

The Remodeling Market in Transition

IMPROVING AMERICA'S HOUSING 2009



Joint Center for Housing Studies of Harvard University

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Introduction and Summary



Like the overall housing market, the US home improvement industry is mired in a severe downturn. Coming on the heels of unprecedented growth over the past decade, this reversal has created difficult challenges for both homeowners that need to make improvement decisions and firms that serve this market. Indeed, by the time the recovery begins, the entire industry is expected to undergo a marked transition on both the demand and supply sides.

Over the past several decades when house prices were on the rise, Americans invested in discretionary home improvements as a wealth-building strategy. Now with house prices still falling, owners are more likely to make improvements primarily to maintain the structural integrity and efficient functioning of their homes, as well as to generate cost savings. Many households may even rethink the decision to buy homes at all, given the risks of ownership that have now been exposed.

Similarly, businesses that serve the remodeling industry are facing fundamental changes. Even in the best of times, home improvement contracting firms experience very high failure rates. With today's challenging market conditions, business failures—particularly among smaller-scale, less efficient operations—are likely to soar.

At the same time, though, the correction in the remodeling industry should be much less severe than in home building. The residential supply chain—product manufacturers, product distributors, professional dealers, and retailers—now more fully understand the benefit of serving the remodeling sector as a strategy for balancing out construction cycles. Focusing on this customer base and assisting remodeling contractors in improving their operations will help to create a more professional industry.

As the economy moves toward recovery, the remodeling sector should therefore operate more efficiently and more profitably. And there will be new sources of growth to help replace those projects that are unlikely to return to levels achieved earlier in the decade: in particular, the need to upgrade the nation's aging rental stock, to meet the increasing demand for "green" remodeling solutions, and to serve the rapidly expanding market of immigrant homeowners.

Following the Construction Market Down

Even though remodeling activity held on until the end of 2007, the retreat was sharp. Now about a year into the downturn, homeowner spending on improvements has already dropped almost 16 percent and all of the major indicators suggest that the bottom of the cycle is some time away (**Figure 1**).

Existing home sales are a primary driver of home improvement spending because buyers typically want to make changes to their new homes upon purchase. According to Joint Center for Housing Studies (JCHS) research, households that relocate spend an average of 20–25 percent more on improvements than otherwise similar households that do not move. But with existing home sales off nearly 30 percent in the third quarter of 2008 from their recent peak, the number of new owners who might undertake improvements has also fallen sharply.

At the same time, depressed home prices provide owners less equity to finance projects, and today's credit market restrictions make it increasingly difficult to borrow whatever equity remains. During the spectacular run-up in house prices earlier this decade, owners extracted so much equity from their homes that mortgage debt accounted for an increasing share of the aggregate value of the owner-occupied housing stock. Federal Reserve Board estimates show that home equity made up almost 65 percent of the stock's value in the

late 1980s; by 2007, however, it accounted for less than half. Since the beginning of 2007, homeowner equity has not only declined relative to mortgage debt, but it has also dropped in absolute terms because of the plunge in home prices.

Falling home prices have also reduced the incentive to make home improvements. Owners who might otherwise undertake remodeling projects with an eye toward increasing the value of their homes often wait until house prices stabilize to decide which improvements make the most financial sense. Another reason to wait out price cycles is that the share of cost recovered from home improvement projects typically increases when house values are rising and decreases when values are falling. In their most recent annual survey, *Remodeling* magazine and the National Association of Realtors® (NAR) found that cost recovery declined steadily from an average of 87 percent in 2005 to just over 67 percent in 2008.

Also undermining the growth in remodeling expenditures is the recent surge in mortgage delinquencies and foreclosures. Owners of homes at risk of or in foreclosure generally have little to spend on improving or even maintaining their properties. In addition, many of the owners displaced by the foreclosure process either become renters or move in with other households, thereby reducing the national homeownership rate. Since homeowners contribute a much larger share of overall improvement

Figure 1

Major Indicators Point to Further Remodeling Declines

Change from recent peak

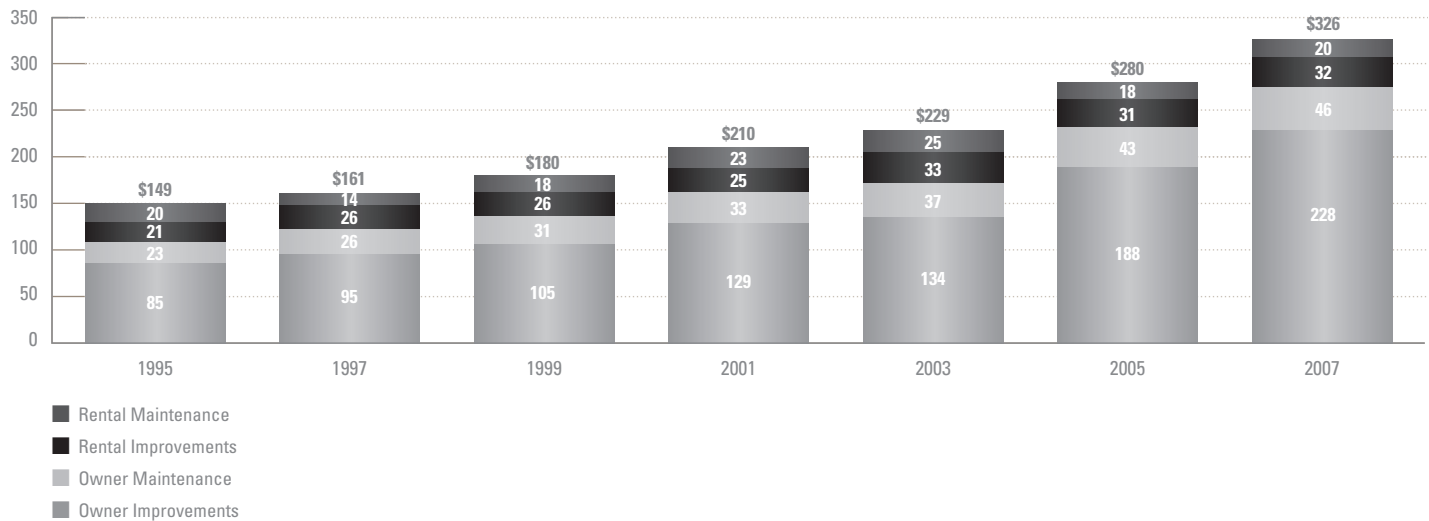
Remodeling Indicators	Recent Peak	Date of Peak	2008:3 Levels	Change
Existing Single-Family Home Sales (Millions, seasonally adjusted annual rate)	6.3	2005:3	4.4	-29.4%
Median Existing Single-Family Home Sales Price (Thousands of \$, seasonally adjusted)	226.4	2005:4	195.9	-13.5%
Owner Equity in Household Real Estate (Billions of \$, non-seasonally adjusted)	12,496	2005:4	8,530	-31.7%
Share of Cost Recovered from Remodeling Projects (%)	86.7	2005	67.2	-19.5pp
Homes in Foreclosure (Thousands, non-seasonally adjusted)	395	2005:3	1,351	242.0%
National Homeownership Rate (%, non-seasonally adjusted)	69.2	2004:2	67.9	-1.3pp

Notes: The number of homes in foreclosure is measured from its recent trough in 2005:3. The share of cost recovered from remodeling projects is compared with the annual 2008 number. pp=percentage point.
Sources: National Association of Realtors® (NAR), Existing-Home Sales Series; US Census Bureau, Current Population Survey and Housing Vacancy Survey; Federal Reserve Board, Federal Flow of Funds; Mortgage Bankers Association, National Delinquency Survey; and *Remodeling* magazine, Cost vs. Value Survey.

Figure 2

The Remodeling Market Continued to Expand Rapidly through 2007

Billions of dollars



Sources: JCHS tabulations of the 1995–2007 American Housing Surveys (AHS) and the US Department of Commerce Survey of Expenditures for Residential Improvements and Repairs (C-50 reports).

spending than rental property owners, declines in the homeownership rate imply reduced demand for remodeling.

Shifts in Home Improvement Activity

Remodeling expenditures—including maintenance, repairs, and improvements to rental and owner-occupied homes and the properties on which they are located—more than doubled to an estimated \$326 billion between 1995 and 2007 (Figure 2). The current downturn is therefore all the more dramatic given the magnitude of spending growth during this period. Between 2003 and 2007 alone, overall spending increased 43 percent while homeowner spending jumped 60 percent. On average, every owner spent \$1,160 more on home improvements in 2007 than in 2003.

Even between 2005 and 2007 when home building was headed down, remodeling activity was still posting healthy gains. Spending by homeowners was up by an average of 9.3 percent over this two-year period, while spending by rental property owners increased just 3.5 percent. With these gains, expenditures on owner-occupied units contributed fully 84 percent of the remodeling market in 2007, with improvements (in contrast to more routine maintenance and repairs) accounting for 70 percent of the total.

The healthy growth in the remodeling market in 2006 and early 2007 reflected a continuation of the forces that had

helped to propel spending to its earlier record-breaking pace: solid activity at the upper end of the market; concentration on kitchen and bath projects; increased share of installations by professional contractors; and strong gains in owners living in homes that were appreciating in value. New trends, however, were also beginning to emerge during this period that point to the changing direction of the remodeling industry.

In particular, the share of homeowners making improvements is back on the rise, broadening the base of households in the market. In 1995, almost 60 percent of homeowners reported having undertaken one or more projects in the previous two years. This share trended down through 2003, when fewer than 54 percent of owners reported projects over a two-year period. Improvement activity began to pick up again in 2005, with nearly 58 percent of homeowners reporting at least one project by 2007.

Related to this trend is the reduced concentration of spending. In 1995, the top 1 percent of owners accounted for almost 19 percent of all homeowner remodeling expenditures. These were the owners who undertook extensive projects such as whole-house remodels, high-end kitchen and bath improvements, and home additions. Remodeling activity became even more concentrated over the ensuing decade, with the top 1 percent of owners accounting for more than a third of all expenditures in 2005. The recent surge in home improvement spending was therefore driven by a fairly thin slice of

high-end projects, apparently built on debt carried by the run-up in house prices and therefore not sustainable. By 2007, however, this share dipped back under 29 percent.

During the period of unprecedented growth in improvement spending, homeowners turned their attention to projects that would enhance the use of space and upgrade the products and finishes within the home. Kitchen and bath remodels, as well as other room additions and alterations accounted for 37 percent of homeowner spending in 2007, up from 33 percent in 1995. Similarly, other interior additions and replacements (flooring, wall, and ceiling finishes) made up another 12 percent of spending—almost double the 1995 share of 7 percent.

With this strong focus on interior projects, spending on exterior replacements and system upgrades lost share. Looking ahead, though, the shares of spending across these broad project categories is likely to return to longer-term averages. In fact, these shifts have already begun to occur, with expenditures on electrical, plumbing, and HVAC systems and on major equipment on the rise between 2005 and 2007.

Adjustments in the overall housing market are also driving changes in the composition of spending. Earlier in this decade, household mobility increased significantly as owners attempted to take advantage of rapidly rising house prices. In a typical year, 6.5–7.0 percent of owners relocate. From 2003 to 2006, however, owner mobility averaged 9 percent and peaked at almost 10 percent in 2005. With the current housing downturn, mobility is likely to return to its longer-term trend.

Lower mobility rates imply not only lower levels of improvement spending, but also changes in spending priorities. Recent buyers devote a larger share of their home improvement dollars to interior projects such as kitchen and bath remodels, other room additions and alterations, and interior replacements (**Figure 3**). Undertaking these discretionary projects soon after purchase allows buyers to avoid disruptions once they move in and to enjoy the improvements for the entire time they occupy the homes.

Longer-term owners, in contrast, devote a larger share of their budgets to system and equipment upgrades and to exterior replacements. These owners typically made discretionary improvements soon after they purchased their homes, so their current spending often focuses on replacing essential elements and maintaining their homes in good repair.

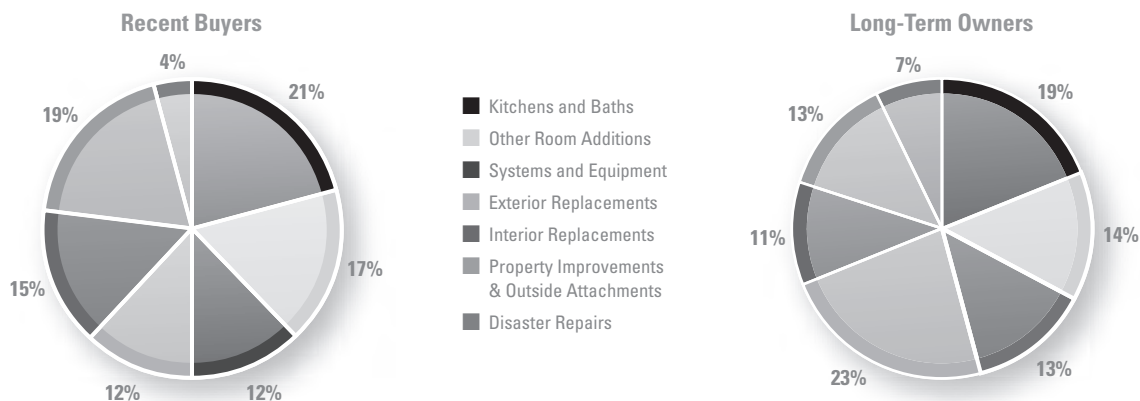
Geographical Differences in Spending

Nationwide, homeowner spending on improvements averaged just over \$2,300 per year between 2000 and 2007. But spending levels varied widely across metropolitan areas. Markets where house price appreciation was unusually strong earlier in the decade, such as the California coast and the Eastern seaboard, also posted unusually high levels of homeowner improvement spending (**Figure 4**). At the other extreme, areas where the local economy was weak (such as Cleveland and Detroit) or where the pace of home building kept price appreciation in check (such as Houston, Dallas, and Denver) saw much lower spending levels.

Figure 3

New and Long-Term Owners Have Different Spending Priorities

Average share of spending, 2005–2007

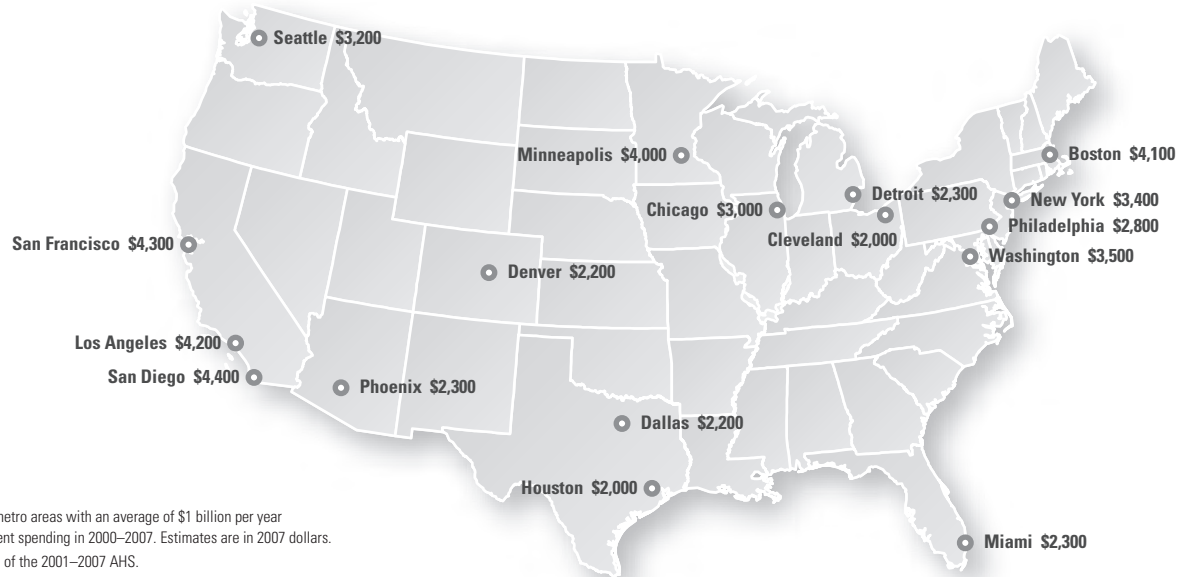


Notes: Recent buyers have owned their homes for less than 2 years, while long-term owners have been in their homes for more than 20 years. See Table A-1 for project category definitions. Source: JCHS tabulations of the 2005 and 2007 AHS.

Figure 4

Most High-Spending Home Improvement Markets Experienced Rapid House Price Appreciation Earlier in the Decade

Average annual improvement spending per homeowner, 2000–2007



Notes: Sample includes metro areas with an average of \$1 billion per year in homeowner improvement spending in 2000–2007. Estimates are in 2007 dollars.
Source: JCHS tabulations of the 2001–2007 AHS.

In the current housing market environment, price appreciation will be much less of a factor in remodeling spending. Indeed, many of the markets that had the largest increases in house prices earlier in the decade now have the largest declines in improvement expenditures. This could reverse the geographical patterns of spending over the next few years.

In addition, the collapse of house prices in some areas has left many owners with virtually no equity. The economic forecasting firm Moody's Economy.com estimates that as of late 2008 more than 15 percent of US homeowners were living in units that had less value than their outstanding mortgages. Given the continued drop in house prices, Moody's Economy.com expects this share to peak at about 20 percent by the end of 2009. Owners with little or no equity in their homes are unlikely to make significant improvements until house prices stabilize. Even those with substantial equity may be unable to make improvements because they cannot meet today's stringent credit standards.

The wave of foreclosures will, however, provide future opportunities. As noted previously, owners at risk of default are unlikely to make improvements to their homes, and foreclosed homes are often vandalized. As housing markets recover, though, many of these homes will be rehabilitated either by banks to make them more attractive for sale or by

their new owners. Areas where foreclosure rates are high may therefore see a resumption of home improvement spending as markets begin to recover. To assist in this process, the Housing and Economic Recovery Act of 2008 allocated \$4 billion to state and local governments for the redevelopment of abandoned and foreclosed properties.

Sources of Industry Growth

As the remodeling industry emerges from the downturn, the sources of growth will be much different than those in the past decade. Three market segments should help to offset the drag from the weak housing market: continued growth in the number of immigrant homeowners, the need to upgrade the aging rental stock, and increasing consumer interest in green remodeling activities.

First, foreign-born homeowners currently account for more than 10 percent of home improvement spending. Not only do immigrants represent a growing share of new household formations, but they are also very active in the improvement market. Immigrants are younger households, heavily concentrated in their 30s and 40s—the ages when families are growing and changing the uses of their homes, and therefore the ages when homeowners begin to spend more on remodeling.

In addition, the rental housing stock is in dire need of improvements after years of underinvestment. During the homeownership boom, weak demand for rentals discouraged owners from upgrading their units. Indeed, spending on rental units increased less than 30 percent between 1995 and 2007, compared with more than 150 percent for owner-occupied units.

Because of the near-term slack in the housing market, some of the excess supply of owner-occupied units will be temporarily converted to rentals, thus reducing the need for new rental units. In the longer term, however, growth in the renter population will increase the demand for rental housing. With low levels of construction activity over the past decade, the median age of the rental stock has risen to 36 years (4 years older than the owner-occupied stock), leaving many units in need of upgrading.

Finally, the public's growing interest in sustainable housing is expected to provide a boost to the remodeling industry in the years ahead. While initially focused on energy efficiency,

consumers have recently shown increasing interest in quality and durability issues, environmental performance, and safety and disaster mitigation products.

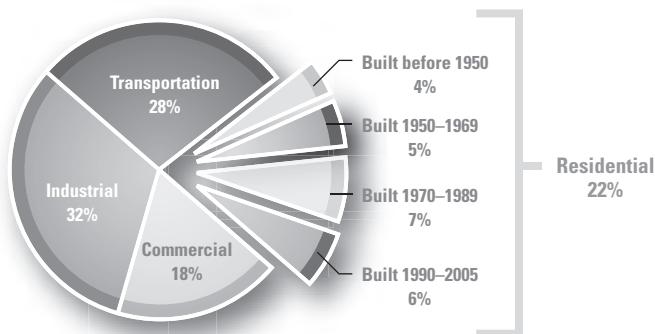
Energy efficiency is one area where the economic benefits of green remodeling are readily apparent. Given that existing homes consume 22 percent of the nation's energy, the introduction of green systems could have a tremendous impact on national consumption (**Figure 5**). With homes built before 1970 (before the first OPEC oil embargo when energy was relatively inexpensive) responsible for about 40 percent of residential energy use, the stock of older homes provides a prime market for energy-efficient upgrades.

Moreover, the foundation of the remodeling industry is solid. The US housing stock consists of nearly 130 million homes in ongoing need of maintenance, component replacement, and adjustments to meet changing preferences and lifestyles. With one to two million homes added to the housing inventory each year, future growth in home improvement activity is assured.

Figure 5

Older Housing Contributes Substantially to National Energy Consumption

Energy consumption by sector



Source: US Department of Energy, Energy Information Administration, Annual Energy Review and Residential Energy Consumption Survey, 2005.

2

Navigating Industry Cycles



Despite evidence to the contrary, remodeling has a reputation as a countercyclical industry. This misconception stems from the fact that home building and improvement projects are often viewed as competing activities since homeowners seeking to upgrade often choose between buying other homes and fixing up their current units.

As home building increases, so the theory goes, remodeling activity decreases. Conversely, when home building weakens, the demand for remodeling picks up.

Although not countercyclical, the home improvement industry is less volatile than new residential construction. When the home building market is strong, the remodeling share of overall residential investment typically decreases and vice versa. During the current housing downturn, the home improvement and repairs share in fact climbed from about 37 percent in 2005 to 48 percent in 2007. As residential spending moves toward recovery, the home improvement share should continue to increase (**Figure 6**).

Home Building/Home Improvement Cycles

While home building and remodeling may be competing activities, a strong economy typically encourages spending in both sectors while a weak economy typically discourages spending in both. In the current downturn, an oversupply of new homes, rising mortgage defaults and foreclosures, and severe credit market disruptions have led to some of the deepest cutbacks in home building in the past 50 years. Single-family housing starts have dropped more than 65 percent from their peak in early 2006, the result of a comparable plunge in new single-family sales (**Figure 7**). Both of these declines dwarf previous records since at least the early 1960s—and probably since the 1930s if data were available back that far.

More important for the remodeling industry, sales and prices of existing homes have also plummeted. In fact, the drop in existing home prices is a distinguishing characteristic of this housing market cycle. Before 2007, national home prices had never fallen on an annual basis according to information from the National Association of Realtors®, which began reporting house price data in the late 1960s. As this

cycle has progressed, median home prices have continued to drop—down 13 percent nationally as of the third quarter of 2008—and are poised to slide even further. With the weakness in sales and prices, fewer households are in the market and therefore fewer buyers and sellers are making improvements to their properties.

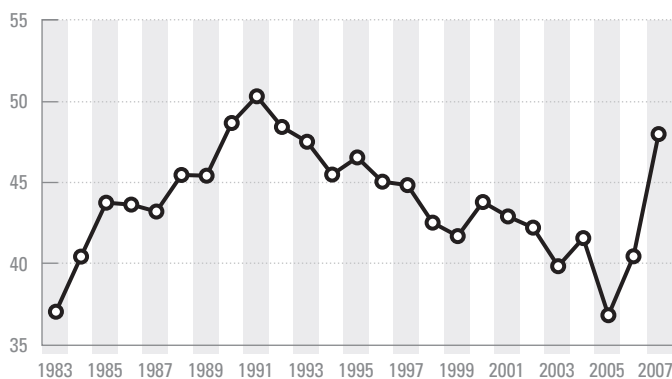
Remodeling expenditures typically rise less than residential construction spending during an upturn and decline less during a downturn (**Figure 8**). One recent exception was in the mid-1990s, when spending by owners on improvements declined 13 percent from peak to trough, while spending on new residential construction declined just 5 percent. Turns in the home improvement market also typically lag the construction cycle by one to two quarters.

Given the severity of today's housing market meltdown, however, the current home improvement cycle is likely to be much more severe than in recent decades. Homeowner improvement spending increased 160 percent from its mid-1990s trough to its 2007 peak, but then dropped 16 percent by the third quarter of 2008. Since homeowner expenditures are still falling, the overall decline will no doubt be much more substantial before this cycle is over.

Figure 6

With the Home Building Downturn, the Remodeling Share of Spending Is Increasing

Improvement and repair expenditures as a share of total housing expenditures (Percent)



Notes: Total housing expenditures include the value of construction put in place for new single-family homes, multifamily homes, and improvements and repairs to owner and rental units. Owner improvement and repair estimates prior to 1995 were extrapolated from the AHS estimates using the annual growth rates in the C-50 reports. Rental improvement and repair estimates are from the C-50 reports. Source: JCHS tabulations of the 1995–2007 AHS and the 1982–2007 C-50 reports.

Increased Volatility of Expenditures

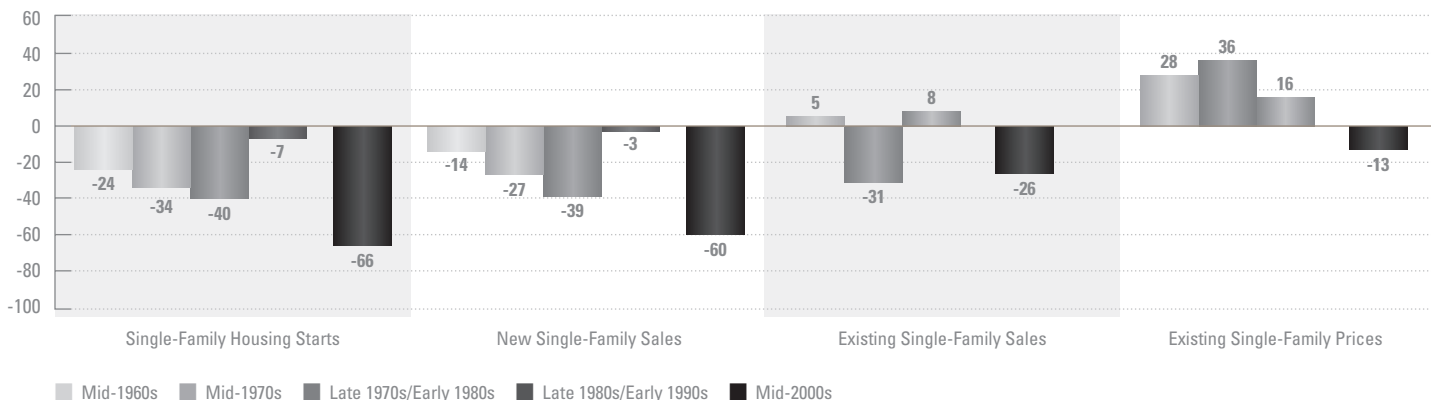
The remodeling industry can be segmented into six major categories of projects. At the high end of the list are kitchen and bath remodels as well as additions to existing homes. These are often referred to as discretionary improvements because owners undertake these projects to increase the enjoyment of their homes rather than to maintain the structural soundness or efficient operation of their residences.

The interior projects category, in contrast, comprises major improvements to or replacements of such features as insulation, flooring, paneling, and ceilings. Exterior additions and replacements include roofing, siding, windows, and doors. Replacements

Figure 7

By Most Measures, the Current Housing Recession Is the Worst in the Postwar Era

Percent change 32 months after peak in single-family housing starts



Note: Percent change is computed from three-month moving averages.

Sources: JCHS tabulations of the US Census Bureau, New Residential Construction Report (C-20 and C-22) and New Residential Sales Report (C-25); NAR; and Moody's Economy.com.

to systems and equipment cover plumbing, electrical, HVAC, and built-in appliances. Outside attachments and property improvements include adding or replacing a deck, porch, garage, carport, driveway, swimming pool, and other major upgrades to the lot or yard. Finally, disaster-related home repairs make up a separate category of improvement spending.

Remodeling activity is also divided into professionally installed and do-it-yourself (DIY) projects. This is an important distinc-

tion because consumers can save substantially by doing the work themselves—a powerful incentive particularly during recessions. In addition, many owners see working on their homes not only as a means to increase their value and improve their living conditions, but also as an enjoyable opportunity to apply their skills.

Over the last decade, the popularity of different types of remodeling activities has changed. In 1995, 33 percent of homeowner spending was for discretionary improvements such as kitchen and bath remodels and room additions. By 2007, the share of spending in this category increased modestly to 37 percent, but the composition of projects had shifted markedly. At the beginning of the decade, only 20 percent of total homeowner spending was for upper-end discretionary projects. In 2007, the share had increased to 30 percent as owners on average sharply expanded the scope of their home improvements (**Figure 9**).

Meanwhile, the share of expenditures on interior replacements nearly doubled. These projects are often undertaken in conjunction with kitchen and bath remodels, additions, and interior alterations. This increase compensated for significant declines in the shares of exterior replacements and property improvements, which are typically more stable from year to year. The net result is that more expensive home improvement projects accounted for a larger share of market activity in 2007 than in 1995.

Figure 8

This Remodeling Downturn Is More Severe than in Previous Cycles, But Still Less Drastic than in Home Building

Percent change in spending

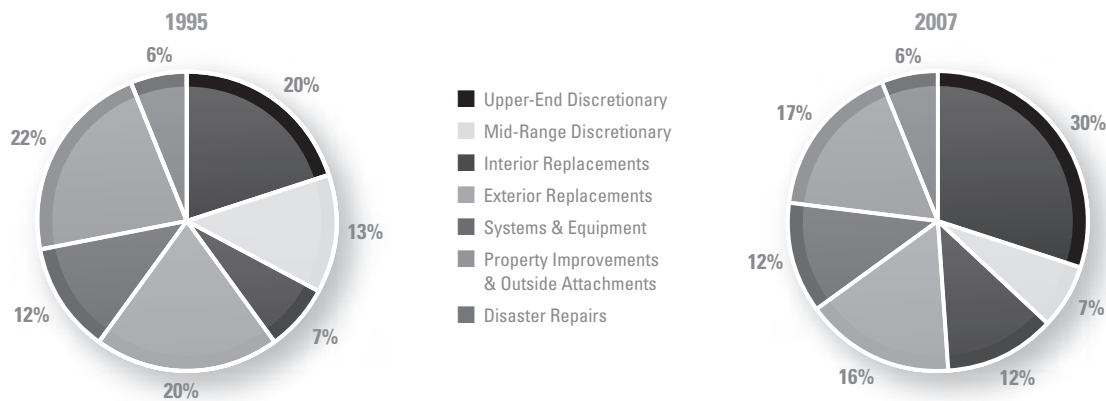
Cycle Time Period	Owner Improvements		Single-Family Construction	
	Previous Trough to Peak	Peak to Trough	Previous Trough to Peak	Peak to Trough
1980s/Early 1990s	127.6	-17.0	200.7	-20.2
Mid-1990s	26.2	-13.0	66.5	-5.4
Current	160.0	-15.5*	193.1	-52.6*

*Estimates as of 2008:3.
Source: US Census Bureau, C-30 reports.

Figure 9

The Shift to Upper-End Discretionary Projects Fueled the Spending Boom, Contributing to Increased Cyclicity

Share of homeowner improvement spending



Notes: Expenditures are inflation-adjusted to 2007 dollars to compare equivalent spending levels for upper-end and mid-range discretionary projects. Upper-end discretionary projects include major kitchen and bath remodels as well as room additions and alterations over \$25,000. Mid-range discretionary projects include minor kitchen and bath remodels as well as room additions and alterations under \$25,000. Major kitchen remodels are defined as \$10,000+ if done professionally and \$4,000+ if DIY. Major bathroom remodels are defined as \$5,000+ if done professionally and \$2,000+ if DIY. See Table A-1 for other category definitions.
Source: JCHS tabulations of the 1995 and 2007 AHS.

While the emphasis on high-end projects helped to boost improvement spending to its recent heights, it also suggests that the current downturn will be sharper than usual. Upper-end discretionary projects are more volatile than mid-range projects because most owners feel comfortable undertaking major projects only when economic conditions are favorable. Similarly, improvement spending in general is more volatile than maintenance and repair spending because the projects tend to cost more.

The volatility of spending in the major remodeling categories differed considerably between 1995 and 2007. Growth in total maintenance and improvement spending averaged just under 6 percent annually over this period, ranging from 1 percent in 2002–2003 to 13 percent in 2004–2005. At the same time, spending on upper-end discretionary projects averaged 11 percent annual growth but was much more volatile from year to year. In contrast, spending on replacements grew significantly less but was more stable (Figure 10).

Do-It-Yourself Activity

The strong growth and increased volatility in home improvement spending earlier in the decade coincided with a growing share of do-it-yourself activity. This trend is counterintuitive since DIY projects are typically less expensive than professionally installed projects, which include the costs of labor, overhead, and profits in addition to materials.

The mix between DIY and professional home improvement projects provides some explanation. DIY projects are heavily concentrated in discretionary categories that have higher average costs. Between 1995 and 2007, 43 percent of DIY expenditures were for discretionary projects. The comparable share of expenditures for professionally installed projects was only 32 percent. As a result, as owner spending shifted toward discretionary projects over the decade, the DIY share of activity also increased—generating more growth but greater volatility in year-to-year spending.

The Outlook

The current remodeling cycle is more severe than in recent decades, largely because of the growing share of expenditures on upper-end discretionary projects. The retreat in homeowner spending should, however, be less drastic than that in new residential construction spending for several reasons.

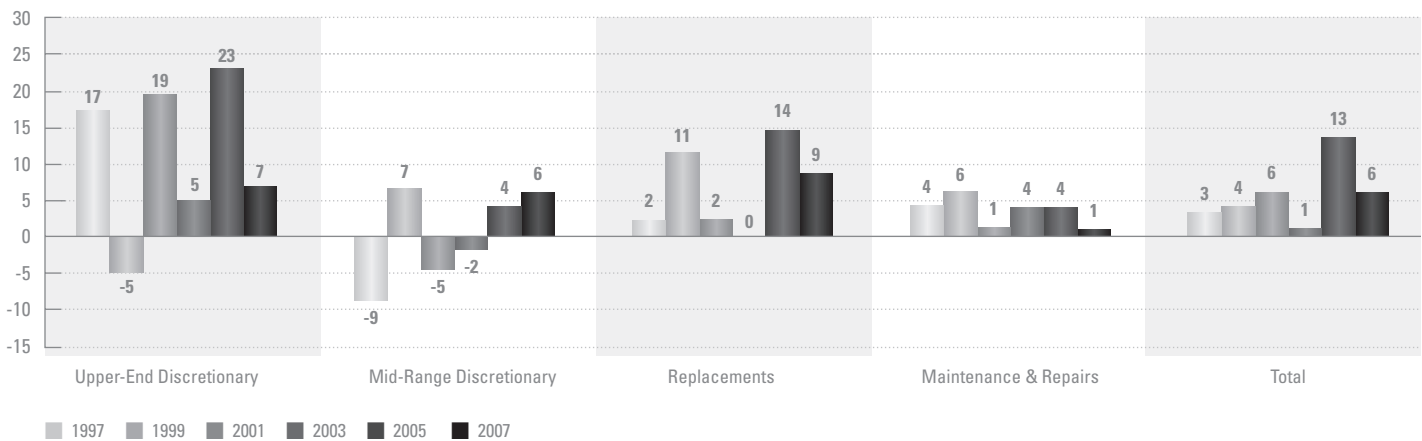
First and foremost, overbuilding in the housing market contributes to sharper cycles. When excess housing supplies develop during an upturn, they inflate growth; as inventories are worked off during the downturn, the excess units understate true market demand. In the home improvement market, however, excess supply is not a factor.

A second reason for more moderate remodeling cycles relative to new construction is that spending in large segments

Figure 10

Spending on Upper-End Projects Has Been Strong But Volatile in Recent Years

Average annual growth in homeowner remodeling expenditures (Percent)



Notes: Expenditures are inflation-adjusted to 2007 dollars to compare equivalent spending levels for upper-end and mid-range discretionary projects. Upper-end discretionary projects include major kitchen and bath remodels as well as room additions and alterations over \$25,000. Mid-range discretionary projects include minor kitchen and bath remodels as well as room additions and alterations under \$25,000. Major kitchen remodels are defined as \$10,000+ if done professionally and \$4,000+ if DIY. Major bathroom improvements are defined as \$5,000+ if done professionally and \$2,000+ if DIY. Replacements include interior and exterior projects, as well as systems and equipment. Maintenance and repairs include routine preservation projects, such as painting and minor repairs intended to keep the property in normal working condition.

Source: JCHS tabulations of the 1995–2007 AHS.

of the home improvement market—exterior replacements, system upgrades, and disaster repairs—varies little from year to year, effectively creating a floor under expenditures. While upper-end discretionary projects are responsible for most of the volatility in homeowner spending, even at their inflated 2007 share, these projects accounted for 30 percent or less of total expenditures. As a result, even if some discretionary projects were deferred and others were downsized, the impact on overall remodeling expenditures would be much more modest than the decline to date on the construction side.

Over the longer term, more modest house price appreciation and the declining share of home improvement costs that own-

ers can recoup in higher house values are likely to dampen enthusiasm for discretionary home improvement projects—particularly at the upper end of the market. Instead, project activity is likely to shift back toward exterior replacements and system upgrades, which tend to be most cost-effective in terms of generating energy savings. More basically, many home components need periodic replacement as they wear out or fail. Since professionals traditionally install the majority of these replacements and upgrades, the share of spending on professional services should increase even with greater stability in overall home improvement spending.

3

Emerging Industry Structure



Remodeling remains an unusually fragmented industry. Joint Center estimates from the Census of the Construction Industries indicate that 530,000 contracting businesses primarily served the home improvement market in 2002. Of these firms, fewer than 38 percent—or about 83,000 general remodeling contractors and 117,000 specialty trade contractors—had even one employee.

Even contractors with payrolls are typically small operations. Over half (54 percent) of these general remodeling firms reported gross revenues of less than \$250,000. Only 12 percent had revenues of \$1 million or more, and just 1 percent had revenues of \$5 million or more. While an updated look at the remodeling industry will not be available until the second half of 2009, there is no evidence of significant concentration since the 2002 census.

In addition, firms have increasingly focused only on the residential remodeling market. For example, more than 80 percent of general remodeling contractors reported that 100 percent of their 2002 revenues came from remodeling projects. During upturns, this specialization means that contractors can narrowly target their activities, which helps to improve their efficiency and competitiveness. During downturns, however, specialization limits the ability to branch into other market segments where business might be better.

This structure exposes contractors to considerable risk during even normal business cycles. In the current downturn, improvement spending probably did not begin to decline until the third quarter of 2007, but contractors felt the impact almost immediately. According to US Department of Labor reports, average hours worked by employees at general remodeling firms started to decrease in that same quarter and the number of payroll employees began to fall shortly thereafter. By the third quarter of 2008, remodeling contractor payrolls had shrunk 5.6 percent from a year earlier, while payrolls in the overall economy had declined just 0.3 percent.

Performance of Larger Firms

While smaller contracting firms no doubt bear the brunt of the spending slowdown, larger firms are by no means immune.

Joint Center analysis of information collected annually by *Qualified Remodeler* magazine on the nation's top 500 remodeling contractors reveals that revenue growth among larger firms peaked in 2004. By 2007, these contractors averaged just 2.7 percent annual revenue growth and an increasing share reported declines (**Figure 11**).

Some types of larger firms, however, performed much better than others in 2007. Thanks to extreme weather events, insurance restoration contractors saw strong revenue gains. More specialized firms, such as exterior replacement contractors and kitchen and bath firms, also posted above-average growth that year. Design/build and full-service remodelers, in contrast, reported scant revenue gains.

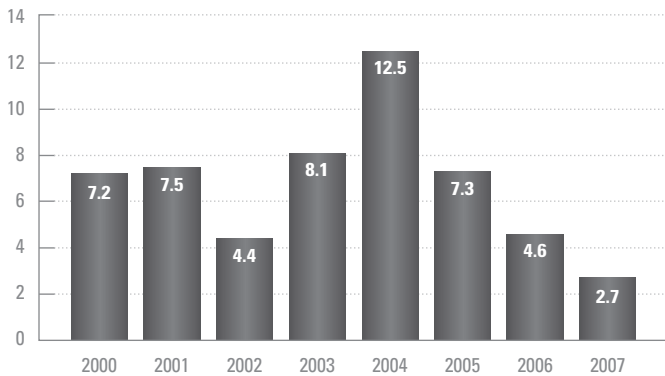
The weakness in 2007 revenues apparently reflects a decrease in the size rather than in the number of remodeling projects. Fully 50 percent of design/build firms reported a decline in average job size that year, as did 47 percent of full-service firms. Meanwhile, less than one third of exterior replacement firms and kitchen and bath specialists indicated that their average job sizes had decreased.

Volatile performance is nothing new for the remodeling industry. So far this decade, larger contractors have seen tremendous disparities both in average annual revenue growth across specialties and in year-to-year variations within specialties. For example, with strong demand for kitchen and bath remodels between 2000 and 2007, the few larger firms specializing in these projects averaged 11.4 percent annual revenue growth, outpacing gains in every other specialty (**Figure 12**). Insurance restoration firms were not far behind with average annual growth of 10.2 percent. Meanwhile, the other three types of remodeling specialists—design/build, full-service, and exterior replacement firms—saw more modest growth in the 6.0–6.7 percent range.

Figure 11

Even Larger Remodeling Contractors Have Felt the Spending Slowdown

Median annual revenue growth (Percent)



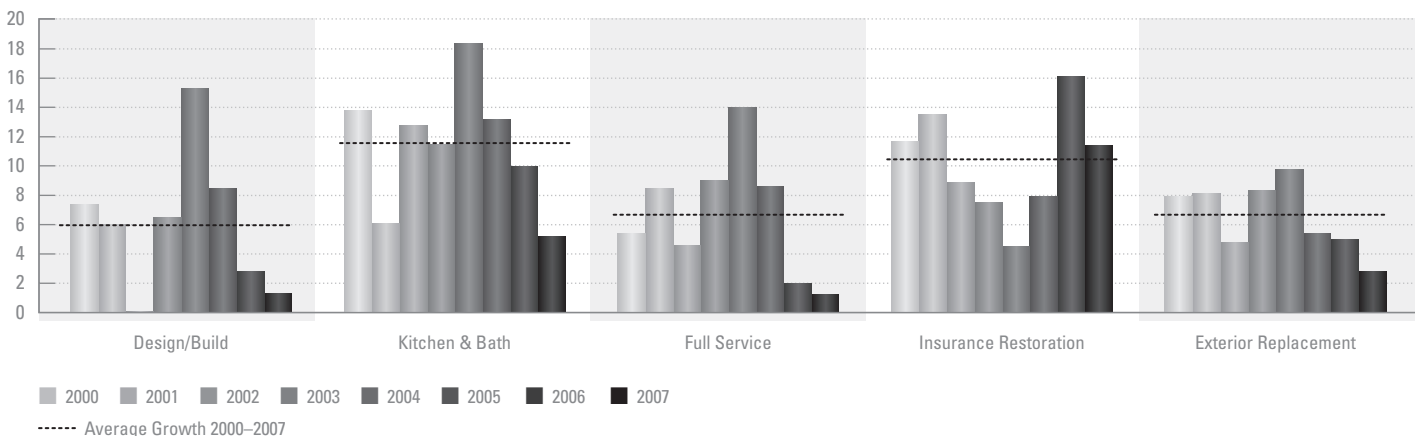
Note: Includes remodeling firms reporting revenue in any two consecutive years.

Source: JCHS tabulations of *Qualified Remodeler* magazine's Top 500 Remodelers List.

Figure 12

While Kitchen and Bath Firms Have Had the Most Revenue Growth, Replacement Firms Have Had the Most Stability

Median annual revenue growth (Percent)



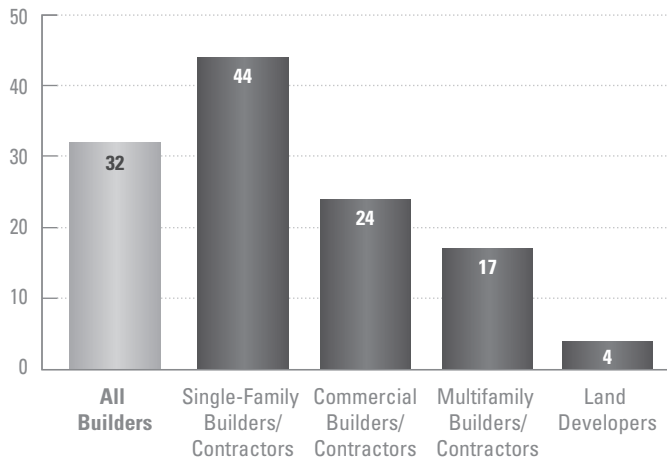
Notes: Includes remodeling firms reporting revenue in any two consecutive years. Remodeling firm categories are shown in order of highest-to-lowest standard deviation (SD), i.e., how much annual growth differs from average growth over the period. Design/build firms had an SD twice that of exterior replacement firms.

Source: JCHS tabulations of *Qualified Remodeler* magazine's Top 500 Remodelers List.

Figure 13

Many Residential Builders Have Entered the Remodeling Market

Share of NAHB builders reporting residential remodeling as a secondary activity (Percent)



Source: National Association of Home Builders, Member Census, October 2008.

But even more important to longer-term viability is the year-to-year volatility of revenue growth. Sharp swings—and particularly declines—typically create challenges for contracting businesses. Slow, steady revenue growth, in contrast, allows firms to gradually adjust their procedures and maintain control of their operations. Between 2000 and 2007, design/build firms reported the greatest volatility in revenue growth, followed by kitchen and bath, full-service, and insurance restoration firms. Meanwhile, exterior replacement firms reported the most stable annual revenues over the period.

The variation in year-to-year revenues appears to be related to the typical job size in a particular specialty. In 2007, design/build firms reported a median job size of more than \$90,000. Job sizes in the other specialties were a fraction of that number, averaging \$38,000 for full-service firms, \$13,000 for insurance restoration firms, \$12,000 for kitchen and bath firms, and \$9,000 for exterior replacement firms.

Increasing Competition

With the residential construction market near record lows, home builders are expanding into other activities to help ride out the recession. A member census conducted by the National Association of Home Builders (NAHB) in October 2008 found that 45 percent of builders had diversified into other construction and non-construction projects since the beginning of 2007. Another 20 percent planned to diversify in 2009.

With low barriers to entry, remodeling is a market that home builders can easily pursue. In fact, some portion of residential contractors has traditionally worked on home building when that market is strong and then shifted to remodeling when home building is weak. Given the severity of the current housing market cycle, many builders seem to be following this strategy. Indeed, the NAHB census found that 32 percent identified remodeling as a secondary activity—a significantly higher share than for any other option (Figure 13).

Among single-family home builders (including custom builders, general contractors, and speculative and tract builders), fully 44 percent listed remodeling as a secondary activity—far ahead of the 24 percent who selected land development, the next-most commonly cited secondary activity for this group. Almost a quarter of commercial builders and contractors also identified residential remodeling as a secondary activity.

While residential remodelers may also diversify into other areas of construction, their options are more limited. Commercial remodeling was the most commonly mentioned secondary activity, an attractive market given the strength of the non-residential construction sector in recent years. Other common secondary activities reported by residential remodelers were single-family custom building, single-family general contracting, subcontracting/specialty trade contracting, and architecture, planning, designing, or engineering.

With increased competition from both inside and outside the remodeling industry, many contractors emphasize project pricing (rather than their credentials, customer satisfaction record, or breadth of services) as their principal advantage. A late 2008 poll conducted by Angie’s List, an online contractor referral service, found that 76 percent of contractors said that, in this slowdown, they would consider dropping their prices to get a project. Of these, 70 percent were willing to cut prices up to 10 percent; 25 percent were willing to cut prices 10–20 percent; and 5 percent were willing to offer even steeper discounts.

Rising Contractor Failure Rates

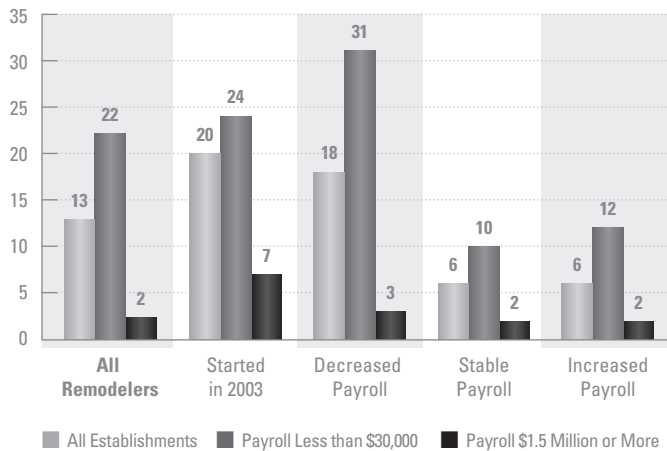
As primarily small businesses with limited capitalization and little formal business background, remodeling firms typically have high failure rates even when business conditions are favorable. Indeed, Joint Center analysis of US Census Bureau estimates indicates that failure rates reached 12.9 percent during the middle of the strong remodeling upturn in 2004. While high for most types of residential contracting firms (ranging from 8.1 percent for plumbing and HVAC subcontractors to 12.6 percent for painting subcontractors), failure rates for general remodeling contractors topped the list for the industry.

Furthermore, smaller general remodeling contractors are much more likely to fail than their larger counterparts. Firms

Figure 14

Startups and Firms with Declining Payrolls Are at High Risk of Failure

Establishments no longer operating in 2004 as a share of all general remodelers in 2003 (Percent)



Note: Failures are defined as firms that did not report employment or revenue to government agencies in 2004. Stable payroll is defined as growth of 0–4.9% in 2002–2003; increased payroll is defined as growth of 5.0% or more in 2002–2003.

Source: US Census Bureau, Business Information Tracking Series.

with payrolls of less than \$30,000 that year (with estimated gross revenues of less than \$100,000) had failure rates exceeding 22 percent—about twice as high as the rate for all contractors (**Figure 14**). Meanwhile, those with payrolls of more than \$1.5 million (with estimated gross revenues of \$5 million or more) had failure rates of only 2.4 percent.

In addition to size, business experience greatly influences a firm’s chances of survival. Fully 20 percent of contractors that started up in 2003 failed in 2004. Firms that reported any decline in payroll, however, had failure rates almost as high (18 percent). By comparison, failure rates for firms that had either stable or increasing payrolls in 2003 were much lower, averaging just 6 percent.

The combination of firm size and recent financial performance has even more impact on a firm’s survival. For example, among the 20 percent of firms that started up in 2003 and failed in 2004, the failure rate for small companies was more than three times higher than that for larger ones. Similarly, among the 18 percent of firms with declining payrolls in 2002–2003, the 2004 failure rate was 31 percent for small firms compared with only 3 percent for larger firms.

Now faced with economic recession and increased competition, even large contracting firms are likely to fail. In 2007, 47 percent of remodeling contractors that had revenues of \$1–5

million reported revenue declines, up from 31 percent in 2003. Meanwhile, 33 percent of firms with revenues above \$5 million also posted declines in 2007, up from 23 percent in 2003. Even conservatively applying the 2004 failure rate, business failures in 2007 would have increased 21 percent among firms with revenues in the \$1–5 million range and 12 percent among firms with revenues of more than \$5 million. While current information is not available, actual business failures are likely much higher, especially among smaller contractors.

Emerging Markets

Smaller firms do, however, have some competitive advantages. In addition to lower overhead, they tend to be more entrepreneurial than larger firms and therefore quicker to adapt to emerging opportunities and to adopt new technologies. The sustainable or green remodeling market provides a case in point.

Rising home energy costs and growing environmental concerns have boosted demand for green remodeling projects in an otherwise soft market. Some contractors have responded by enrolling in certification programs, learning about environmentally friendly products, and targeting their marketing to develop niche practices. Having a “green” reputation is a competitive strength in that these contractors can assure customers that they will use appropriate products and installation procedures to ensure favorable results.

Smaller contractors have made greater inroads into this emerging market than their larger counterparts. According to a recent national survey of remodeling contractors by the Joint Center, smaller firms have been better able to identify a client base that is enthusiastic about environmentally friendly products such as high-efficiency toilets, renewable-species flooring, and low-VOC paints and finishes (**Figure 15**). While larger contractors may eventually close this gap, smaller firms have so far gained a substantial lead.

The Outlook

The remodeling industry remains extremely fragmented, with few signs of consolidation. How well an industry primarily composed of very small businesses can cope in the current economic environment remains to be seen, but many remodeling firms will no doubt fail.

Nevertheless, being a small business can be both an asset and a liability. Smaller firms generally have a lower cost structure and can often successfully compete on price with larger firms. For their part, larger firms typically have more resources to ride out downturns and a larger customer base to turn to when looking for new work. Regardless, the intense competition for remodeling projects will make it difficult for contract-

ing firms of any size to grow their revenues significantly in the near term.

The recent trend toward specialization is likely to reverse during the current downturn as intensifying competition pushes contractors to pursue a broader range of projects. Just as many home builders are now focused on remodeling, remodelers will also attempt to extend their reach beyond their traditional specializations.

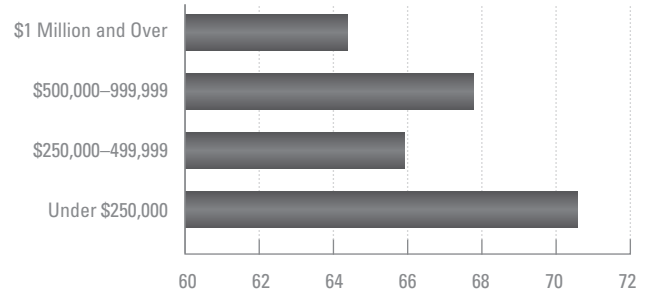
Once the economy begins to recover, however, the incentives for industry consolidation and specialization will revive. Given that remodeling is a profession with low costs of entry, competition is a constant. Consolidation is a way to achieve a scale of operations that generates the greatest efficiencies in terms of marketing, scheduling, and project management. Over the coming decade, a new business model is likely to emerge that enables remodeling companies to serve multiple markets by establishing systems and operating procedures that can successfully be replicated in several locations.

At the same time, though, firms can remain small and profitable. Specialization will continue to grow in popularity because it is a strategy that allows contractors to gain business efficiencies without having to achieve economies of scale. Indeed, specialized contractors can compete effectively with larger diversified businesses in terms of service, staff training and certification, product purchasing power, and reputation—all by focusing on a key market niche.

Figure 15

Clients of Smaller Firms Generally Look More Favorably on Environmentally Friendly Products

Share of remodeling contractors reporting increased consumer interest in environmentally friendly products by contractor revenue (Percent)



Notes: Environmentally friendly products were identified by the Partnership for Advancing Technology in Housing (PATH). See JCHS Working Paper W09-1 for more details.

Source: JCHS 2008 national green remodeling survey, administered by Specpan.

4

Changing Geography of Improvement Spending



The areas of the country hardest hit by the broader housing market slowdown—where house prices and home sales have collapsed and where mortgage defaults and foreclosures are mounting—are likely to see the sharpest declines in home improvement activity during this cycle. Spending will also be weak in metropolitan areas where the share of costs recovered from remodeling projects is lowest.

Other markets, however, can be expected to ride out the economic recession with more modest spending cutbacks. In general, these are the metropolitan areas that experienced less house price appreciation and overbuilding earlier in the decade, that have maintained relatively stable house prices since the downturn, and that have fewer homeowners at risk of default or foreclosure.

Spatial Variation in Spending

Some areas of the country routinely post much higher levels of home improvement spending, largely because of their higher house values and household incomes. Among the 15 metropolitan areas that had at least \$1 billion in annual expenditures earlier in this decade, San Francisco, San Diego, Los Angeles, and Boston all saw average annual homeowner spending of more than \$4,000 through 2008. With their much lower household incomes and housing values, Cleveland and Houston had average spending levels of about half that amount (**Table A-7**).

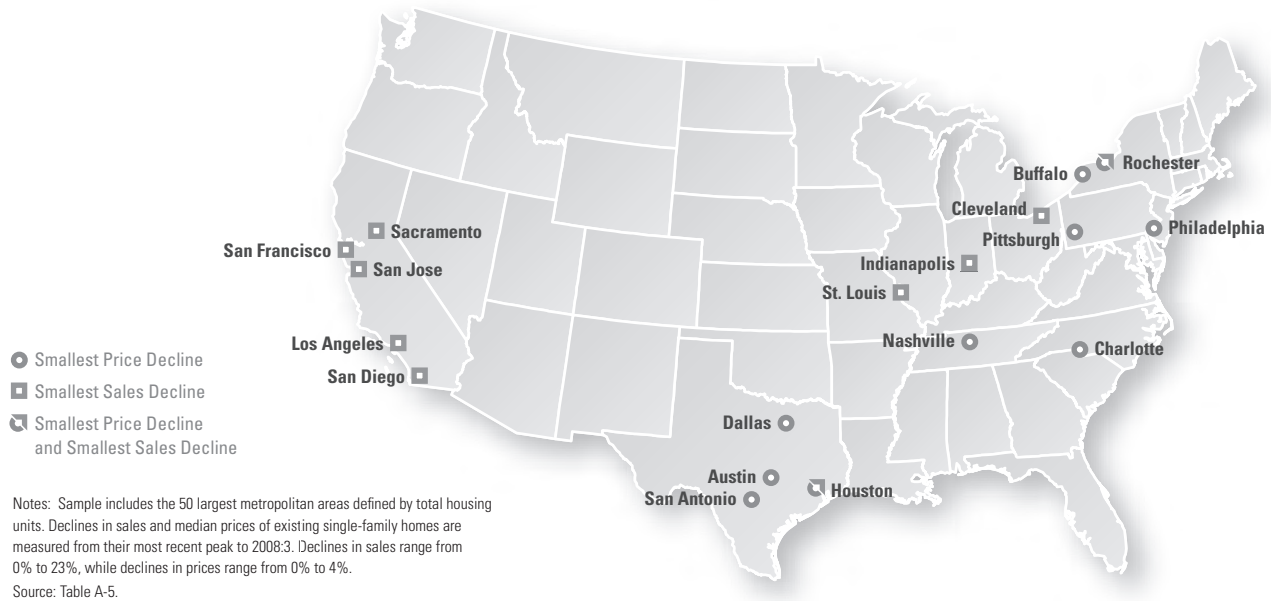
In addition to differences in household income, spending disparities also reflect the fact that owners in some metropolitan areas typically devote a larger share of their resources to improving their homes. On average, homeowners in San Diego, Boston, Los Angeles, and Minneapolis spent more than 4 percent of their incomes on home improvements between 2000 and 2007. In contrast, Denver and Houston had shares just over 2 percent.

Moreover, the housing stock in some parts of the country is more substantial and more expensive, and owners therefore need to spend more on basic home improvements. Owners in these high-spending areas have a larger investment to protect, and improvement spending is a way to ensure that they recapture the value of their homes when they sell. In low-

Figure 16

Home Improvement Spending in the Midwest and Texas Should Decline the Least in the Near Term

Metropolitan areas with smallest declines in house prices and sales



spending areas, owner improvements may not be as effective in increasing home values, particularly if other owners in the area do not upgrade as well.

Fallout from the Housing Market Crisis

As home prices soared over the past decade, owners saw the equity they held in their homes climb rapidly. With this strong surge in household wealth, homeowners did not hesitate to tap their equity through loans or by taking cash out at the time of sale or mortgage refinancing. Indeed, owners extracted an average of \$450 billion a year from their homes. According to recent studies by the Federal Reserve Board, owners then reinvested more than one-quarter of the equity withdrawn in home improvements.

Now with prices plunging, the amount of equity that owners have in their homes has also plummeted—so much so that a growing number of owners have mortgage balances that exceed the value of their homes. Soft house prices provide owners little incentive to invest in home improvements, and many choose to wait until the market bottoms out before making their spending decisions.

Would-be sellers and buyers who would otherwise invest in improvements are also on the sidelines. Households that want to sell typically make cosmetic improvements before

placing their homes on the market. Buyers often make much more substantial changes at the time of purchase for a variety of reasons: they can more readily obtain improvement financing in conjunction with the principal mortgage; they may be able to delay their move-in date until after the work is completed and therefore avoid significant disruption; and they can enjoy the upgrades for the entire time they own their homes. Since recent homebuyers spend about 23 percent more on improvements than similar owners who do not move, fewer home sales mean lower remodeling expenditures. Indeed, the nationwide drop in sales translates into about a \$2 billion cutback in home improvement spending.

But metropolitan areas where house price and sales declines have been modest should see less of a slowdown in home improvement activity over the next several quarters. Many of these metros, which are concentrated in the industrial Midwest, did not experience a rapid run-up in prices and therefore have not posted such a dramatic drop-off (**Figure 16**).

Several Texas metro areas have also managed to avoid some of the recent economic turmoil, and home prices and sales have held up reasonably well. Finally, sales in some previously overheated markets such as Los Angeles, San Diego, and San Francisco have already begun to revive from their dramatic collapse beginning in early 2004.

Figure 17

Previously Overheated Coastal Markets Face Sharply Lower Home Prices and Sales

Metropolitan areas with largest declines in house prices and sales



In the near term, the largest declines in improvement spending will be in metropolitan areas where home sales and prices have retreated the most. The markets with the largest declines in prices are primarily in Florida, California, and other rapidly growing Southwest metros (**Figure 17**). Areas with the largest declines in sales, however, are much more geographically dispersed.

In some instances, these two indicators of future home improvement activity are sending conflicting signals. For example, San Diego, San Francisco, and Los Angeles—recently among the most rapidly appreciating housing markets in the country—have posted some of the smallest declines in sales and the largest declines in prices. Growing sales of distressed properties are the explanation. According to DataQuick estimates, 52 percent of existing home sales in San Diego County in November 2008 were of properties foreclosed in the previous year, as were 44 percent in the San Francisco Bay area, and 44 percent in Los Angeles County.

Since house prices are largely determined by what households can afford to pay, the ratio of house prices to incomes is an effective indicator of future price adjustments. Between 1975 and 2000, house prices nationally averaged about 1.7 times household income, with very little year-to-year variation around this trend. Beginning around 2000, house prices began to climb faster than incomes, peaking at the end of 2006 at

more than 2.1 times household incomes. By the third quarter of 2008, this ratio had dropped back to 1.9.

This national analysis masks the tremendous variation in local house-price-to-income ratios. In areas such as Cleveland, the relationship between prices and household incomes has been fairly stable, implying that little adjustment is necessary (**Figure 18**). At the other extreme is San Francisco, where house prices have historically run at more than three times household income. As a result, while some adjustment in prices is still ahead, San Francisco's ratio is unlikely to fall to national averages. In between these extremes are metros such as New York, where house prices have moderated somewhat but further adjustment is likely, and Dallas, where the ratio has held near normal levels since the run-up in house prices in the 1980s.

The Pressure from Foreclosures

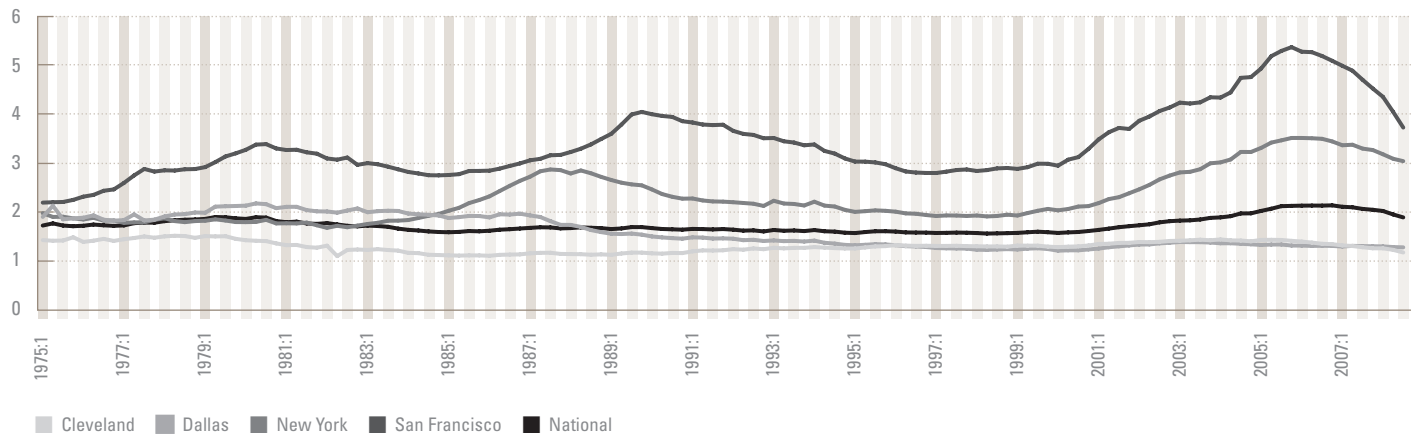
For a growing number of owners, house price declines have already eliminated all of the equity they held in their homes. Moody's Economy.com put the share of owners with mortgage balances that exceed the market value of their homes at 15–20 percent in the third quarter of 2008.

Owners with little or no equity in their homes that also face financial pressures—such as an upwardly adjusting interest rate on a subprime home loan or an employment loss—are

Figure 18

House-Price-to-Income Ratios Normally Vary Greatly Across Metro Areas

Median existing single-family house price compared with mean household income



Note: House price is the 2008:3 median sales price of existing single-family homes as determined by NAR and indexed by the Freddie Mac Conventional Mortgage Home Price Index. Sources: Freddie Mac; Bureau of Economic Analysis; US Census Bureau; NAR; and Moody's Economy.com.

especially at risk of default and ultimately foreclosure. Loans entering foreclosure averaged 4.8 percent of all mortgages nationally between 2007 and the first half of 2008, according to US Department of Housing and Urban Development estimates. Foreclosure rates are currently highest in California, Nevada, and Florida—states where house price appreciation was rapid earlier in the decade and where markets were often overbuilt. Certain states in the industrial Midwest also have high foreclosure rates thanks to weak economies and falling household incomes (**Figure 19**).

High levels of distressed properties in general, and of foreclosures in particular, push down home improvement spending. Owners with little equity and threatened with default are unlikely to make significant improvements to their homes. But even more important is the impact of foreclosed homes on the improvement decisions of neighboring property owners. Homeowners that see growing numbers of vacant properties in their area may fear a decline in market values and therefore hesitate to make improvements to their own homes.

During the past decade, the reverse of this phenomenon was an important driver of home improvement spending. As house values began to rise, homeowners would use their growing equity to make improvements, which not only increased the value of their homes but also generally increased home values throughout their communities. Rising house values in a community, in turn, produced higher levels of home equity, which encouraged more home improvement activity. In a recent

study, Joint Center researchers found that for a given level of improvement expenditures, house price appreciation was 15 percent higher if the home was located in a neighborhood with above-average improvement spending, as compared with a neighborhood with below-average spending.

In all likelihood, the opposite dynamic is now playing out in many neighborhoods. As spending on distressed and foreclosed properties stalls, nearby property values are declining. As house prices in the neighborhood fall, owners of nondistressed homes have less equity to undertake improvements. With lower levels of improvement spending, prices slide even further.

Weakening Project Cost Recovery

Owners undertake some types of home improvements to increase the enjoyment of their homes and to keep them operating efficiently, such as replacing floor and wall coverings, modernizing equipment and appliances, and retrofitting aging systems. Other projects, however, are considered investments that enhance the home's appeal in the market and thereby increase its value.

For any given home improvement project, the amount of the cost that the owner recaptures in the form of higher market value depends heavily on local house price appreciation. In general, when house prices are increasing, owners recoup a larger share of the cost because the value of that improvement rises along with house prices.

Figure 19

Home Foreclosures Are Heavily Concentrated in California, Florida, and the Industrial Midwest

Estimated share of mortgages entering foreclosure between January 2007 and June 2008 (Percent)

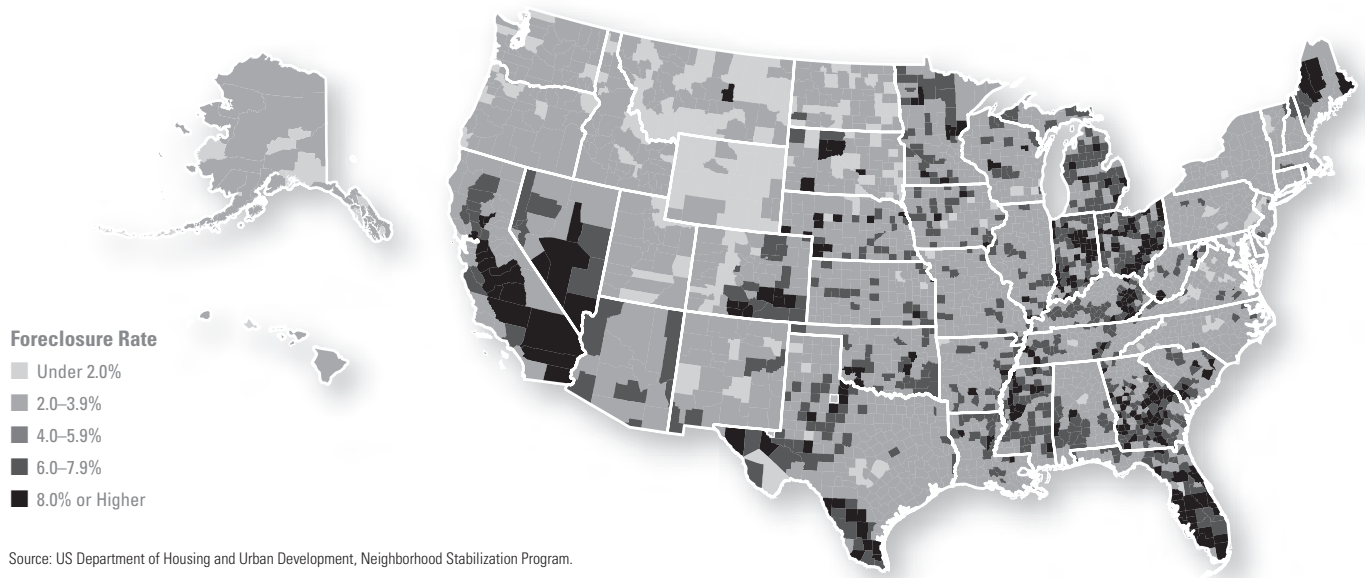
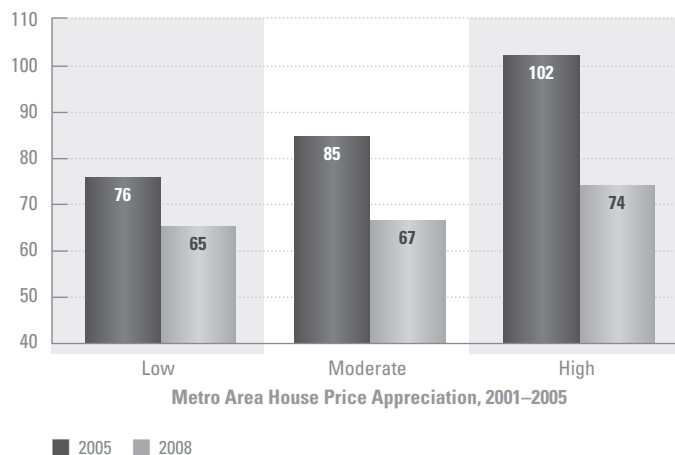


Figure 20

Rapidly Appreciating Markets that Saw the Highest Cost Recovery Earlier in the Decade Are Now Experiencing the Sharpest Declines

Average share of improvement costs recovered (Percent)



Notes: Sample includes 41 metropolitan areas in *Remodeling* magazine's Cost vs. Value survey between 2005 and 2008 that had at least 10 survey responses in each year. Appreciation categories include a similar number of metros.

Source: Table A-6.

When annual house price appreciation peaked at 12.8 percent nationally in 2005, the recapture rate for home improvement projects reached 86.7 percent across the metro areas surveyed by *Remodeling* magazine and the National Association of Realtors®. When house price gains slowed to just 2.0 percent in 2006, however, the average cost recovery dropped to 76.1 percent. As house prices continued to slip, the share fell to 70.0 percent in 2007 and then to 67.2 percent in 2008.

These national trends help to explain the relationship between local house price appreciation and home improvement spending. In metropolitan areas where house price appreciation was strongest between 2001 and 2005, owners captured more than 100 percent of their costs in 2005 (**Figure 20**). By comparison, metro areas with moderate house price appreciation recouped an average of 85 percent of project costs, while those with low appreciation recouped just 76 percent.

As house prices continue to decline and economic conditions deteriorate, this trend is reversing. Most of the top 10 metropolitan areas in terms of house price declines report much lower cost recovery for home improvement projects, with the average share down by 28 percentage points between 2005 and 2008. In Washington, DC, for example, the share of project costs recovered shrank from an average of 114.3 percent in 2005 to 63.6 percent in 2008; in Miami, from 118.1 percent to 83.3 percent; in San Francisco, from 126.8

percent to 93.2 percent; and in Phoenix, from 106.3 percent to 77.2 percent (**Table A-6**).

Pockets of Spending Strength

Although beginning to fall nationally in 2007, house prices in some markets continued to appreciate and owners therefore continued to spend on improvements. Even with the backdrop of a troubled economy and soaring home foreclosures, these households reported expenditures about 30 percent above the national average (**Figure 21**). At the same time, owners in markets with declining home values reported home improvement expenditures about 30 percent below the national average.

It should be noted that owners are often slow to comprehend how much their homes may have lost in value and thus may either overstate price appreciation or understate the magnitude of the decline. The pattern is, however, unmistakable: owners who felt that the prices of their homes were holding up continued to spend much more on home improvements than those who felt their homes were dropping in value.

The Outlook

As the housing market correction proceeds, the metropolitan areas with the largest inventory overhangs will likely see the steepest declines in home improvement spending. The growing number of properties with delinquent and foreclosed mortgages is accelerating the adjustment process. As banks and other investors attempt to clean up their balance sheets, they are cutting prices on foreclosed homes to stimulate sales.

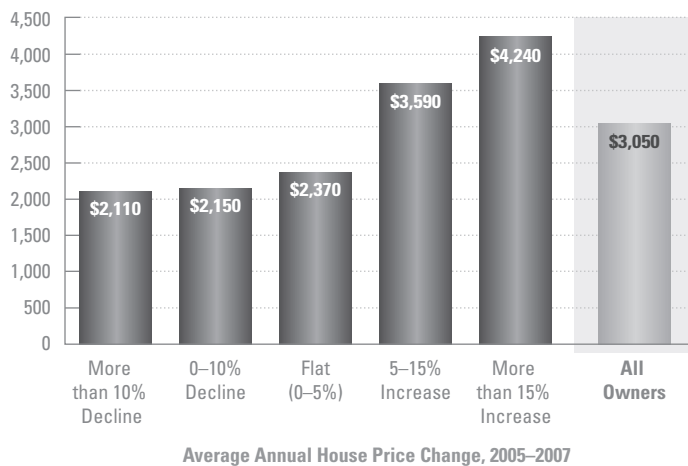
Meanwhile, owners of distressed properties are cutting back on their improvement spending. As the number of households unwilling or unable to take on projects continues to grow, nearby owners will remain reluctant to invest in their own homes out of concern for falling prices.

Nevertheless, metropolitan areas that did not experience excessive house price appreciation earlier in the decade and that have strong enough economies to support modest growth in the coming quarters should be able to maintain healthy levels of home improvement spending. Areas where house prices are still declining can expect to see improvement spending rebound once prices reach bottom.

Figure 21

Homeowners in Appreciating Markets Continue to Spend on Remodeling

Average annual improvement spending (Dollars)



Source: JCHS tabulations of the 2005–2007 AHS.

5

Growth Markets for Remodeling



While the timing and magnitude of a remodeling turnaround are difficult to predict, it is clear that the home improvement industry can no longer rely as heavily on upper-end discretionary projects to drive growth in the future. Instead, it must capitalize on emerging opportunities as the market adjusts to new economic realities.

Of the sources of demand that are most likely to boost improvement spending, three stand out: the increasing need to upgrade the rental housing stock, ongoing growth in the immigrant homeowner market, and emerging interest in sustainable remodeling projects.

In the aftermath of the mortgage market meltdown, homeownership has lost some of its appeal. In addition, some households that would otherwise buy homes are no longer able to qualify for loans under today's more stringent underwriting standards. As households increasingly choose to rent rather than own their housing, the need to invest in the nation's aging rental stock will provide a prime opportunity for remodeling contractors.

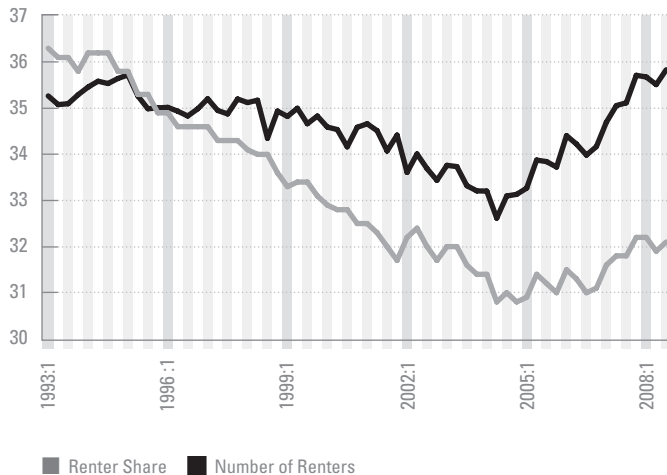
Meanwhile, immigrant households represent an increasingly important segment of the housing market. Between 1995 and 2007, the number of immigrant households rose from 9 million to more than 15 million. When immigrants arrive in the country, many initially rent. As they climb the economic ladder, however, they move into homeownership at rates comparable to those of the domestic-born population. As a result, foreign-born homeowners will account for a growing share of improvement spending in the years ahead.

With affordability a key priority, homebuyers are now looking for more efficient and cost-effective systems in their homes. More than 40 percent of the owner-occupied housing stock, along with almost half of the rental stock, was built when energy costs were much lower and environmental impacts were of less concern. Older homes thus represent a tremendous market for green remodeling. Sustainable housing retrofits also have growing appeal to a new generation of environmentally aware homebuyers.

Figure 22

With Homeownership Rates Declining, Demand for Rental Housing Is on the Rise

Number of renter households (Millions); renter share of all households (Percent)



Source: US Census Bureau, Housing Vacancy Survey.

Reinvesting in the Rental Stock

During the decade when homeownership rates were soaring, the number of renter households fell from almost 36 million in 1994 to less than 33 million in 2004. Shrinking demand discouraged rental owners from investing in their properties and developers from building additional units. As a result, the median age of the rental housing stock now stands at 36 years, compared with 32 years for the owner-occupied inventory.

With the recent collapse of the for-sale market, demand for rental housing is now on the increase—both because homeownership has become less attractive and because many owners are losing their homes to foreclosure. High gas prices have also encouraged households to trim their commuting costs by moving closer to employment centers or public transportation options, where rental units are in greater supply. As a result, the share of renter households has grown in recent years (**Figure 22**).

Stronger demand should generate greater investment in the aging rental stock. Nearly half of rental units were built before the 1970s, and only 15 percent have been built since 1990. Combined with the normal wear-and-tear of high turnover rates, the aging of the rental stock has contributed to its general deterioration. In 2007, almost 10 percent of rental housing—more than 3.6 million units—was structurally inadequate.

The poor condition of the rental inventory reflects years of neglect. Throughout the 1970s and 1980s, expenditures on the owner- and renter-occupied stock moved in tandem, although per unit spending averaged about 30 percent less for rentals primarily because of their smaller size. Beginning in the early 1990s, however, their paths began to diverge. Average per unit improvement and maintenance expenditures for rental units fell by almost 40 percent in inflation-adjusted terms between 1990 and 2007, while expenditures on owner-occupied units increased almost 30 percent.

Rental housing therefore represents a growing market for the home improvement industry. The types of projects in demand do, however, differ from those for owner-occupied units. Spending is more heavily focused on replacements and system upgrades since it is often difficult to add onto or structurally modify rental units. In addition, higher turnover rates in the rental stock mean more maintenance is required. For example, rental property owners spent 38 percent of their budgets on maintenance and repairs in 2007, while homeowners devoted only 20 percent to this expenditure category.

Despite the compelling need for significant reinvestment in the rental stock, current housing market conditions are likely to delay the process. Overbuilding in many metropolitan areas has produced a glut of vacant for-sale units, as well as of empty homes held off the market until conditions improve. Until this excess inventory is absorbed, many of these homes will be at least temporarily converted to rentals. This additional supply will reduce rents and dampen the demand for older units, discouraging rental property owners from making improvements in the near term.

The Growing Immigrant Market

Immigrants are key to the future growth of the US home improvement industry. In 2007, foreign-born households spent about \$23 billion on improvements to their homes (**Figure 23**). Their spending levels have grown almost 13 percent per year since 2000—well in excess of the 7 percent among the domestic-born population. Growth was particularly strong during the middle of the decade when overall spending was rising rapidly. As a result, immigrant owners now account for more than 10.0 percent of home improvement expenditures, up from 8.5 percent earlier in the decade.

A large part of this growth reflects steady increases in the number of immigrant homeowners. But even on a per household basis, spending by foreign-born owners has equaled or exceeded that of their native-born counterparts in recent years. One reason for this spending strength is their age distribution: immigrants represent more than 20 percent of the population between the ages of 30 and 44, the years when families are typically growing, when space is at a premium,

and when households may be inclined to modify the use of space in the home. This age group traditionally spends heavily on home improvements.

In addition, immigrant households tend to settle in gateway cities along the California coast, as well as in Texas, southern Florida, and the Northeast corridor. In these high-cost housing

markets, owners devote a relatively large share of their incomes to home improvements. In the 12 metropolitan markets where foreign-born homeowners spent at least \$500 million on home improvements in 2007, the immigrant share of expenditures was well above the national average of just over 10 percent (**Figure 24**). In five metro areas—Houston, Miami, San Diego, San Francisco, and Washington, DC—immigrants contributed more than a quarter of all remodeling expenditures.

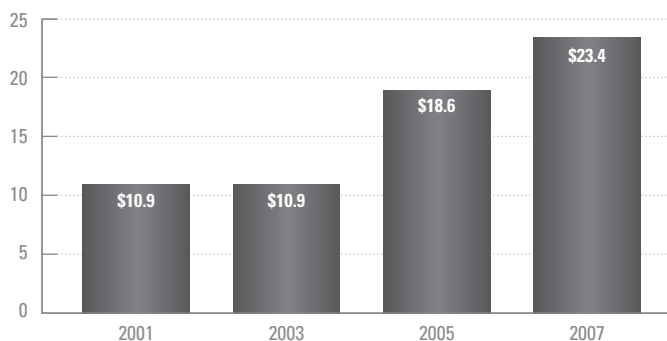
While still concentrated in gateway areas, immigrants have dispersed to an increasingly broad array of housing markets. In 1990, 33 percent of the foreign-born population lived in California alone and 68 percent lived in just five states: California, New York, Florida, Texas, and New Jersey. By 2007, California was home to only 26 percent of the foreign-born population, and the share in the top five states dropped to 61 percent.

Immigrant households will provide a growing source of remodeling demand as their numbers continue to rise. Between 2000 and 2005, the foreign-born population increased by just over 1.1 million a year, accounting for about 40 percent of total population growth during that period. Recent Census Bureau projections indicate that their share of growth will expand to about 44 percent by 2010 and almost 50 percent by 2025. As they form households and buy homes, immigrants are likely to account for similar shares of the growth in remodel-

Figure 23

Immigrant Homeowners Have Continued to Increase Their Spending on Improvements

Improvement spending by foreign-born homeowners (Billions of dollars)

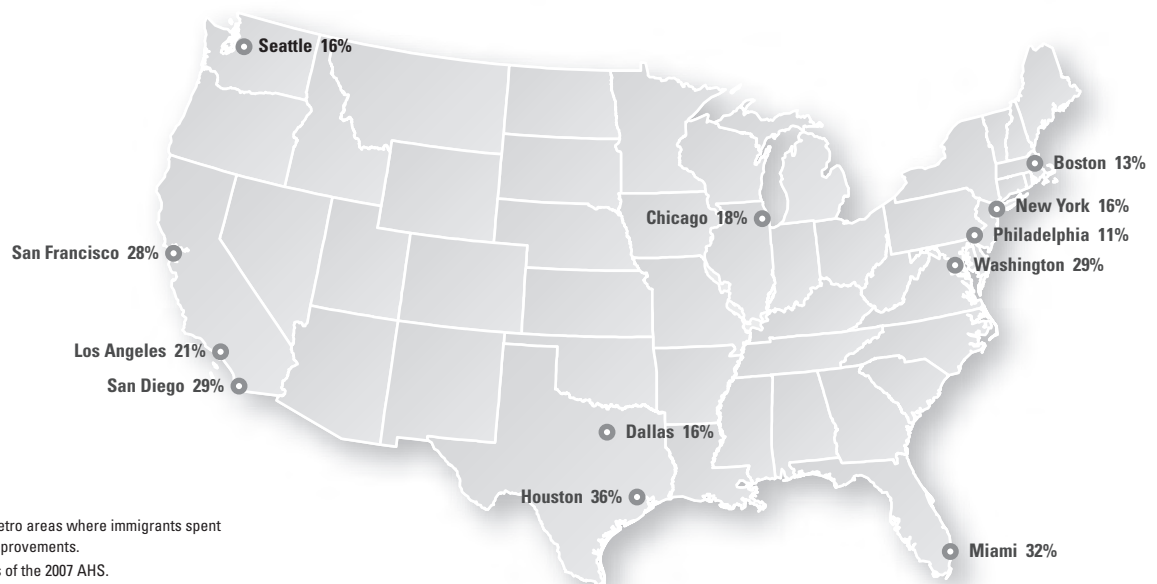


Source: JCHS tabulations of the 2001–2007 AHS.

Figure 24

Immigrants Contribute Significantly More to Improvement Spending in Gateway Cities

Foreign-born homeowner share of spending, 2007

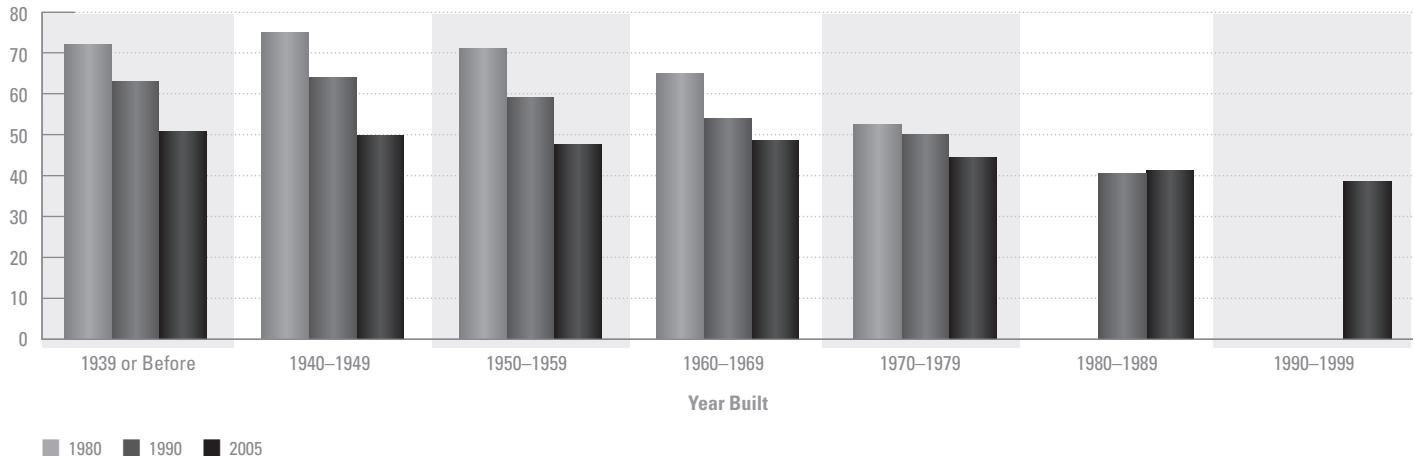


Note: Sample includes metro areas where immigrants spent at least \$500 million on improvements.
Source: JCHS tabulations of the 2007 AHS.

Figure 25

Remodeling Has Helped to Improve the Energy Efficiency of the Existing Housing Stock

Energy consumption per square foot (Thousands of BTUs)



Source: US Department of Energy, Energy Information Administration, Residential Energy Consumption Survey 1980-2005.

ing expenditures. Although the recession is now slowing the influx of foreign-born households, immigration should resume its strong pace once the economy recovers.

Emerging Interest in Sustainable Remodeling

Coupled with growing concerns about global warming, the recent surge in oil prices has helped to reinvigorate the sustainability movement. Energy efficiency in homes has become a central focus, given that the residential stock is a major contributor to national energy consumption.

With the sharp fluctuation in US energy costs since the 1970s, the energy efficiency of homes has improved, but only modestly. Advanced building techniques as well as more efficient equipment and appliances have helped to reduce energy usage in newer homes. According to a 2005 US Department of Energy survey, a home built in the 1990s uses about 40 BTUs of energy per square foot, down from almost 50 BTUs per square foot for homes built in the 1960s.

Efficiency gains within the existing housing stock have been more significant. In 1980, occupants of a typical 1960s home used 65 BTUs of energy per square foot. By 2005, their usage was 25 percent lower (**Figure 25**). Homes built in the 1950s or earlier show even greater efficiency improvements over time. Some of these savings result from removing older, less energy-efficient homes from the stock, and others from households

changing their behavior to conserve more energy. Still, the bulk of the efficiency gains likely arise from retrofitting older homes and their systems.

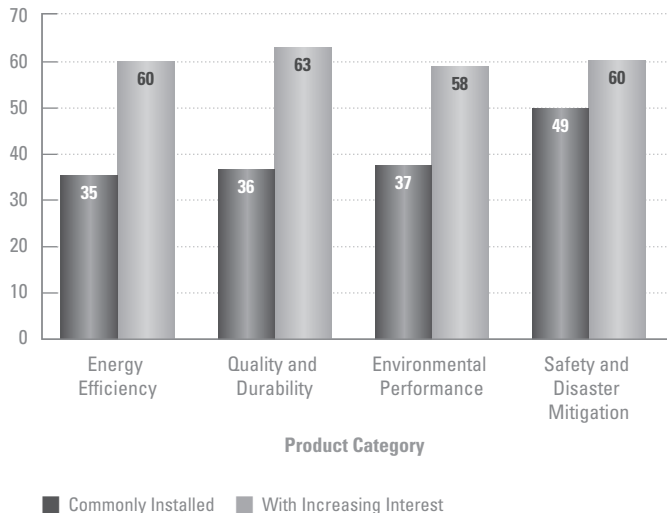
Homeowners can improve energy efficiency by replacing appliances and lighting systems, upgrading their HVAC systems, and enhancing the insulating properties of the home's exterior. According to US Department of Energy studies, space heating and air conditioning account for almost half of residential energy consumption, water heating for 20 percent, and appliances and lighting for the remaining 32 percent. In 2007, homeowners devoted over \$52 billion of their improvement expenditures to energy-related projects, up from less than \$33 billion in inflation-adjusted terms a decade earlier.

Sustainable design, however, goes well beyond energy efficiency. Motivated by broader environmental concerns, consumers have demonstrated a growing interest in products and projects that meet three additional green goals: quality and durability, environmental performance, and safety and disaster mitigation. In a recent survey conducted in conjunction with Specpan, the Joint Center asked a panel of full-service remodeling contractors about how frequently they installed green products that met at least one of these four criteria. The survey focused on 10 products listed by the Partnership for Advancing Technology in Housing (PATH) as having the "most promise for making our existing homes more durable, stronger and more resource efficient."

Figure 26

Interest in Green Remodeling Extends Beyond Energy Efficiency

Average responses by remodeling contractors (Percent)



Notes: Product categories defined by PATH. Commonly installed includes responses indicating that contractor installs product regularly or occasionally. See JCHS Working Paper W09-1 for more details.
Source: JCHS 2008 national green remodeling survey, administered by Specpan.

Respondents indicated that they were no more likely to install energy-efficient products on average than products promoting the other three goals. About 40 percent stated that they regularly or occasionally installed products in each of the four categories (Figure 26). Some products with energy-saving properties, such as high-performance windows, were used almost universally, while others such as tubular skylights had not yet penetrated most markets.

To gauge future trends, the survey also asked remodeling contractors to identify products for which consumers have expressed increased interest. Here again, there were no major differences between products promoting energy efficiency and those meeting other green objectives. Nevertheless, interest in specific products within each category varied widely. For example, among the products providing greater energy efficiency, more than 80 percent of contractors noted greater consumer interest in compact fluorescent lighting, but only half saw greater interest in wireless lighting and temperature controls.

These findings support a growing body of research indicating that interest in green remodeling is widespread and increas-

ing. Growing concern for sustainability offers the homeowner or rental property owner additional motivation for undertaking home improvement projects. With younger age groups expressing particular interest in green projects, this market holds promise for growth for many years to come.

To meet this emerging demand, residential building product manufacturers and distributors are offering a broader range of environmentally sensitive products. Remodeling contractors are also tapping into this market. Programs to certify home improvement contractors in green remodeling are among the most popular in the industry. Indeed, many contractors have chosen to focus on green remodeling, a specialization that allows them to focus their activities in a growing market niche and therefore operate more efficiently and profitably.

The Outlook

This decade has been a study in extremes for the home improvement industry. Early on, favorable economic conditions—easy access to credit, rapidly appreciating home values, rising home sales, and high cost recovery rates for home improvements—supported exceptionally strong growth in remodeling expenditures. Since late 2007, however, house prices have plunged across the country, homes sales have fallen, and credit has dramatically tightened, leaving the remodeling industry in one of its steepest declines in recent memory.

As the housing market stabilizes and the broader economy begins to recover, remodeling activity will return to a more normal pace of growth. As credit conditions thaw, owners will find it easier to finance their home improvement projects. As home prices edge back up, owners will again see the wealth-building benefits of investing in their homes. And as sales pick up, recent buyers will want to make improvements as they settle into their new homes.

The fundamentals of the US home improvement industry are compelling. Over the coming decade, the nation’s housing stock will have to accommodate some 14–15 million additional households—about half of which may be foreign-born. The strong pace of household growth will ensure that the nation’s housing stock will also grow, that existing units will be in high demand, and that older homes will need to be adapted to the needs and desires of new owners. These are the forces that have created the \$300 billion remodeling industry and that ensure its continued expansion over the coming decades.

6

Appendix Tables



Table A-1	Total Homeowner Improvement Expenditures: 2007
Table A-2	Professional and Do-It-Yourself Home Improvement Expenditures: 2007
Table A-3	Total Improvement Expenditures by Homeowner Characteristics: 2007
Table A-4	Professional and Do-It-Yourself Improvement Expenditures by Homeowner Characteristics: 2007
Table A-5	Single-Family Prices and Sales by Metropolitan Area: Recent Peak to 2008:3
Table A-6	House Price Appreciation and Share of Home Improvement Costs Recovered in Metropolitan Areas: 2005–2008
Table A-7	Homeowner Improvement Expenditures, House Values, and Household Income in Selected Metropolitan Areas

The following Web tables provide historical data on improvement spending and additional homeowner detail such as income quintiles, nativity, metro status, and recent mover status. Go to www.jchs.harvard.edu and click on the report cover.

Table W-1	Total Homeowner Improvement Expenditures: 1995–2007
Table W-2	Professional Home Improvement Expenditures: 1995–2007
Table W-3	Do-It-Yourself Home Improvement Expenditures: 1995–2007
Table W-4	Total Improvement Expenditures by Homeowner Characteristics: 1995–2007
Table W-5	Professional Improvement Expenditures by Homeowner Characteristics: 1995–2007
Table W-6	Do-It-Yourself Improvement Expenditures by Homeowner Characteristics: 1995–2007

Table A-1

Total Homeowner Improvement Expenditures: 2007

	Homeowners Reporting Projects (000s)	Average Expenditure (\$)	Total Expenditures (Millions of \$)
Kitchen Remodels			
Minor	1,387	2,854	3,957
Major	1,033	22,193	22,930
Bath Remodels			
Minor	1,587	1,340	2,126
Major	1,206	10,995	13,255
Room Additions and Alterations			
Kitchen	38	30,037	1,151
Bath			
Created finished bathroom from unfinished space	181	5,999	1,088
Added bathroom onto home	112	12,990	1,460
Bathroom created through structural changes	165	5,656	932
Bedroom			
Created finished bedroom from unfinished space	333	10,353	3,448
Added bedroom onto home	169	49,073	8,271
Bedroom created through structural changes	291	5,847	1,699
Other			
Created finished recreation room from unfinished space	354	8,517	3,012
Created other finished inside room from unfinished space	563	9,476	5,333
Added other inside room onto home	386	29,920	11,564
Other room created through structural changes	494	7,611	3,763
Outside Attachments			
Deck/Porch			
Added porch onto home	339	5,874	1,993
Added deck onto home	555	4,432	2,460
Garage/Carport			
Added attached garage onto home	81	18,825	1,526
Added carport onto home	84	3,003	252
Systems and Equipment			
Plumbing/Pipes	1,580	1,396	2,205
Electrical System	2,538	1,334	3,386
Plumbing Fixtures	4,194	947	3,973
HVAC			
Added/replaced central air conditioning	2,096	3,533	7,405
Added/replaced built-in heating equipment	2,270	2,535	5,756
Appliances/Major Equipment			
Added/replaced water heater	3,152	571	1,799
Added/replaced built-in dishwasher	2,514	543	1,366
Added/replaced garbage disposal	1,649	233	384
Added/replaced security system	988	1,106	1,092
Exterior Additions and Replacements			
Roofing	3,384	5,184	17,546
Siding	1,204	5,343	6,432
Windows/Doors	4,614	2,790	12,875
Interior Additions and Replacements			
Insulation	1,645	1,457	2,397
Flooring/Paneling/Ceiling			
Added wall-to-wall carpeting over finished floor	3,096	1,982	6,134
Added other types of flooring such as wood, tile, marble, or vinyl	5,378	2,049	11,019
Installed paneling or ceiling tiles	2,092	1,570	3,284
Other	937	5,256	4,924
Disaster Repairs			
	916	13,872	12,700
Other Property Additions and Replacements			
Added other outside structure	286	7,062	2,020
Septic tank	202	4,666	944
Driveways or walkways	2,112	3,108	6,564
Fencing or walls	2,390	2,134	5,100
Patio, terrace, or detached deck	1,453	3,294	4,786
Swimming pool, tennis court, or other recreational structure	513	12,627	6,481
Shed, detached garage, or other building	1,197	3,722	4,456
Other major improvements or repairs to lot or yard	682	3,997	2,728
Total	21,786	10,465	227,979

Notes: Numbers of homeowners do not add to total because homeowners may report projects in more than one category. Household totals were estimated using American Housing Survey and American Community Survey data. 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. Source: JCHS tabulations of the 2007 American Housing Survey (AHS).

Table A-2

Professional and Do-It-Yourself Home Improvement Expenditures: 2007

	Professional			Do-It-Yourself		
	Homeowners Reporting Projects (000s)	Average Expenditure (\$)	Total Expenditures (Millions of \$)	Homeowners Reporting Projects (000s)	Average Expenditure (\$)	Total Expenditures (Millions of \$)
Kitchen Remodels						
Minor	758	4,001	3,032	629	1,470	924
Major	572	29,790	17,034	461	12,778	5,896
Bath Remodels						
Minor	749	2,000	1,499	837	750	628
Major	622	15,842	9,858	583	5,824	3,397
Room Additions and Alterations						
Kitchen	19	35,904	666	20	24,536	485
Bath	231	11,622	2,687	191	4,156	793
Bedroom	276	36,941	10,209	415	7,729	3,209
Other	730	24,735	18,062	850	6,598	5,610
Outside Attachments						
Deck/Porch	416	8,533	3,546	443	2,048	907
Garage/Carport	78	13,599	1,066	87	8,218	712
Systems and Equipment						
Plumbing/Pipes	903	1,783	1,611	676	879	594
Electrical System	1,602	1,700	2,724	936	707	662
Plumbing Fixtures	1,982	1,433	2,839	2,212	513	1,134
HVAC	2,936	4,058	11,914	556	2,241	1,247
Appliances/Major Equipment	4,285	821	3,520	2,776	404	1,122
Exterior Additions and Replacements						
Roofing	2,707	5,810	15,728	677	2,685	1,819
Siding	776	6,673	5,177	428	2,934	1,256
Windows/Doors	2,733	3,801	10,387	1,881	1,323	2,488
Interior Additions and Replacements						
Insulation	727	2,240	1,628	918	837	768
Flooring/Paneling/Ceiling	4,836	3,284	15,883	3,467	1,314	4,555
Other Interior	644	5,801	3,737	336	3,534	1,187
Disaster Repairs	728	13,087	9,528	187	16,923	3,172
Other Property Additions and Replacements	3,953	6,740	26,645	3,050	2,109	6,434
Total	15,957	11,216	178,979	10,897	4,496	49,000

Notes: Numbers of homeowners do not add to total because homeowners may report projects in more than one category. Household totals were estimated using American Housing Survey and American Community Survey data. 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 AHS (see Table A-1).

Source: JCHS tabulations of the 2007 AHS.

Total Improvement Expenditures by Homeowner Characteristics: 2007

	Number of Homeowners (000s)	Homeowners Reporting Projects (000s)	Total Expenditures (Millions of \$)
Total	75,512	21,786	227,979
Income (2007 dollars)			
Under \$40,000	24,704	6,105	36,511
\$40–79,999	23,777	6,978	55,737
\$80–119,999	14,121	4,432	47,442
\$120,000 and Over	12,902	4,266	88,271
Home Value (2007 dollars)			
Under \$100,000	18,594	4,758	22,423
\$100–149,999	10,991	3,208	17,549
\$150–199,999	9,608	2,863	19,465
\$200–249,999	7,390	2,202	19,288
\$250–399,999	13,810	4,276	49,304
\$400,000 and Over	15,119	4,479	99,949
Age of Household Head			
Under 35	9,249	2,858	25,080
35–44	14,990	4,467	55,566
45–54	18,091	5,407	60,986
55–64	15,041	4,410	50,821
65 and Over	18,141	4,644	35,526
Generation			
Echo Boom (Born 1975 and later)	5,127	1,554	12,370
Generation X (Born 1965–74)	12,724	3,854	44,852
Younger Baby Boom (Born 1955–64)	17,578	5,262	61,334
Older Baby Boom (Born 1945–54)	16,874	5,020	58,426
Matures (Born 1935–44)	11,196	3,138	32,056
Seniors (Born before 1935)	12,012	2,957	18,940
Race/Ethnicity			
White	59,586	17,491	188,941
Black	6,096	1,553	11,652
Hispanic	6,137	1,792	17,611
Asian/Other	3,693	950	9,774
Spending Level (2007 dollars)			
\$0	53,726		
\$1–2,499	9,318	9,318	8,316
\$2,500–4,999	3,638	3,638	12,779
\$5,000–9,999	3,760	3,760	26,038
\$10,000–19,999	2,579	2,579	35,554
\$20,000–34,999	1,212	1,212	30,988
\$35,000–49,999	475	475	19,525
\$50,000 and Over	804	804	94,780

Note: Income data exclude households not reporting income.

Source: JCHS tabulations of the 2007 AHS.

Table A-4

Professional and Do-It-Yourself Improvement Expenditures by Homeowner Characteristics: 2007

	Professional			Do-It-Yourself		
	Number of Homeowners (000s)	Homeowners Reporting Projects (000s)	Total Expenditures (Millions of \$)	Number of Homeowners (000s)	Homeowners Reporting Projects (000s)	Total Expenditures (Millions of \$)
Total	75,512	15,957	178,979	75,512	10,897	49,000
Income (2007 dollars)						
Under \$40,000	24,704	4,410	26,899	24,704	2,745	9,612
\$40–79,999	23,777	4,773	40,875	23,777	3,836	14,862
\$80–119,999	14,121	3,263	36,091	14,121	2,437	11,351
\$120,000 and Over	12,902	3,507	75,111	12,902	1,877	13,160
Home Value (2007 dollars)						
Under \$100,000	18,594	3,027	15,874	18,594	2,658	6,549
\$100–149,999	10,991	2,257	12,894	10,991	1,771	4,656
\$150–199,999	9,608	2,072	14,156	9,608	1,485	5,309
\$200–249,999	7,390	1,594	14,053	7,390	1,168	5,236
\$250–399,999	13,810	3,338	37,904	13,810	2,026	11,400
\$400,000 and Over	15,119	3,670	84,098	15,119	1,790	15,851
Age of Household Head						
Under 35	9,249	1,850	16,886	9,249	1,865	8,194
35–44	14,990	3,124	42,102	14,990	2,614	13,464
45–54	18,091	3,829	46,160	18,091	2,919	14,827
55–64	15,041	3,361	42,155	15,041	2,016	8,665
65 and Over	18,141	3,794	31,676	18,141	1,483	3,850
Generation						
Echo Boom (Born 1975 and later)	5,127	997	7,851	5,127	1,046	4,519
Generation X (Born 1965–74)	12,724	2,634	34,121	12,724	2,323	10,731
Younger Baby Boom (Born 1955–64)	17,578	3,638	44,458	17,578	3,009	16,877
Older Baby Boom (Born 1945–54)	16,874	3,777	47,785	16,874	2,374	10,642
Matures (Born 1935–44)	11,196	2,455	27,894	11,196	1,315	4,162
Seniors (Born before 1935)	12,012	2,456	16,871	12,012	830	2,069
Race/Ethnicity						
White	59,586	12,776	148,417	59,586	8,814	40,525
Black	6,096	1,291	9,395	6,096	586	2,256
Hispanic	6,137	1,200	12,884	6,137	1,033	4,727
Asian/Other	3,693	689	8,283	3,693	465	1,491
Spending Level (2007 dollars)						
\$0	59,555			64,614		
\$1–2,499	5,247	5,247	4,761	5,167	5,167	3,555
\$2,500–4,999	2,866	2,866	8,969	1,694	1,694	3,810
\$5,000–9,999	3,220	3,220	19,532	1,701	1,701	6,506
\$10,000–19,999	2,298	2,298	27,051	1,284	1,284	8,503
\$20,000–34,999	1,132	1,132	24,827	550	550	6,161
\$35,000–49,999	451	451	15,921	203	203	3,604
\$50,000 and Over	743	743	77,919	298	298	16,861

Note: Income data exclude households not reporting income.

Source: JCHS tabulations of the 2007 AHS.

Table A-5

Single-Family Prices and Sales by Metropolitan Area: Recent Peak to 2008:3

Metro Area	Median Sales Price of Single-Family Homes				Sales of Single-Family Homes			
	Peak Since 2003:3		2008:3	Percent Change	Peak Since 2003:3		2008:3	Percent Change
	Thousands of \$	Quarter	Thousands of \$		Thousands	Quarter	Thousands	
Atlanta, GA	174	2007:1	148	-15	143	2006:2	83	-42
Austin, TX	190	2008:2	189	0	48	2006:1	36	-25
Baltimore, MD*	289	2007:1	272	-6	56	2004:4	25	-54
Birmingham, AL	166	2006:1	155	-7	34	2006:1	18	-47
Boston, MA*	414	2006:2	357	-14	61	2005:3	45	-26
Buffalo, NY*†	108	2008:3	108	0	22	2003:4	17	-24
Charlotte, NC	211	2007:3	202	-4	48	2007:1	26	-46
Chicago, IL	278	2007:3	243	-12	202	2005:3	108	-47
Cincinnati, OH	146	2005:4	132	-9	57	2005:4	39	-32
Cleveland, OH*	142	2005:2	111	-22	45	2006:1	37	-19
Columbus, OH	153	2005:4	138	-9	51	2005:3	35	-32
Dallas, TX	153	2005:4	147	-4	151	2006:2	109	-28
Denver, CO*	251	2006:1	219	-13	57	2005:3	42	-26
Detroit, MI*	166	2005:3	125	-25	78	2003:4	44	-44
Hartford, CT	265	2007:2	244	-8	21	2005:1	11	-47
Houston, TX†	156	2008:3	156	0	163	2007:1	125	-23
Indianapolis, IN	124	2005:1	113	-9	42	2006:1	32	-23
Jacksonville, FL*	196	2007:1	175	-11	47	2005:3	25	-45
Kansas City, MO	158	2005:4	144	-9	60	2005:1	36	-39
Las Vegas, NV*	321	2006:1	210	-34	74	2004:1	55	-25
Los Angeles, CA*	597	2007:1	383	-36	119	2004:1	99	-16
Louisville, KY	140	2006:3	133	-5	34	2006:4	23	-32
Memphis, TN	145	2005:4	122	-16	39	2005:4	19	-51
Miami, FL	394	2005:4	291	-26	96	2004:2	35	-63
Milwaukee, WI	224	2007:3	210	-6	19	2006:1	12	-37
Minneapolis, MN*	242	2006:1	201	-17	72	2004:2	43	-40
Nashville, TN	185	2007:2	177	-4	52	2006:2	32	-38
New Orleans, LA	181	2005:4	164	-9	21	2004:2	12	-42
New York, NY	473	2007:1	443	-6	180	2005:3	115	-36
Oklahoma City, OK*	137	2007:4	131	-5	44	2005:3	34	-24
Orlando, FL*	275	2006:4	209	-24	67	2004:2	30	-55
Philadelphia, PA	236	2007:2	232	-2	82	2005:4	49	-40
Phoenix, AZ*	272	2006:1	184	-32	125	2005:1	84	-33
Pittsburgh, PA*	121	2007:3	117	-4	33	2004:2	23	-31
Portland, OR	296	2007:3	275	-7	54	2005:3	27	-50
Providence, RI*	297	2005:3	243	-18	24	2005:3	18	-27
Raleigh, NC	233	2007:4	221	-5	31	2007:1	19	-39
Richmond, VA*	235	2007:1	215	-9	31	2005:1	22	-28
Riverside, CA*	406	2006:4	225	-45	116	2005:3	70	-40
Rochester, NY	121	2007:4	117	-3	22	2003:4	18	-19
Sacramento, CA*	384	2005:4	209	-46	56	2004:1	43	-23
San Antonio, TX	155	2008:1	152	-2	48	2006:2	35	-28
San Diego, CA*	619	2005:4	371	-40	44	2004:2	35	-20
San Francisco, CA*	820	2007:3	612	-25	50	2003:4	43	-13
San Jose, CA*	853	2007:4	647	-24	19	2008:3	19	0
Seattle, WA	392	2007:3	349	-11	73	2005:3	33	-54
St. Louis, MO*	150	2006:1	135	-10	72	2005:2	56	-21
Tampa, FL*	230	2006:2	169	-27	75	2005:2	37	-51
Virginia Beach, VA*	248	2007:2	235	-5	31	2004:4	22	-30
Washington, DC*	442	2005:4	328	-26	119	2004:3	64	-47

* Metros where home sales were beginning to recover by 2008:3.

† Metros with no decline in median sales price as of 2008:3.

Notes: Home sales prices are seasonally adjusted. Home sales are at a seasonally adjusted annual rate. Selected metro areas were the top 50 in total housing units in 2004.

Sources: NAR; Moody's Economy.com; and American Community Survey.

Table A-6

House Price Appreciation and Share of Home Improvement Costs Recovered in Metropolitan Areas: 2005–2008

Metro Area	Change in Median Sales Price of Single-Family Homes (Percent)		Cost Recovery Share (Percent)				Change 2005 vs. 2008 (Percentage points)
	2001:3–2005:3	2005:3–2008:3	2005	2006	2007	2008	
Low Appreciation Metro Areas							
Buffalo, NY	16	10	91	61	49	51	-40
Cincinnati, OH	12	-9	82	62	61	60	-22
Columbus, OH	13	-8	78	65	62	59	-19
Dallas, TX	9	2	77	78	66	66	-11
Denver, CO	12	-12	79	70	64	63	-16
Houston, TX	19	10	82	67	80	70	-12
Indianapolis, IN	6	-8	73	62	57	57	-16
Kansas City, MO	16	-7	60	67	55	59	-1
Knoxville, TN	18	4	88	99	82	87	-1
Louisville, KY	16	-2	71	65	67	64	-7
Memphis, TN	14	-13	76	68	78	70	-6
Salt Lake City, UT	18	26	68	79	76	68	0
Tulsa, OK	15	12	70	68	72	79	9
Wichita, KS	18	13	70	62	69	61	-9
Average	14	1	76	70	67	65	-11
Moderate Appreciation Metro Areas							
Albuquerque, NM	30	13	90	84	78	72	-18
Atlanta, GA	22	-12	74	75	83	66	-8
Boise, ID	26	24	86	94	73	73	-14
Boston, MA	39	-14	102	76	69	72	-30
Chicago, IL	41	-9	99	81	77	63	-37
Madison, WI	36	4	92	76	70	62	-30
Milwaukee, WI	43	-2	82	69	65	63	-19
Minneapolis, MN	37	-12	77	73	61	62	-15
New Orleans, LA	34	3	90	91	79	71	-19
Pittsburgh, PA	19	0	66	58	68	64	-2
Raleigh, NC	26	13	81	74	65	65	-15
San Antonio, TX	30	13	76	77	83	70	-6
St. Louis, MO	19	-3	85	65	64	63	-22
Average	31	1	85	76	72	67	-18
High Appreciation Metro Areas							
Baltimore, MD	104	0	98	85	67	68	-31
Hartford, CT	48	-3	82	66	66	66	-16
Jacksonville, FL	70	-5	92	89	73	72	-20
Las Vegas, NV	106	-32	74	75	77	73	-1
Miami, FL	139	-25	118	99	85	83	-35
New York, NY	73	-2	119	87	82	75	-45
Orlando, FL	104	-18	107	86	73	68	-39
Phoenix, AZ	88	-30	106	85	76	77	-29
Portland, OR	47	10	90	83	85	73	-17
Richmond, VA	57	2	94	85	82	69	-25
Sacramento, CA	120	-46	101	86	77	74	-27
San Diego, CA	97	-39	109	81	80	83	-26
San Francisco, CA	52	-15	127	105	100	93	-34
Washington, DC	111	-24	114	89	74	64	-51
Average	87	-16	102	86	78	74	-28

Notes: Only equivalent project types were compared in each year. Sample includes 41 metropolitan areas in the Cost vs. Value Survey between 2005 and 2008 that had at least 10 survey responses in each year. Appreciation categories contain a similar number of metro areas. Low appreciation metro areas had the smallest increase (6–18%) in the median sales price of existing single-family homes between 2001:3 and 2005:3. High appreciation metro areas had the largest increase (44–140%) in median sales price.

Sources: JCHS tabulations of *Remodeling* magazine, Cost vs. Value Survey; NAR; and Moody's Economy.com.

Table A-7

Homeowner Improvement Spending, House Values, and Household Income in Selected Metropolitan Areas

Metro Area	Average Annual Improvement Expenditures 2000–2007	Median Reported House Value 2007	Median Reported Household Income 2007
Boston, MA	\$4,137	\$350,000	\$72,625
Chicago, IL	2,995	250,000	71,000
Cleveland, OH	2,027	122,500	45,000
Dallas, TX	2,196	124,000	63,000
Denver, CO	2,200	240,000	75,000
Detroit, MI	2,312	150,000	57,550
Houston, TX	1,985	110,000	71,300
Los Angeles, CA	4,211	550,000	77,000
Miami, FL	2,328	265,000	50,000
Minneapolis, MN	3,994	225,000	73,000
New York, NY	3,370	400,000	81,000
Philadelphia, PA	2,837	243,000	70,000
Phoenix, AZ	2,309	225,000	58,000
San Diego, CA	4,377	525,000	77,000
San Francisco, CA	4,336	700,000	95,480
Seattle, WA	3,237	360,000	69,500
Washington, DC	3,490	429,000	90,000

Notes: Includes metro areas with at least \$1 billion in total annual home improvement spending. Metro areas are aggregated from 1980 PMSA and CMSA codes available in the AHS.

Source: JCHS tabulations of the 2001–2007 AHS.

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