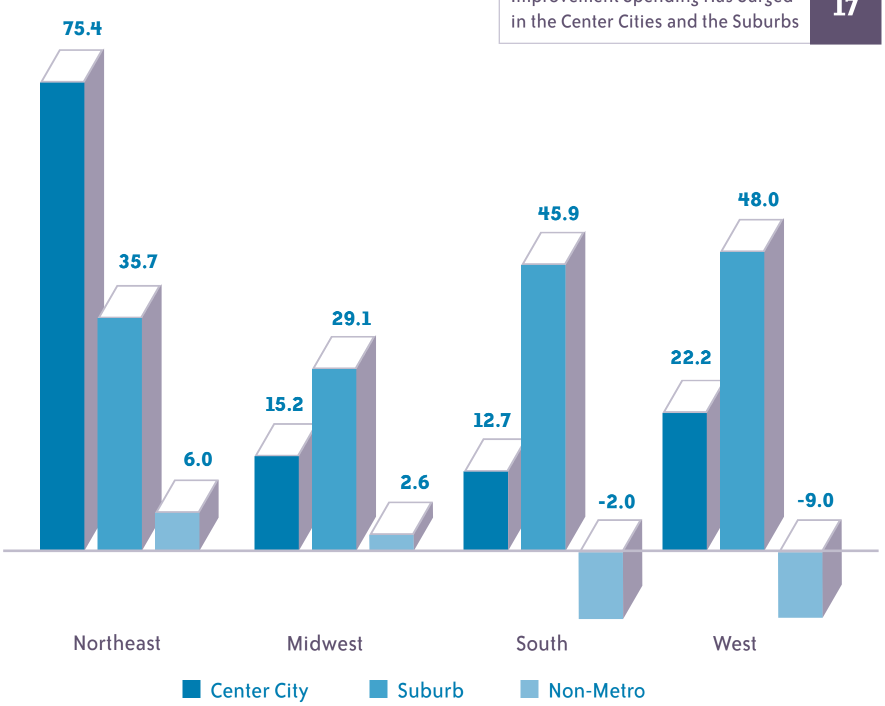
Improvement spending also tracks broad regional patterns in homeowner growth. Historically, a major share of expenditures has been concentrated in the large metropolitan areas of the Northeast and Midwest. The geography of remodeling activity is, however, gradually shifting to high-growth suburban areas, particularly in the South and West. For example, while the total number of suburban homeowners increased 16.3 percent from 1995 to 2001, the number of suburban homeowners in the South and West grew by about 22 percent, Consistent with this growth, home improvement spending rose an inflation-adjusted 40 percent in suburban areas overall but about 47 percent in the suburbs of the South and West.

Recent growth in remodeling activity in the Northeast is, however, an important countertrend (Figure 17). Sharp house price appreciation in Boston, New York and other metro areas in the region has apparently made upgrading older center city housing an attractive option. After years of decline, home improvement expenditures in Northeastern center cities surged more than 75 percent between 1995 and 2001, significantly faster than in the nation's suburban areas. With high housing costs preventing many households from purchasing newer, better-quality homes in the suburbs, the option of acquiring and rehabilitating older center city homes will become an increasingly attractive option for first-time buyers.

The aging of the housing inventory should boost remodeling activity across the country. Just as most of the owner-occupied stock built before 1950 is concentrated in the Northeast and Midwest, most of the units constructed during the 1970s building boom are located in the South and West. As a result, a large share of homes in the Sunbelt is now in the 25 to 30 year-old range—the age when the need for replacements and repairs increases markedly. Over the coming decade, metropolitan areas such as Atlanta, Dallas, Houston, and Los Angeles should therefore see a noticeable pickup in remodeling activity.

Improvement Spending Has Surged in the Center Cities and the Suburbs **17**

Percent change in 1995-2001



Source: JCHS tabulations of the 1995 and 2001 American Housing Surveys. Owner spending is adjusted for inflation using CPI-UX.

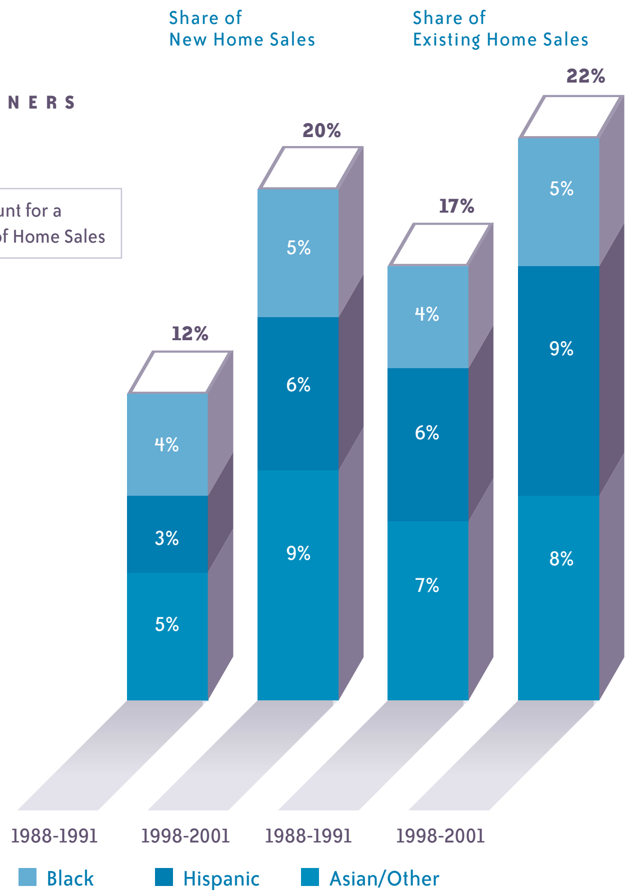
THE GROWING PRESENCE OF MINORITY OWNERS

From 1995 to 2001, the number of Hispanic homeowners rose 45.9 percent, Asian owners 39.8 percent, and black owners 23.7 percent. By comparison, the increase in non-Hispanic white owners was just 10 percent. The disproportionately large increase in minority households primarily reflects the recent pace of immigration. By 2001, many of these immigrants had moved into the economic mainstream, accounting for nearly half of the nation's 12 million minority homeowners.

The growing presence of minority homeowners has helped to lift sales of both new and existing homes to record levels. Between 1998 and 2001, minority households purchased over 3.2 million existing homes—some 22 percent of existing homes sold over that period. Only a decade earlier, minorities accounted for just 17 percent of existing home sales.

Given that minority buyers have lower incomes on average than white buyers, their presence in the market for new homes is somewhat smaller. Even so, the number of new home sales to minorities more than doubled during the 1990s, boosting their share of new home purchases from 12 percent to 20 percent (Figure 18).

18 Minorities Account for a Growing Share of Home Sales



Source: JCHS tabulations of the 1991 and 2001 American Housing Surveys.

SPENDING GAINS BY HISPANIC OWNERS

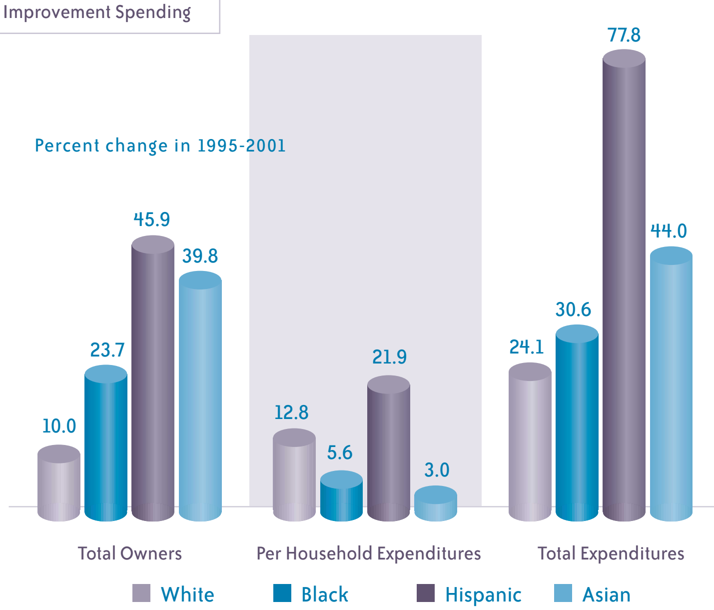
Along with the rise in minority homeownership has come a surge in minority spending on home improvements and repairs. Indeed, led by dramatic increases in spending among Hispanic owners, the overall growth in minority expenditures is nothing short of spectacular. Home improvement spending among Hispanics was up nearly 80 percent in inflation-adjusted terms from 1995 to 2001—more than three times the spending growth among white households (Figure 19). Growth of expenditures by black and Asian households also topped that of whites, although by a narrower margin.

The jump in overall improvement expenditures reflects in part steady gains in per household spending. Despite lower average incomes, minority homeowners have increased their per household expenditures faster than white homeowners. Hispanics are again leading the way, with average spending up 21.9 percent from 1995 to 2001—growth that is nearly 10 percentage points higher than that for whites.

Moreover, recent gains in minority remodeling expenditures are just a preview of the growth that lies ahead. Over the past six years, minorities accounted for some 40 percent of the growth of all homeowners and 57 percent of the growth in the number of homeowners undertaking improvement projects. In the coming decade, fueled by ongoing immigration, minorities are expected to contribute nearly half the 11 million increase in the number of homeowners, climbing by more than 5 million to 17.2 million (Figure 20). Hispanics alone will account for one in five net new homeowners over the next decade.

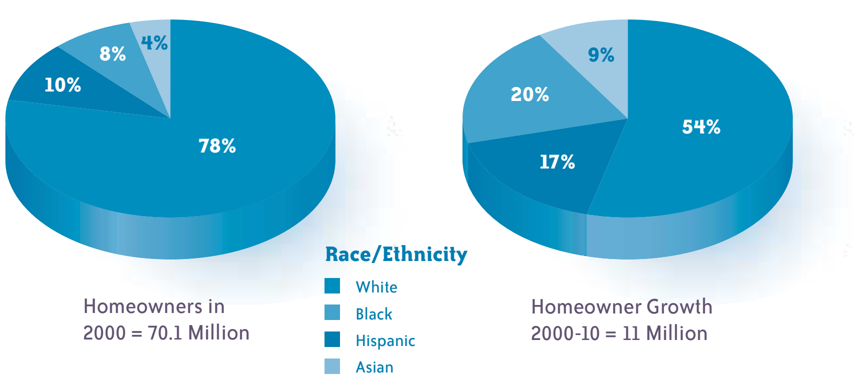
Both demographic and housing stock trends support strong growth in home improvement spending over the coming decade. Minority homeowners, in particular, constitute a large and growing market for home remodeling services. At the same time, housing cost pressures will contribute to a shift in the top 35 remodeling markets over the next ten years. Rising home prices will force increasing numbers of buyers to seek out older, more affordable homes—many of which are located in the center cities of the Northeast and Midwest, as well as the inner suburbs of high-growth metro areas of the South and West.

19 Hispanics Are Leading the Surge in Home Improvement Spending



Source: JCHS tabulations of the 1995 and 2001 American Housing Surveys. Owner spending is adjusted for inflation by CPI-UX.

20 Minorities Will Contribute Nearly Half of the Growth in Homeowners Over the Decade



Source: JCHS projections.

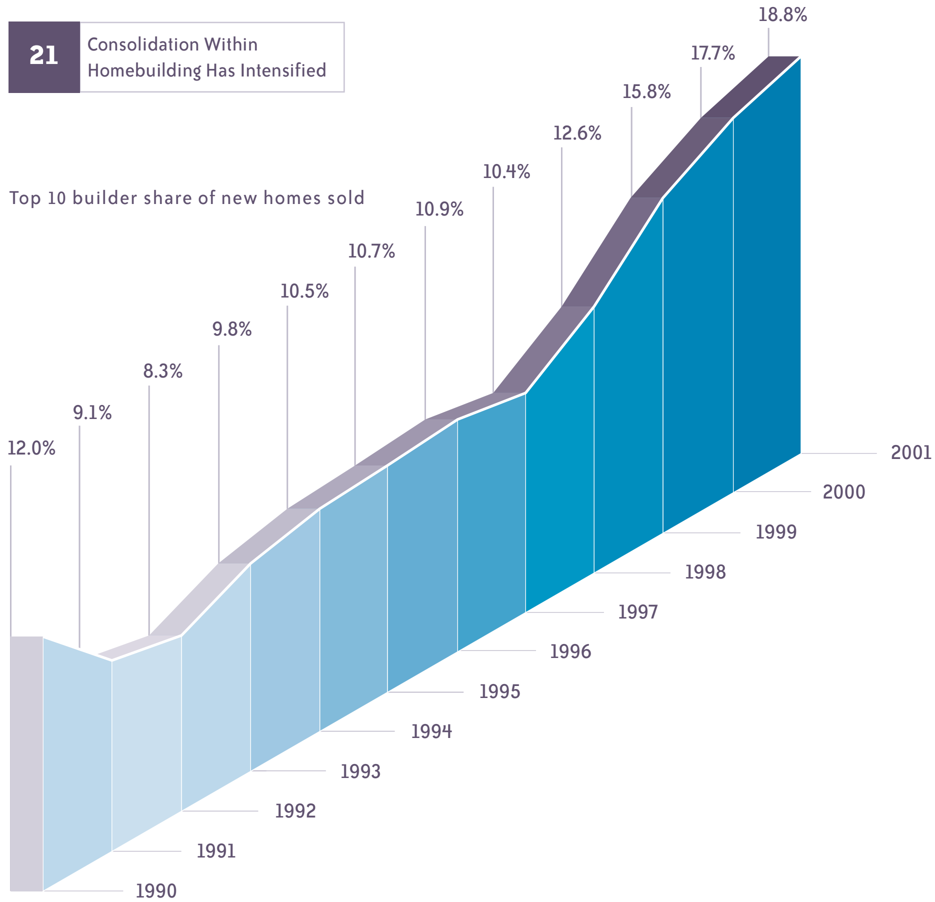
THE EVOLVING HOME IMPROVEMENT INDUSTRY

The remodeling industry comprises hundreds of thousands of individuals and firms that manufacture, sell, and install home improvement products, as well as provide replacement and repair services. Many industry participants also sell goods and services to homebuilders. As a result, recent changes in the homebuilding industry are having profound effects on the home improvement industry. Technological advances in the manufacture and sales of building materials, together with ongoing shortages of skilled workers, are also driving industry change.

Growth in the number, size, and quality of new housing over the past decade has pushed residential investment to new highs. Given the economies of scale in home production, together with the difficulties of assembling land parcels in certain high-growth markets, the country's largest homebuilding companies are now responsible for a growing share of this new construction activity. Indeed, the share of newly constructed homes sold by the nation's top 10 builders has more than doubled since 1992 to almost 19 percent (Figure 21).

In larger markets, the concentration of homebuilding activity is even greater. According to a UBS Warburg analysis, the 10 largest homebuilding companies constructed over half of all homes sold in 18 of the country's 50 largest markets. Again, given the economies of scale, this share is likely to expand over the coming decade.

21 Consolidation Within Homebuilding Has Intensified



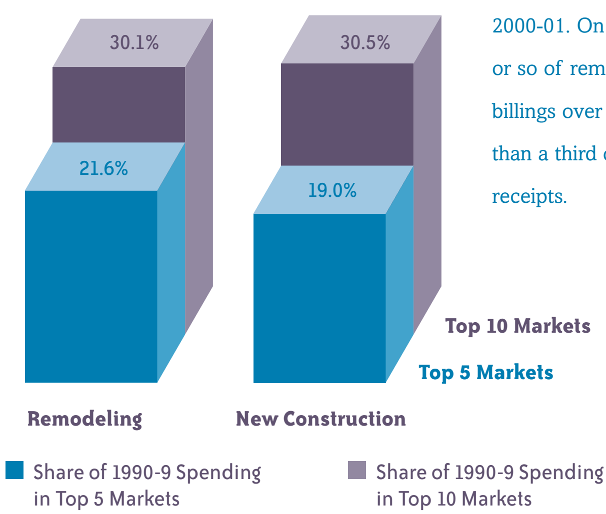
Note: Excludes homes built under contract.
Sources: **Professional Builder** Magazine and US Department of Commerce.

Following the homebuilders' lead, the home improvement industry is also consolidating. On the demand side, just 9.1 percent of homeowners were responsible for two-thirds of total remodeling expenditures in 2000-01. On the supply side, the 1 percent or so of remodeling contractors with annual billings over $1 million captured more than a third of total professional remodeling receipts.

Home improvement activity is also concentrated geographically. During the 1990s, just five consolidated metropolitan areas (New York, Los Angeles, Chicago, San Francisco, and Philadelphia) accounted for over 20 percent of home improvement spending, while ten areas accounted for 30 percent (Figure 22).

These figures mirror the pattern of single-family home construction, where the top five markets (Chicago, Los Angeles, Atlanta, Phoenix, and New York) were responsible for 19 percent of total activity and the top ten for 31 percent.

22 Remodeling Activity Is as Geographically Concentrated as New Construction

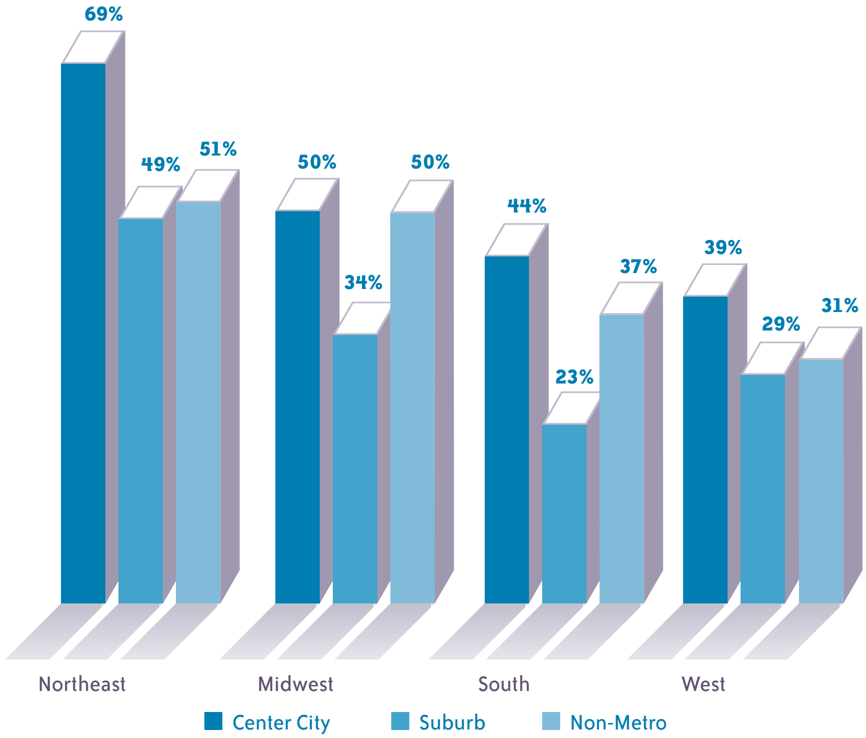


Sources: JCHS and the US Department of Commerce.

With the growing concentration of home improvement and residential construction activity, all phases of the building products industry have undergone tremendous consolidation. In the Northeast—with its older homes, higher incomes, and limited development opportunities—spending on home improvement activities now exceeds new construction activity (Figure 23). Particularly in the center cities, remodeling accounts for about seven out of every ten dollars spent on the owner-occupied housing inventory. As a result, several large, consumer-oriented building material distributors have expanded their businesses into previously underserved center city areas of the Northeast.

23 Home Improvement Activity Outruns New Construction in the Northeast

Home improvement as a share of investment in single-family homes



Sources: JCHS tabulations of the 1995, 1997, 1999 and 2001 American Housing Surveys and US Department of Commerce C30 Series.

In contrast, areas with relatively high levels of new construction, including fast-growth suburbs in the Sunbelt, have attracted many large distributors that focus almost exclusively on homebuilders. Take the case of lumber and millwork products, which were once the province of numerous, relatively small, independent lumberyards. Over the past decade, many of these firms were acquired by regional and national distributors, and then converted to facilities that almost exclusively serve homebuilders, particularly high-volume production builders.

Several other factors have also encouraged consolidation within the building products industry. Spurred by steadily rising demand and ready access to capital, building materials manufacturers invested in new technology to reduce labor requirements and to manage their inventories and operations more effectively. These investments enabled producers of dimensional lumber, plywood, gypsum, and other materials to increase their sales 35 percent between 1992 and 1997, while also reducing the number of business locations by nearly 11 percent and holding employment growth to less than 5 percent.

The wholesale distribution of building materials has also changed, in part because of consolidation and in part because of a reduction in so-called "two-step" distribution. Better inventory management tools, transportation, and logistics now enable retail distributors to carry less stock and rely less on wholesale distributors for rapid inventory replenishment. Indeed, many larger retail distributors now bypass wholesalers altogether, saving substantially on costs by purchasing directly from manufacturers.

Of all the points on the distribution chain, however, retail has seen the most dramatic growth and consolidation. According to the US Department of Commerce, sales at establishments selling products for the construction, improvement and maintenance of homes totaled nearly $270 billion in 2002—lifting its share of total retail sales to 7.5 percent from 6.6 percent a decade earlier. Much of this growth reflects the emergence of several nationwide building materials retailers and home centers catering to the home improvement market. Building product distributors generally fall into three categories: (1) retail-oriented distributors providing a full range of products and catering primarily to homeowners; (2) contractor-oriented distributors focusing on homebuilding and home improvement contractors and subcontractors; and (3) specialty distributors offering a more limited array of products (e.g., hardware, paint, floor or wall tile) to both homeowners and contractors.

Consolidation among retail-oriented distributors has been most far-reaching. By 2001, the top five retail-oriented distributors offering a full line of building and home improvement products were responsible for nearly two-thirds (63.5 percent) of all sales of the top 500 distributors. In fact, just two retail distributors—Home Depot and Lowe's—accounted for 58.5 percent of all sales of building and home improvement products by the top 500 distributors. In contrast, the 77 next largest retail-oriented distributors accounted for just 3 percent of sales (Figure 24).

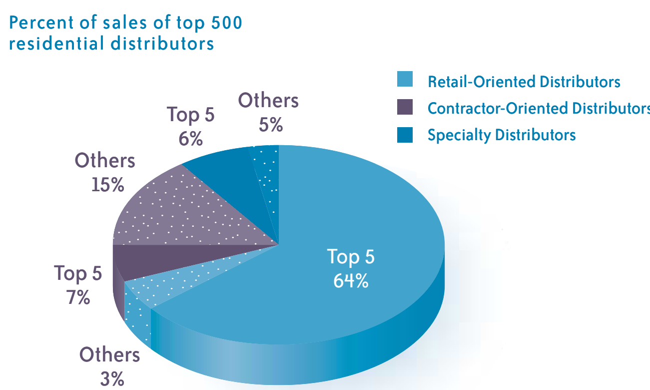
Consolidation among other types of distributors has been much slower. Of the top 500 residential building and home improvement product distributors in 2001, 64 percent fell into the contractor-oriented category but were responsible for only 22 percent of sales. Meanwhile, the top five distributors in this category generated just 6.5 percent of total sales. Collectively, the 100 largest specialty distributors contributed another 11 percent, with the top five accounting for 6 percent of sales. The other 95 specialty distributors collectively accounted for just 5 percent of sales.

A forthcoming study by Harvard University researchers (including the Joint Center for Housing Studies) suggests that consolidation among contractor-oriented distributors is set to increase. Among the pressures they face are growing competition from consumer-oriented retailers that are expanding into the contractor segment. In addition, manufacturers increasingly sell directly to builders, remodeling contractors, and homeowners. Furthermore, large national homebuilders are using their buying power to extract pricing and other concessions from distributors. Consolidation is the most likely response to each of these competitive challenges.

STRUCTURAL CHANGES

The fragmentation within some segments of the building materials distribution sector does, however, pale in comparison with the situation in the remodeling contractor segment. Firms focusing on remodeling and repair employ about half of the 2.5 million workers in the residential construction sector, but account for a much more modest share of total construction dollars (Figure 25). Even though an increasingly small subset of contractors is gaining market share, building product manufacturers and

24 Retail Distribution of Building and Home Improvement Products Is Highly Concentrated



Source: Chain Store Guide: Home Center Operators and Hardware Chains, 2002.

distributors continue to struggle to serve a large and diverse market that includes 200,000 residential remodeling firms, 600,000 self-employed workers in the building trades, and 21.6 million do-it-yourselfers.

Two trends—the critical shortage of skilled workers and the continued growth of installed sales—are likely to lead to greater consolidation among remodelers in the coming years. Home improvement is labor-intensive and demand for the services of smaller professional contractors can fluctuate quickly from feast to famine. In response to this employment uncertainty, many skilled home improvement contractors took advantage of the strong economy in the 1990s to move to other businesses offering higher wages and more stable working conditions.

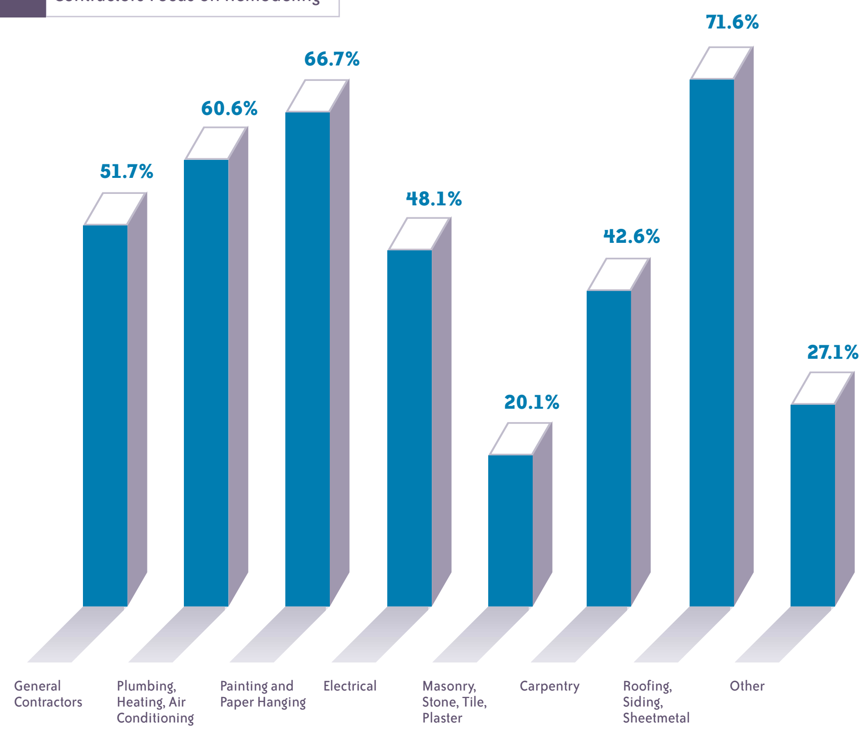
Use of pre-assembled panels and other components in homebuilding helped to ease the ensuing labor shortage somewhat, allowing replacement of skilled tradesmen with semi-skilled laborers. This shift had another positive impact in that it enabled many new immigrants with limited skills to find productive employment in panel and truss manufacturing facilities. But the introduction of pre-assembled panels and components is also likely to encourage more consolidation among remodelers because it particularly benefits high-volume contractors able to manage complex business operations and an increasingly diverse workforce.

A related development is the growing availability and popularity of installed sales. Many customers now look to distributors to install as well as supply building products. This is particularly true for products traditionally installed by smaller, independent remodeling firms or individuals. Since the failure rate for these contractors is very high, many homeowners see advantages in buying installation services from product distributors, which are more likely to still be in business should future problems arise. Such services also appeal to the burgeoning buy-it-yourself (B-I-Y) market, allowing homeowners to participate in the product selection process but then contract for the actual installation. Moreover, installation services represent an attractive way for large, consumer-oriented distributors to expand per store sales—and hopefully per store profits.

OUTLOOK FOR THE REMODELING INDUSTRY

As the boundaries separating manufacturing, distribution, and installation of building products become increasingly blurred, the longer-term structure of the home improvement industry is unclear. But further consolidation is inevitable in the face of fierce competition among the remaining manufacturing and distribution companies, rapid introduction of high-end products, and customer demand for timely delivery of an ever-growing array of materials. The companies that survive, however, have tremendous—and rapidly expanding—opportunities to serve the improvement and repair needs of the nation's $13 trillion housing inventory.

25 Significant Shares of Residential Contractors Focus on Remodeling



Source: JCHS tabulations of the 1997 Census of Construction Industries.

TABLE A-1 Total Home Improvement Expenditures: 1994-2001

	1994-95 Homeowners Reporting Projects (000s)	1994-95 Average ($)	1994-95 Total ($ Mil.)	1996-97 Homeowners Reporting Projects (000s)	1996-97 Average ($)	1996-97 Total ($ Mil.)	1998-99 Homeowners Reporting Projects (000s)	1998-99 Average ($)	1998-99 Total ($ Mil.)	2000-01 Homeowners Reporting Projects (000s)	2000-01 Average ($)	2000-01 Total ($ Mil.)
Kitchen Projects												
Minor Remodel	3,921	2,103	8,249	3,364	2,073	6,975	2,854	2,660	7,595	2,645	2,718	7,192
Major Remodel	143	32,536	4,659	256	29,720	7,629	598	16,438	9,841	1,017	17,737	18,044
Additions/Alterations	656	6,057	3,979	518	8,761	4,545	89	15,415	1,376	88	34,039	3,012
Bath Projects												
Minor Remodel	4,230	918	3,886	3,866	989	3,825	3,508	1,324	4,646	3,319	1,334	4,430
Major Remodel	349	14,131	4,937	397	13,567	5,390	645	9,352	6,036	1,106	8,806	9,748
Additions/Alterations	1,142	9,576	10,944	977	10,185	9,957	794	4,895	3,890	806	8,581	6,925
Other Additions/Alterations												
Bedroom	1,275	3,264	4,164	1,073	5,993	6,436	1,313	9,934	13,044	1,216	13,327	16,210
Other Room	2,840	5,202	14,776	2,381	7,960	18,962	2,850	7,232	20,618	2,782	8,261	22,992
Deck/Porch	2,376	2,155	5,121	2,111	2,128	4,493	2,261	2,485	5,620	1,936	2,985	5,780
Other Interior Improvement	2,505	2,121	5,315	2,076	1,936	4,019	1,629	1,966	3,203	1,660	2,151	3,571
Disaster Repairs	1,458	7,112	10,370	1,271	6,882	8,748	1,308	5,880	7,693	1,268	9,156	11,613
Replacements												
Roofing	5,029	2,986	15,021	5,673	3,223	18,286	6,957	2,868	19,957	6,811	3,274	22,301
Siding	2,136	3,978	8,499	2,307	3,695	8,527	2,573	4,078	10,494	2,453	4,041	9,913
Plumbing/Pipes	2,710	641	1,738	2,880	544	1,568	3,108	510	1,588	3,076	677	2,083
Electrical System	4,073	478	1,948	4,319	736	3,180	4,293	547	2,352	4,563	741	3,383
Window/Door	8,356	1,314	10,981	7,865	1,286	10,119	8,001	1,562	12,497	8,962	1,709	15,319
Plumbing Fixtures	3,795	371	1,410	4,135	420	1,740	6,424	457	2,938	7,303	525	3,835
Insulation	2,642	406	1,074	2,393	366	875	2,640	593	1,566	2,907	674	1,962
Flooring/Paneling/Ceiling	7,840	1,114	8,739	7,974	1,184	9,447	13,954	1,535	21,432	15,033	1,650	24,815
HVAC	5,112	2,469	12,623	5,377	2,531	13,615	5,888	2,460	14,487	5,921	2,763	16,363
Appliances/Major Equipment	9,786	330	3,233	9,583	370	3,550	10,896	413	4,507	11,968	432	5,173
Exterior Projects												
Garage/Carport	446	5,167	2,309	334	5,431	1,816	466	6,032	2,813	426	6,254	2,670
Other	12,425	2,741	34,066	12,302	2,835	34,884	11,753	2,845	33,442	12,531	3,649	45,729
TOTAL			178,054			188,597			211,647			263,077

Notes: Major remodels are defined as professional home improvements of more than $10,000 for kitchen projects and more than $5,000 for bath projects, and D-I-Y improvements of more than $4,000 for kitchen projects and $2,000 for bath projects. Job categories are aggregations of the detailed projects reported in the American Housing Surveys.

Source: Joint Center tabulations of the 1995, 1997, 1999 and 2001 American Housing Surveys.

TABLE A-2 Professional Home Improvement Expenditures: 1994-2001

	1994-95 Homeowners Reporting Projects (000s)	1994-95 Average ($)	1994-95 Total ($ Mil.)	1996-97 Homeowners Reporting Projects (000s)	1996-97 Average ($)	1996-97 Total ($ Mil.)	1998-99 Homeowners Reporting Projects (000s)	1998-99 Average ($)	1998-99 Total ($ Mil.)	2000-01 Homeowners Reporting Projects (000s)	2000-01 Average ($)	2000-01 Total ($ Mil.)
Kitchen Projects												
Minor Remodel	2,205	1,142	6,008	1,867	2,815	5,258	1,470	3,784	5,567	1,436	3,973	5,709
Major Remodel	112	700	2,945	193	21,749	4,205	273	23,171	6,338	434	25,178	10,929
Additions/Alterations	305	887	2,901	230	14,189	3,268	56	19,055	1,080	57	43,532	2,514
Bath Projects												
Minor Remodel	1,911	1,001	2,367	1,609	1,469	2,364	1,561	2,035	3,178	1,597	2,010	3,210
Major Remodel	284	1,095	3,734	326	10,449	3,408	313	12,930	4,048	504	13,207	6,667
Additions/Alterations	543	1,200	7,662	426	14,962	6,383	416	6,671	2,777	404	12,151	4,911
Other Additions/Alterations												
Bedroom	506	560	2,381	404	10,507	4,249	529	17,841	9,446	508	22,711	11,549
Other Room	1,204	724	10,295	965	14,719	14,213	1,231	11,266	13,877	1,248	13,983	17,454
Deck/Porch	1,072	1,126	3,311	905	3,244	2,939	971	3,785	3,679	837	4,635	3,883
Other Interior Improvement	2,627	1,288	4,358	1,373	2,462	3,382	1,086	2,295	2,492	1,015	2,577	2,618
Disaster Repairs	1,131	1,274	8,951	963	7,287	7,022	935	6,690	6,258	1,002	10,120	10,145
Replacements												
Roofing	4,085	828	13,546	4,604	3,548	16,341	5,101	3,343	17,056	5,105	3,774	19,269
Siding	1,681	1,034	7,461	1,610	4,480	7,213	1,740	5,250	9,136	1,726	5,088	8,782
Plumbing/Pipes	1,749	1,116	1,411	1,557	811	1,264	1,633	741	1,211	1,687	984	1,661
Electrical System	2,640	625	1,560	3,051	817	2,494	2,644	742	1,963	2,774	999	2,772
Window/Door	5,143	1,041	8,479	4,431	1,836	8,138	4,677	2,091	9,784	5,186	2,359	12,238
Plumbing Fixtures	1,726	774	948	1,778	688	1,225	2,855	662	1,891	3,327	712	2,370
Insulation	1,168	1,218	654	956	561	537	1,150	689	792	1,269	778	988
Flooring/Paneling/Ceiling	4,786	1,002	6,946	4,441	1,559	6,926	9,296	1,891	17,587	10,051	2,010	20,204
HVAC	4,439	941	11,592	4,650	2,648	12,317	4,930	2,602	12,831	5,012	2,919	14,631
Appliances/Major Equipment	5,885	854	2,122	5,601	443	2,485	6,984	470	3,288	7,465	494	3,689
Exterior Projects												
Garage/Carport	229	1,356	1,518	170	6,550	1,119	252	5,831	1,472	217	8,458	1,835
Other	8,425	961	25,145	6,878	3,802	26,152	6,677	3,833	25,600	7,069	5,108	36,110
TOTAL			136,303			142,912			161,360			204,151

Notes: Major remodels are defined as professional home improvements of more than $10,000 for kitchen projects and more than $4,000 for bath projects.

Job categories are aggregations of the detailed projects reported in the American Housing Surveys.

Source: Joint Center tabulations of the 1995, 1997, 1999 and 2001 American Housing Surveys.

TABLE A-3 Do-it-Yourself Home Improvement Expenditures: 1994-2001

	1994-95 Homeowners Reporting Projects (000s)	1994-95 Average ($)	1994-95 Total ($ Mil.)	1996-97 Homeowners Reporting Projects (000s)	1996-97 Average ($)	1996-97 Total ($ Mil.)	1998-99 Homeowners Reporting Projects (000s)	1998-99 Average ($)	1998-99 Total ($ Mil.)	2000-01 Homeowners Reporting Projects (000s)	2000-01 Average ($)	2000-01 Total ($ Mil.)
Kitchen Projects												
Minor Remodel	2,008	1,305	2,240	1,845	930	1,716	1,384	1,465	2,028	1,208	1,226	1,482
Major Remodel	204	500	1,714	254	13,454	3,423	325	10,774	3,503	583	12,199	7,115
Additions/Alterations	355	843	1,078	288	4,428	1,277	32	9,097	296	30	16,199	497
Bath Projects												
Minor Remodel	2,714	1,040	1,519	2,485	587	1,460	1,946	754	1,468	1,722	707	1,219
Major Remodel	247	606	1,202	326	6,073	1,982	332	5,982	1,988	602	5,116	3,080
Additions/Alterations	604	918	3,282	556	6,426	3,574	391	2,845	1,113	405	4,966	2,013
Other Additions/Alterations												
Bedroom	785	815	1,783	669	3,266	2,187	800	4,494	3,598	732	6,365	4,661
Other Room	1,676	943	4,481	1,450	3,274	4,749	1,665	4,047	6,741	1,574	3,516	5,537
Deck/Porch	1,309	1,165	1,810	1,205	1,289	1,554	1,293	1,500	1,940	1,106	1,714	1,897
Other Interior Improvement	2,163	1,503	957	900	707	636	647	1,098	710	744	1,280	952
Disaster Repairs	326	821	1,418	307	5,614	1,726	372	3,849	1,435	265	5,521	1,467
Replacements												
Roofing	943	758	1,475	1,068	1,818	1,944	1,855	1,563	2,901	1,706	1,777	3,032
Siding	581	790	1,038	707	1,857	1,313	833	1,630	1,358	726	1,555	1,130
Plumbing/Pipes	1,078	1,075	327	1,329	228	304	1,474	255	376	1,388	303	421
Electrical System	1,531	565	387	2,054	333	685	1,649	235	389	1,789	341	610
Window/Door	3,935	1,263	2,502	3,447	574	1,980	3,323	816	2,713	3,776	815	3,080
Plumbing Fixtures	2,088	896	462	2,356	218	515	3,569	293	1,047	3,976	368	1,465
Insulation	1,734	1,240	419	1,447	233	338	1,490	518	773	1,637	594	973
Flooring/Paneling/Ceiling	3,683	711	1,793	3,742	673	2,521	5,707	673	3,844	6,104	755	4,611
HVAC	849	794	1,031	791	1,640	1,297	1,116	1,482	1,656	1,024	1,690	1,732
Appliances/Major Equipment	4,179	1,042	1,110	4,206	253	1,064	4,299	283	1,219	4,886	303	1,484
Exterior Projects												
Garage/Carport	219	1,134	791	163	4,262	697	213	6,269	1,341	209	3,976	834
Other	7,802	1,021	8,921	6,470	1,349	8,732	5,950	1,317	7,841	6,516	1,476	9,619
TOTAL			41,750			45,685			50,286			58,925

Notes: Major remodels are defined as improvements of more than $4,000 for kitchen projects and more than $2,000 for bath projects. Job categories are aggregations of the detailed projects reported in the American Housing Surveys.

Source: Joint Center tabulations of the 1995, 1997, 1999 and 2001 American Housing Surveys.

TABLE A-4 **Home Improvement Expenditures By Demographic Characteristics: 1994-95 and 2000-01**

	1994-95 No. of Homeowners (Millions)	1994-95 No. of Homeowners Reporting Projects (Millions)	1994-95 Total Expenditures ($ Billions)	2000-01 No. of Homeowners (Millions)	2000-01 No. of Homeowners Reporting Projects (Millions)	2000-01 Total Expenditures ($ Billions)
TOTAL	63.5	37.8	206.9	72.4	41.3	263.1
Age						
Under 35	9.6	6.1	28.8	10.3	6.3	35.4
35-44	14.7	9.5	59.7	16.4	10.2	76.1
45-54	13.4	8.5	54.2	16.7	9.8	70.3
55-64	9.5	5.6	29.1	11.5	6.5	43.5
Over 65	16.3	8.1	35.1	17.5	8.4	37.8
Income						
Under $40,000	26.9	14.2	56.8	27.7	13.9	60.2
$40-80,000	21.1	13.5	72.0	23.2	14.0	77.6
$80-120,000	9.2	6.1	42.7	11.0	7.1	52.6
Over $120,000	5.2	3.4	33.1	9.0	5.8	69.5
Spending Level						
No Projects	25.8	NA	NA	31.0	NA	NA
$0-2,499	18.1	18.1	18.2	21.2	21.2	18.5
$2,500-4,999	8.4	8.4	30.2	7.8	7.8	27.3
$5,000-9,999	6.2	6.2	43.7	6.3	6.3	42.9
$10,000-19,999	3.3	3.3	45.9	3.5	3.5	47.4
$20,000-34,999	1.1	1.1	28.5	1.5	1.5	37.7
Over $35,000	0.7	0.7	40.4	1.1	1.1	89.3
Race/Ethnicity						
White	53.6	32.4	181.0	59.0	33.9	224.6
Black	5.0	2.7	11.9	6.2	3.4	15.6
Hispanic	3.2	1.8	8.7	4.7	2.8	15.5
Asian	1.3	0.6	3.9	1.8	0.9	5.6

Notes: Income data exclude households not reporting income and households reporting zero or negative income. Due to limited sample size, data on race/ethnicity exclude Native Americans and households reporting "other race." Expenditures for 1995 are adjusted for inflation using the CPI-UX.

Source: Joint Center tabulations of the 1995 and 2001 American Housing Surveys.

TABLE A-5 **Professional and Do-it-Yourself Home Improvement Expenditures by Demographic Characteristics: 2000-01**

	No. of Homeowners (Millions)	Professional No. of Homeowners Reporting Projects (Millions)	Professional Total Expenditures ($ Billions)	Do-It-Yourself No. of Homeowners Reporting Projects (Millions)	Do-It-Yourself Total Expenditures ($ Billions)
TOTAL	72.4	29.9	204.0	21.6	59.1
Age					
Under 35	10.3	4.3	23.9	4.1	11.4
35-44	16.4	6.8	54.9	6.3	21.2
45-54	16.7	6.9	56.4	5.3	13.8
55-64	11.5	5.0	36.0	3.0	7.5
Over 65	17.5	6.9	32.8	2.8	5.1
Income					
Under $40,000	27.7	9.9	45.6	6.6	14.6
$40-80,000	23.2	9.6	57.1	8.2	20.5
$80-120,000	11.0	5.3	39.9	4.0	12.8
Over $120,000	9.0	4.7	58.8	2.4	10.7
Spending Level					
No Projects	31.0	NA	NA	NA	NA
$0-2,499	21.2	12.4	11.0	11.8	7.5
$2,500-4,999	7.8	6.4	19.8	3.7	7.5
$5,000-9,999	6.3	5.5	32.0	3.1	10.9
$10,000-19,999	3.5	3.2	36.7	1.8	10.7
$20,000-34,999	1.5	1.3	29.9	0.7	7.8
Over $35,000	1.1	1.1	74.6	0.5	14.7
Race/Ethnicity					
White	59.0	24.4	175.6	17.8	49.1
Black	6.2	2.7	13.2	1.4	2.4
Hispanic	4.7	1.9	9.8	1.8	5.7
Asian	1.8	0.9	4.1	0.6	1.5

Notes: Income data exclude households not reporting income and those reporting zero or negative income.

Due to limited sample size, data on race/ethnicity exclude Native Americans and households reporting "other race."

Source: Joint Center tabulations of the 2001 American Housing Survey.

TABLE A-6 **Home Improvement Activity in 35 Large Metropolitan Areas**

	2002 Median Household Income (Thousands)	Total Spending 1990-99 (Billions)	Average 1990-99 Annual Spending Per Owner	Average 2002 Cost of Major Kitchen Remodel	Average 2002 Cost of Bathroom Remodel
Washington, DC	$91.5	$22.1	$1,950	$40,415	$8,535
San Francisco	$86.1	$28.0	$2,380	$48,495	$12,193
Seattle	$77.9	$9.4	$1,740	$45,445	$10,551
Minneapolis	$76.7	$9.4	$1,720	$47,561	$10,706
Chicago	$75.4	$30.8	$1,690	$47,348	$11,029
Boston	$74.2	$15.3	$1,980	$45,931	$10,887
Atlanta	$71.2	$6.6	$1,460	$41,201	$8,980
Denver	$69.9	$6.7	$1,500	$40,943	$9,361
Detroit	$69.9	$20.2	$1,580	$44,499	$10,358
Dallas	$66.5	$9.3	$1,460	$40,472	$8,464
Kansas City	$64.5	$4.1	$1,480	$42,528	$9,573
Cincinnati	$64.3	$4.2	$1,540	$42,505	$9,767
Milwaukee	$64.2	$4.5	$1,490	$44,516	$9,992
Indianapolis	$64.1	$2.7	$1,300	$42,564	$9,510
Columbus, Ohio	$63.4	$3.7	$1,640	$42,364	$9,753
Philadelphia	$63.3	$24.4	$1,930	$45,111	$10,486
New York City	$62.8	$68.3	$1,930	$45,105	$10,544
Salt Lake City	$61.4	$5.3	$1,160	$39,930	$8,553
San Diego	$60.1	$6.9	$1,590	$44,971	$10,314
Cleveland	$60.0	$6.9	$1,360	$44,546	$10,484
Houston	$59.6	$8.7	$1,580	$41,547	$8,732
Phoenix	$57.9	$7.0	$1,270	$41,715	$8,962
Sacramento	$57.3	$4.1	$1,620	$45,625	$10,642
Portland	$57.2	$6.1	$2,080	$43,237	$10,235
St. Louis	$57.2	$4.5	$1,690	$44,338	$10,268
Los Angeles	$55.1	$46.4	$1,990	$45,746	$10,634
Orlando	$54.7	$3.3	$1,590	$39,907	$8,250
Providence	$54.1	$2.8	$1,260	$43,759	$9,768
Norfolk	$53.8	$3.0	$970	$38,008	$7,569
Buffalo	$50.8	$3.2	$1,400	$42,398	$9,378
Tampa	$50.5	$5.4	$1,190	$38,794	$7,750
Pittsburgh	$48.9	$6.6	$1,340	$43,594	$10,120
Miami	$48.2	$10.0	$1,380	$40,261	$8,352
San Antonio	$46.2	$2.0	$1,010	$40,366	$8,665
New Orleans	$44.0	$3.9	$1,660	$39,609	$8,190
NATIONAL AVERAGE	$54.4	NA	$1,430	$43,213	$9,720

Notes: Data for 1990-99 are in 1999 dollars. Other estimates are in current dollars. National averages include all metropolitan areas.

Sources: US Department of Housing and Urban Development, Joint Center for Housing Studies, and *Remodeling* Magazine.

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