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Executive Summary

As 2020 began, the market for home improvements and repairs appeared poised for a year of modest gains. When the COVID-19 pandemic hit in March, however, the shutdown of nonessential activities brought progress on many professionally installed projects to a halt. But unlike the broader economy, the remodeling market bounced back quickly. Spending on improvements and repairs to owner-occupied and rental properties grew an estimated 3 percent in 2020, somewhat slower than the average annual pace in the previous decade but substantially faster than anticipated when the pandemic began.

The unexpected strength of the home remodeling market made 2020 the tenth consecutive year of expansion for the improvement industry **(Figure 1)**. However, some of the sources and locations of spending growth departed from trends in the preceding decade.

From 2010 to 2019, homeowners largely relied on professional contractors for projects. Activity was also heavily concentrated in coastal metros where rising household incomes and lean inventories of homes for sale were driving up house prices, generating healthy returns for owners on their improvement spending. But in 2020, with many owners required to work from home and amid health concerns about having contractors on site, do-it-yourself (DIY) projects gained new popularity. In addition, remodeling activity shifted away from expensive markets to lower-cost metros where larger shares of younger households—traditionally the most active do-it-yourselfers—could afford to own homes.

The pandemic has in fact been something of a boon for the remodeling industry by forcing a variety of housing and lifestyle changes that encourage improvement spending. Many owners were sud-

FIGURE 1

The Home Remodeling Market Is Continuing Its Steady Expansion Despite the Pandemic

Market Spending (Billions of dollars)



Note: Estimated (e) and forecasted (f) values are modeled using the 2020:04 Leading Indicator of Remodeling Activity (LIRA).
Source: JCHS analysis of US Department of Housing and Urban Development (HUD), American Housing Surveys; US Department of Commerce, Retail Sales of Building Materials; US Census Bureau, Surveys of Residential Alterations and Repairs (C-50); National Apartment Association (NAA), Surveys of Operating Income & Expenses; and LIRA.

denly faced with the need for more space to work from home, help their children with remote learning, and allow social distancing. Whether by intention or by chance, others brought aging parents, adult children, or caregivers into their households. Meanwhile, many urban renters with the financial resources decided to move to outlying communities in search of safer living conditions, as well as more space and lower housing costs. And given today's extremely low mortgage rates, many of these renters became first-time owners—a transition that typically begins a new cycle of home improvement projects.

While 2020 marked a departure from certain remodeling trends, the pandemic also helped to fuel continued growth in spending on replacement projects and outdoor improvements. The share of homeowner expenditures devoted to updating older systems, replacing basic exterior elements, and adding outdoor features had risen throughout the 2010s, and firms serving these specialty markets generally reported an increase in workloads in 2020. Homeowners age 55 and over are especially likely to invest in professionally installed replacement projects, and their rising share of the population kept demand growing briskly.

But for many homeowners with low incomes, keeping up with mortgage payments—let alone home maintenance—became extremely challenging last year. Given that lower-income households were the most likely group to have lost employment income due to the pandemic, more than 22 percent of owners earning less than \$25,000 annually and 16 percent of those earning between \$25,000 and \$50,000 were behind on their mortgage payments by the end of 2020. While mortgage forbearance provisions included as part of the federal stimulus programs have delayed foreclosures, these outstanding payments will eventually come due.

Moreover, even before the pandemic, fully 51 percent of owners in the lowest-income quintile spent less than \$500 on improvements and repairs to their homes in 2019. As a group, however, these homeowners are an important segment of the market, contributing around 10 percent of national spending each year. Their ability to maintain their typically older, more affordable homes is critical not only for their own well-being but also for the preservation of the aging housing stock. If the finances of these households do not improve quickly enough to cover back mortgage payments as well as deferred maintenance, the already large disparity in housing conditions between lowest- and highest-income households will only increase.

Overall, though, the outlook for the remodeling industry is promising for 2021 and beyond. The recent uptick in residential mobility may continue as working from home remains common practice, provid-

ing households greater flexibility about where to live. Among the most likely movers are households living in expensive metros who want to lower their housing costs, which would in turn leave more of their budgets available for remodeling projects.

In addition, many homeowners that deferred projects—both large and small—in 2020 are expected to complete those repairs and improvements once the pandemic is over. With the closure of many office and retail enterprises, the current glut of commercial real estate on the market also provides an opportunity to convert a large swath of underutilized buildings into affordable housing. In the longer term, the aging of both the US population and the housing stock, as well as the increasing incidence of climate-related disasters, will keep growth in the remodeling market strong for years to come.

Market Trends in the 2010s

In the decade leading up to the 2020 pandemic, broad gains in home prices and home equity, as well as the aging of the housing stock, kept the market for residential remodeling and repairs on a steady upward trajectory. Spending for capital improvements and routine maintenance of owner-occupied homes increased nearly 50 percent from \$225 billion at the end of the Great Recession in 2010 to \$327 billion in 2019, while expenditures on the rental stock nearly doubled to \$79 billion. Homeowner and rental property owner expenditures for improvements alone rose 6 percent annually on average over the decade, more than twice as fast as outlays for maintenance and repairs.

In 2019, homeowner improvements continued to account for fully two-thirds of the remodeling market, with strong gains in both per-owner and total spending. Indeed, at \$3,300, average per-owner expenditures were up 13 percent from the peak of the housing boom in 2007. In real terms, however, per-owner spending was still 8 percent below the previous high. Similarly, total improvement spending grew 19 percent from 2007 to 2019, to \$262 billion, but remained about 4 percent below peak after adjusting for inflation.

Homeowner improvement spending varies significantly across metros. The largest markets are primarily the most populous areas of the country, which typically have both higher household incomes and home values. Among the 25 major metros covered in the 2019 American Housing Survey, aggregate remodeling spending ranged from less than \$2 billion in smaller, more affordable areas in the South and Midwest (including Cincinnati, Cleveland, Memphis, Milwaukee, New Orleans, and Raleigh) to \$7 billion or more in larger, more expensive metros (including Chicago, Houston, Los Angeles, New York, and Washington, DC).

On a per-owner basis, however, the list of metros with the highest average improvement spending—ranging up to \$7,000 annually—differs from the top markets in terms of total spending, but still includes many higher-cost areas [Boston, Denver, Houston, Portland, Seattle, and Washington, DC]. At the same time, most of the major metros with below-average per-owner spending are relatively more affordable markets like Atlanta, Cincinnati, Cleveland, Detroit, New Orleans, and Riverside.

SHIFTS IN PROJECT COMPOSITION

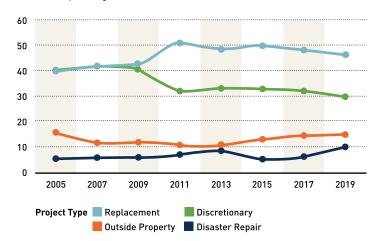
Replacement projects (such as upgrades to roofing, siding, windows, systems, and equipment) continued to dominate the remodeling market in 2019, accounting for 46 percent of total expenditures. Spending on discretionary projects (such as kitchen and bath remodels and room additions) made up 29 percent. These shares have remained essentially unchanged since 2011.

Not surprisingly, a higher share of spending is for replacements in regions where the housing stock is older. In 2019, some 70 percent of owner-occupied housing in the Northeast and 59 percent in the Midwest was at least 40 years old, compared with 47 percent in the West and 39 percent in the South. As a result, at least 53 percent of total improvement spending in Boston, Chicago, Kansas City, and Philadelphia in 2019 focused on replacement projects. In contrast,

FIGURE 2

While Replacement Projects Still Account for About Half of Homeowner Expenditures, Property Improvements and Disaster Repairs Have Become a Growing Share

Share of Spending (Percent)



Notes: Replacement projects include exterior, systems and equipment, and interior projects. Discretionary projects include kitchen and bath remodels room additions, and outside attachments. Outside property includes such projects as driveways and walkways, fencing, sheds, landscaping, and recreational structures. See Table A-1 for more detailed definitions of project categories.

Source: JCHS tabulations of HIDI American Housinn Surveys

spending on replacements contributed 45 percent or less of all home improvement outlays in several West Coast metros, including Los Angeles, Portland, San Francisco, and Seattle.

Meanwhile, discretionary projects accounted for 38 percent or more of aggregate improvement spending in markets with higher incomes and home values (such as Los Angeles, New York, Portland, and San Francisco). By comparison, the discretionary share was 25 percent or less in several southern metros with disproportionately high spending on disaster repairs in 2019 (Dallas, Houston, Miami, and Raleigh).

Expenditures on both improvements to lots or yards and disaster repairs ticked up over the decade to account for a quarter of the market **(Figure 2)**. Spending on projects such as driveways, fencing, sheds, landscaping, and swimming pools increased from 10 percent of aggregate expenditures in 2013 to 15 percent in 2019, to \$39 billion. The shares spent on outside property improvements were especially high in several Sunbelt markets, including Dallas (19 percent), Phoenix (22 percent), and Riverside (22 percent).

At the same time, spending on disaster repairs had climbed to 10 percent of total remodeling expenditures by 2019, double its historical share and setting a new high of \$26 billion. Much of recent repair spending (38 percent) was for damage resulting from hurricanes and tornadoes. Two-thirds of total outlays were concentrated in the southern region of the US following Hurricanes Harvey and Irma in late summer 2017. Fully 41 percent of home improvement expenditures in Houston in 2019 were for disaster repairs, as well as 17 percent in Miami and 14 percent in Dallas. Per-owner spending on these repairs was \$2,300 in Houston and \$600 in Dallas and Miami, compared with just \$300 nationally.

Joint Center for Housing Studies estimates suggest that the repair spending on owner-occupied homes is typically spread over three years following a disaster. Significantly, the National Oceanic and Atmospheric Administration reports that the number of billion-dollar weather- and climate-related disasters set a new record of 22 last year, up from the previous high of 16 events in 2011 and 2017. The increasing frequency and intensity of extreme storms, along with the growing number of homes located in vulnerable areas, are thus likely to keep homeowner spending on disaster repairs on the rise for years to come.

INCREASE IN HIGH-SPENDING HOUSEHOLDS

About 30 percent of homeowners (some 22 million households) reported at least one improvement project in 2019. While this overall proportion has held steady over time, the share of high-spend-

In Most Higher-Cost Metros, Top-Spending Homeowners Make Up 40 Percent or More of the Improvement Market



ing homeowners increased greatly over the 2010s. Indeed, homeowners spending \$50,000 or more on improvements accounted for about 39 percent of the market in 2019, up from less than 30 percent in 2011 after adjusting for inflation. Even so, top spenders made up an even larger share of the remodeling market from 2005 to 2007 during the height of the housing boom, when they contributed more than 45 percent of national expenditures.

High-spending homeowners tend to dominate the market when the mix of remodeling activity shifts toward discretionary projects such as upper-end kitchen and bath remodels or room additions. For example, when top spenders accounted for a peak share of the market in 2007, spending on discretionary projects also hit a peak share of 41 percent of total outlays. In contrast, lower-spending homeowners tend to make up a larger share of the market when the project mix is more focused on replacement projects, such as roofing, siding, or home systems and equipment. This was the case from 2011 to 2015 when owners spending less than \$50,000 on improvements accounted for 69 percent of the market and replacement spending was at a peak of about 50 percent of the total.

In 2019, homeowners spending \$50,000 or more contributed an especially large share of total expenditures in several markets with higher incomes and home values (**Figure 3**). The metros with the largest shares of top-spending owners included Houston (61 percent), Seattle (56 percent), Los Angeles (54 percent), and San Francisco (54 percent). In more affordable

metros of the Midwest and South, spending was far less concentrated in high-cost projects. Indeed, the market share of expenditures by top-spending owners was less than 30 percent in Atlanta, Cincinnati, Detroit, Kansas City, Milwaukee, Pittsburgh, and Raleigh.

PERSISTENT DECLINE IN DIY ACTIVITY

Nearly 4 in 10 home improvements in 2019 were do-it-yourself projects. Spending on DIY activity (which includes only the owner's costs for materials) reached \$46 billion—fully 40 percent higher than in 2011. Nevertheless, expenditures on DIY projects continued to shrink as a share of total home improvement spending, falling from about 24 percent in 2005 to 21 percent in 2009 to a new low of 17 percent in 2019 (Figure 4).

The large share of replacements in the project mix explains part of this decline, given that most homeowners lack the skills to upgrade HVAC systems, replace roofing, or perform other specialized types of installations. Accordingly, DIY activity in 2019 accounted for only 12 percent of spending on exterior replacement projects and 16 percent of spending on home system upgrades—far lower than the 24 percent share for minor kitchen and bath remodels or 29 percent for landscaping improvements, for example.

The large and rapidly growing share of older homeowners is another factor. Some 55 percent of homeowners were at least age 55 in 2019, up from 44 percent in 2009 and 41 percent in

1999. Older owners consistently spend only about 15 percent of their home improvement dollars on DIY projects. However, the DIY share has also trended down across younger age groups, including owners under 35—the group most likely to undertake improvement projects themselves. The share of spending by younger owners on DIY projects fell from about 33 percent on average between 1997 and 2007 to 24 percent in 2019. Similarly, middle-aged owners devoted 19 percent of their home improvement dollars to DIY projects in 2019, a drop from about 26 percent historically.

Among the 25 metros tracked by the 2019 American Housing Survey, the share of DIY activity was largest in a mix of both high-and low-cost markets such as Pittsburgh (22 percent), Seattle (22 percent), New Orleans (21 percent), Portland (21 percent), and Riverside (21 percent). In contrast, the metros with the lowest shares of spending on DIY projects (less than 13 percent) were mostly expensive housing markets, including Boston, Chicago, New York, San Francisco, and Washington, DC.

GROWING CONTRIBUTION OF OLDER OWNERS

Homeowners age 55 and over spent nearly \$140 billion on remodeling projects in 2019, lifting their share of overall improvement spending from 40 percent in 2009 to 52 percent (**Figure 5**). Owners aged 55–64 accounted for 25 percent of national expenditures, while owners age 65 and over made up a slightly larger share of 27 percent. This concentration of spending reflects the

large increase in the number of older owners with the aging of the massive baby-boom generation into their mid-50s to mid-70s, as well as a jump in real outlays per older owner from \$2,500 in 2009 to \$3.100 in 2019.

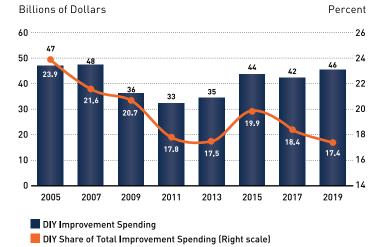
Major metro areas where homeowners age 55 and over make up especially large shares of the remodeling market include Memphis (59 percent) and Los Angeles (56 percent). In contrast, older owners account for less than 43 percent of home improvement expenditures in Atlanta and Chicago.

Homeowners age 55 and over—who are much more likely to live in older units and to have longer occupancies—thus devote a somewhat larger share of their improvement dollars (48 percent) to replacing home components and upgrading systems than homeowners under age 55 (44 percent). Conversely, they spend a smaller share of their budgets (27 percent) on discretionary projects than younger homeowners (32 percent). In addition, older homeowners focus somewhat less on making outside property improvements (14 percent) than younger owners (16 percent).

Between 2015 and 2019, nearly 6 million owners age 55 and over reported at least one improvement project intended to make their homes more accessible for people with limited mobility, such as those using a wheelchair or a walker. In 2019 alone, another 2.4 million older owners reported that they had plans in the next two years to remodel their homes to improve accessibility.

FIGURE 4

Although DIY Improvement Spending Was Up in 2019, Its Share of the Market Dropped to a New Low

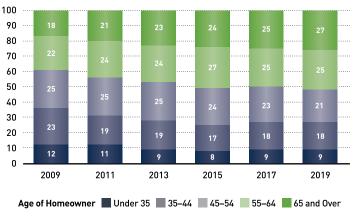


Source: JCHS tabulations of HUD, American Housing Surveys.

FIGURE 5

Older Owners Continue to Increase Their Share of Home Improvement Spending

Share of Spending (Percent)



Source: JCHS tabulations of HUD, American Housing Surveys

As it is, most of the US housing stock lacks basic accessibility features such as a bedroom and full bathroom on the entry level or extra-wide hallways and doors. At last measure in 2011, just 3.5 percent of owner-occupied homes included all of these features. Even in 2019, fully a quarter of older owner households with at least one person using a mobility device rated their home's layout and features as between "not at all supportive" (1 on a 5-point scale) and "somewhat supportive" (3 on a 5-point scale) of their accessibility needs.

YOUNGER OWNERS REGAINING A FOOTHOLD

The number of homeowners under age 35 increased some 13 percent nationally from 2015 to 2019, to almost 8 million. At the same time, home improvement spending by these younger owners jumped by 28 percent in real terms, to \$24 billion. Yet even with these large gains, there were still 25 percent (2.6 million) fewer younger homeowners in 2019 than at the previous remodeling market peak in 2007, and their real aggregate spending was more than 26 percent lower.

Coming out of the Great Recession, younger households—many carrying significant student loan debt—faced a challenging job market and struggled to enter into homeownership. Years of weak income growth and rapidly rising house prices made it difficult to save for the downpayment or afford the monthly costs of owning a home. And for many younger households that were able to purchase homes, monthly mortgage payments and other expenses took much of their incomes, leaving little left over for making improvements.

Indeed, home remodeling expenditures by owners under age 35 remained depressed at just 8–9 percent of market spending from 2013 to 2019—significantly lower than the 12–13 percent share in the preceding 15 years. Among the 25 major metros covered in the 2019 American Housing Survey, younger homeowners contributed above-average shares of aggregate improvement spending (9–12 percent) only in relatively affordable metros where younger households faced lower barriers to homeownership. On this list are Cincinnati, Cleveland, Detroit, Kansas City, Memphis, and Pittsburgh. In contrast, younger homeowners accounted for substantially smaller shares of market activity (3–7 percent) in many high-cost markets such as Boston, New York, Portland, San Francisco, Seattle, and Washington, DC.

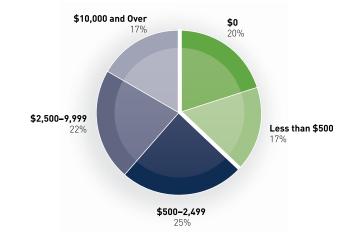
RISING NEED FOR INVESTMENT

In 2019, the median owner-occupied home was 40 years old, up from 34 years in 2009 and 29 years in 1999. The growing number of older homes has fueled spending on improvements in general and for replacement projects in particular. Nearly half (47 percent)

FIGURE 6

Over a Third of Owners Spent Little or Nothing to Maintain or Improve Their Homes in 2019

Share of Owners by Spending Levels (Percent)



Source: JCHS tabulations of HUD, 2019 American Housing Survey.

of the spending on homes built before 1980 was for replacement projects in 2019, substantially higher than the 20 percent share spent on homes built since 2010. Average per-owner spending for replacement projects for older homes was \$1,500, compared with just \$700 for homes built since 2010.

Despite the importance of home maintenance and updates, one in five owners (20 percent) reported no spending at all in 2019, while another 17 percent invested less than \$500 **(Figure 6)**. Owners making little or no investment in their properties tend to be older and have lower household incomes and home values. In 2019, some 36 percent of these underinvesting owners were age 65 and over, compared with 30 percent of owners spending \$500 or more for home improvements or repairs. The typical owner spending less than \$500 had a household income of \$58,000 and home value of less than \$200,000, while the typical owner spending at least \$500 had a household income of \$84,000 and a home value of almost \$250,000.

Years of underinvestment may result in unsafe and unhealthy housing conditions. Based on HUD definitions, about 2.7 million, or 3 percent, of owner-occupied homes were either moderately or severely inadequate in 2019, with deficiencies related to plumbing, electrical, pest infestations, and structural problems. The share of inadequate homes rises with age of the stock from just 1 percent of owner-occupied homes built since 2000 to 7 percent of homes built before 1940.

Housing adequacy varies by metropolitan area. Of the 25 large metro areas tracked by the 2019 American Housing Survey, 20

had an above-average share of adequate owner-occupied homes. The metros with the highest shares of adequate housing tend to be located in the West and Southwest, regions of the country with newer stocks. Metros in the Midwest and along the East Coast, in contrast, had higher shares of inadequate housing. In Pittsburgh, over 4 percent of all owner-occupied homes were either moderately or severely inadequate in 2019. The shares of inadequate housing in Chicago, Memphis, Philadelphia, and Washington, DC, were also above the 3 percent national average.

A study by the Federal Reserve Bank of Philadelphia and PolicyMap estimated that the cost of addressing the deficiencies of the owner-occupied housing stock reported in the 2017 American Housing Survey would be \$82 billion, or an average repair cost of \$3,100 per home. The analysis also found that the homes with the highest average repair needs were owned by long-term occupants who were typically older (with a median age of 68 compared with 56 for all owners) and had lower household incomes (with a median income of less than \$20,000 compared with \$70.000 for all owners).

Eliminating these inadequacies will thus require public and nonprofit programs that offer grants or low-cost loans to older homeowners with limited resources. Although some inadequate units will deteriorate and be lost from the housing stock, the repair and renovation of other at-risk properties would allow older owners to remain safely in their homes while also help to preserve the affordable supply.

Impacts of the Pandemic

Early in 2020, home remodeling spending was growing at a 3 percent pace, somewhat below the average rate for the past few decades. By late March, however, new project activity and progress on current jobs slowed sharply amid the economic shutdown. The closure of offices and schools meant that many homeowners were working remotely while also helping their children with virtual learning. Whether by choice or by necessity, adult children moved in with their parents, and older parents moved in with their adult children. And many urban households that were able to telecommute left the cities, often for more affordable living situations. These profound lifestyle changes encouraged many owners to modify their homes to accommodate their new circumstances.

SOLID RECOVERY IN PROFESSIONAL AND DIY ACTIVITY

Not surprisingly, professionally installed improvement activity plummeted right after the March lockdown as homeowners delayed or cancelled projects over the health risks of having workers on site (Figure 7). The number of payroll employees at residential remodeling firms fell by almost 20 percent in April. This drop would have been even larger without the federal Coronavirus Aid, Relief, and Economic Security (CARES) Act, which provided incentives for small businesses to keep employees on their payrolls.

Soon after the initial freefall in activity, however, professional remodeling began a steady recovery. Indeed, contractor work-

FIGURE 7

Professional Remodeling Activity Gradually Recovered in 2020 from a Pandemic-Induced Drop, While Sales of Home Improvement Products Rebounded Much More Sharply

Year-over-Year Change, 2020 (Percent)



— Aggregate Hours Worked by Residential Remodelers — Retail Sales at Building Materials and Supplies Stores

Notes: Aggregate hours worked is the product of number of payroll employees and average weekly hours worked. Building materials and supplies dealers include home centers, paint and wallpaper stores, and hardware stores.

Source: JCHS tabulations of US Bureau of Labor Statistics. Current Employment Statistics and US Department of Commerce, Monthly Retail Trade Survey.

loads continued to improve, ending 2020 above year-earlier levels. Depending on their specialization, though, some firms fared far better than others. Surveys by The Farnsworth Group and the Home Improvement Research Institute (HIRI) found that exterior specialty trade contractors—for example, companies that upgrade or replace roofing, siding, or windows—reported a surge in activity just a few months into the pandemic. Firms specializing in interior projects such as carpeting, flooring, and paneling saw business conditions improve more slowly over this period, while most design/build and full-service general remodeling contractors focusing on upper-end remodels and additions reported continued weakness months after the onset of the pandemic.

Meanwhile, with many owners working from home and often having more time on their hands to think about making modifications, DIY maintenance and improvement spending immediately surged after only a modest softening. Retail sales of building materials, which include products purchased by do-it-yourselfers, bounced back sharply from a dip in April and averaged double-digit growth each month for the rest of the year. Homeowners generally took on simpler projects such as landscaping, painting, and other more routine maintenance tasks. Many also made improvements to their lots or yards so that they could socialize safely with friends and neighbors while maintaining physical distance.

Even in late March, the Farnsworth/HIRI surveys found that 60 percent of respondents had started at least one DIY maintenance

or improvement project within the previous two to three weeks. By early May, that share had jumped to almost 80 percent. A major motivation for owners to tackle projects themselves was the desire to avoid having workers in their homes.

LIFT FROM YOUNGER HOUSEHOLDS

In the years leading up to the pandemic, home improvement spending was strongest in metropolitan areas with rapidly rising house prices. House price gains provided owners not only the incentive to preserve the growing value of their homes, but also the increased equity to borrow against to finance improvements.

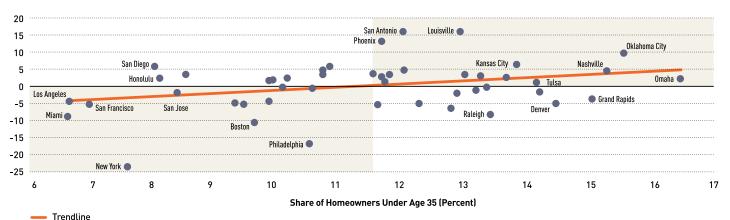
But for younger households with moderate incomes, rising prices presented a significant barrier to homeownership in many markets. In the nation's 50 largest metros in 2019, median house prices averaged less than three times median household incomes in Cincinnati, Cleveland, Oklahoma City, and St. Louis, but more than nine times incomes in such areas as Honolulu, Los Angeles, and San Jose.

Homeownership affordability is fundamental to the health of the remodeling market for several reasons. Households under age 35 are traditionally the most active group in the DIY market. Over time, these households tend to increase their spending sharply and turn to professional installers as both their incomes and families grow.

FIGURE 8

Remodeling Activity Picked Up Last Year in Many Metros with Larger Shares of Younger Owners

Change in Residential Properties with Remodeling Permits, 2020 (Percent)



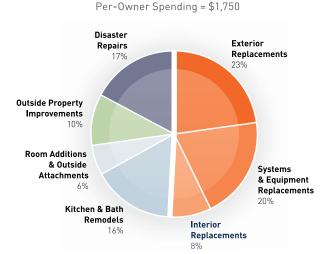
Notes: Data are for 47 of the largest metros by population with sufficient permit reporting coverage. Share of owners under age 35 is for 2019. The metro average change in permitted properties is -0.1%, and the average share of homeowners under age 35 is 11.4%. See Table 8.5 for more detailed data

Source: JCHS tabulations of BuildFax and US Census Bureau, 2019 American Community Survey

Lowest-Income Owners Spend a Much Larger Share of Their Improvement Budgets on Replacement Projects than Highest-Income Owners

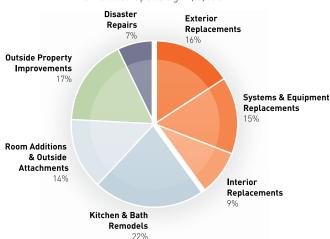
Share of Spending, 2019

Owners in Bottom Income Quintile



Owners in Top Income Quintile





Notes: See Table A-1 for more detailed definitions of project categories. Kitchen and bath remodels include additions. The bottom income quintile includes household incomes of less than \$32,000 and the top quintile includes incomes of more than \$144,000. Source: JCHS tabulations of HUD, 2019 American Housing Survey.

Underscoring the importance of homeownership affordability, improvement activity in 2020 was typically stronger in major markets with relatively more younger homeowners **(Figure 8)**. Remodeling permits rose 2.0 percent on average in metros with an above-average share of owners under age 35, but fell 2.7 percent on average in metros with a below-average share of younger owners. More affordable metros with particularly rapid gains in permitting last year include Louisville (16 percent), Oklahoma City (9 percent), and Kansas City (6 percent), and more expensive markets with particularly sharp declines include Boston (-11 percent), Miami (-8 percent), and San Francisco (-5 percent).

RISKS FOR LOWER-INCOME OWNERS

Massive job losses in the wake of the pandemic left many households struggling to pay their monthly housing costs. According to the Census Bureau's Household Pulse Surveys, nearly 40 percent of owner households lost employment income between the onset of the pandemic and the end of 2020. Lower-income households were the most likely to face losses. Between March and December 2020, close to half (48 percent) of owners earning less than \$25,000 had lost employment income, compared with under 34 percent of owners with incomes of \$100,000 or more. As a result of these losses, 22 percent of lower-income households

were behind on their mortgage payments by the end of the year more than four times the share of highest-income households.

Although the majority of owners with lower incomes do not undertake any improvements in a given year, those that do typically devote a considerable share of their incomes to these projects. In 2019, homeowners in the bottom income quintile spent 14 percent of their incomes on remodeling projects, almost three times the share of owners in the top income quintile and about twice the average share for all owners. As such, lowest-income homeowners have contributed about 10 percent of all home improvement spending nationally in recent years.

Since these owners are more likely to live in older homes than owners with higher incomes, they spent significantly more of their improvement dollars on replacement projects (51 percent) in 2019 than owners in the top income quintile (40 percent) (Figure 9). Conversely, lowest-income owners spent a much smaller share of their budgets for kitchen and bath remodels and additions (22 percent) than owners in the top quintile (36 percent).

Given that national spending on replacement projects is more stable than spending on discretionary projects, it is not surprising that outlays by lowest-income owners are also more stable over the remodeling cycle. If lower-income households as a group do not recover from the pandemic's setbacks, their remodeling spending will undoubtedly fall. This decline, in turn, would not only change the mix of home improvement activities and increase industry volatility, but also widen the already large gap between the housing conditions of highest- and lowest-income households.

The Outlook for Home Remodeling

The restrictions imposed by the COVID-19 pandemic drastically altered the daily lives of most households. Activities such as telecommuting, remote learning, and socializing primarily outdoors became the new normal, and many homeowners adjusted to these constraints by making modifications to their homes. However, the pandemic has also had broader, more enduring impacts that encourage, if not require, some households to make significant changes in their housing situations. In particular, increases in moving and homebuying, as well as high vacancies in both multifamily rental and commercial buildings, have brought new opportunities for growth in the home improvement market.

INCREASE IN HOUSEHOLD MOBILITY

One of the major impacts of the pandemic has been to increase household mobility, the share of the population that changes residences in any given year. While moving closer to family, taking advantage of increased work flexibility, and pandemic-related safety concerns were all cited as reasons for moving in 2020, the major motivation was often financial. Indeed, job or income losses and the desire for more affordable housing options ranked high among respondents to surveys and polls conducted by Marketplace-Edison Research, the Pew Research Center, and others.

Analysis by the National Association of Realtors confirms this trend, finding that many recent residential moves have been out of high-cost urban areas into more affordable suburban, exurban, and rural communities. Given the dominance of owner-occupied homes in these outlying areas, many renters that left expensive cities during the pandemic have become homeowners. Today's extremely affordable mortgage rates provided another incentive for these households to buy.

The decision to own rather than rent is key to the longer-term prospects of the improvement industry. Since owners have more freedom and incentive to make major modifications to their homes, they typically spend \$2,100 more a year on improvements than owners of rental properties (**Figure 10**). If a million house-

holds were to make the transition from renting to owning in a given year, they could therefore add more than \$2 billion to national home improvement spending on an ongoing basis.

The type of property purchased, however, also makes a difference. Owners of single-family homes spend \$1,800 more annually on improvements than owners of condos. Similarly, if a million homeowners traded in their downtown condos for more spacious single-family homes in the suburbs or exurbs, they also could add almost \$2 billion annually to the home improvement market.

At the same time, a large reduction in the number of homeowner households would have a negative impact on expenditures. If a million owner households suffered a substantial loss of employment income and could no longer afford their mortgage payments, they might have to sell their homes and move in with friends or family temporarily. Since the typical owner spends almost \$3,300 a year on home remodeling, the dissolution of these households could reduce remodeling spending by more than \$3 billion annually. Even so, once these households are able to recover financially and reestablish themselves as homeowners, they would likely resume their spending on improvement projects.

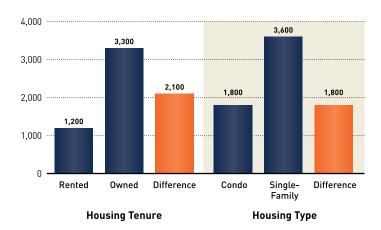
CHANGING CONSUMER PREFERENCES

In addition to increasing the demand for more affordable homes in lower density areas, the pandemic has made certain property

FIGURE 10

Improvement Spending Varies Considerably with Housing Tenure and Type

Average Annual Per-Unit Spending (Dollars)



Notes: Estimates are average per-unit spending in 2019. Single-family homes are detached.

Source: JCHS analysis of HUD, 2019 American Housing Survey and NAA. 2020 Survey of Operating Income & Expenses.

features more desirable. For example, after spending so much time at home, owners have become more interested in adding or improving outdoor living spaces such as decks, porches, patios, and gardens. And with many restaurants closed or at restricted capacity, households that have had to prepare more meals at home may want to upgrade their kitchens. Heightened health concerns from the pandemic may also motivate owners to invest in HVAC upgrades with air filtration and purification features, antimicrobial materials and products, and water purification systems.

Another major housing change that homeowners may be more likely to consider is the addition of an accessory dwelling unit (ADU). ADUs, or self-contained units built on the same property as the primary home, provide a promising way to expand the affordable rental supply or to accommodate the growing number of multigenerational households in the US. Homeowners planning to bring older parents into their households may want to make accessibility improvements as well.

Meanwhile, the departure of upper-income households from dense urban areas has created a surplus of high-rent apartments in certain metros. With rents falling, these empty apartments could be converted to much-needed middle-market rentals. In addition, with so many people working remotely, companies need less office space and retailers are shifting to online sales in response to changing consumer preferences. Travel restrictions have also cut into demand for lodging, restaurants, and meeting facilities. The emerging glut of commercial real estate in many markets across the country thus provides a major opportunity to convert vacant properties to affordable housing.

STRONG DEMAND AMID ECONOMIC UNCERTAINTY

Pandemic-induced changes in housing and lifestyle decisions, as well as the longer-term evolution of real estate markets, point to strong growth in home improvement spending. Conditions also suggest that there is significant pent-up demand for larger discretionary projects such as additions, alterations, and remodels—major projects that many homeowners are likely to have deferred during the pandemic.

Despite this generally rosy outlook, however, the potential for solid growth in home improvement spending exists within the context of an economy struggling to recover from the worst downturn since the Great Depression. Although many homeowners who were able to keep their jobs endured the pandemic without severe losses, millions of other households saw their incomes plummet in 2020. Those owners were left without the resources to cover their mortgages, let alone pay for improvements and repairs.

Unlike during the last recession, though, a widespread foreclosure crisis is not expected. So far, government forbearance programs have prevented vulnerable owners from losing their homes, although borrowers will ultimately have to make up for their missed payments. Despite the continuing weakness of the broader economy, house prices have continued to rise at a pace that has allowed owners to build significant home equity. With this cushion, most owners who are currently behind on their mortgage payments would be able to sell their homes and have sufficient funds to pay off their outstanding loan balances.

But even with these concerns, residential remodeling activity should increase steadily in the years ahead. The aging of both the US population and the housing stock provides a solid foundation for long-term growth in spending. In addition, a massive wave of young adults is moving into the prime ages for first-time homebuying, ensuring strong support for improvement spending for years to come. And if the changes in housing choices brought on by the pandemic—the uptick in residential mobility, shifts in household composition, and the focus on home-centered activities—become lasting trends, demand for remodeling projects could be even stronger than currently anticipated.

Homeowner Improvement Expenditures: 2019

	Homeowners Reporting Projects (000s)	Average Expenditure [\$]	Total Expenditures (Millions of \$)
DISCRETIONARY	5,815	13,302	77,352
Kitchen Remodels	2,018	12,387	24,993
Minor	1,683	6,329	10,650
Major	335	42,816	14,343
Bath Remodels	2,781	6,748	18,764
Minor	2,338	3,567	8,341
Major	442	23,557	10,422
Room Additions	739	24,352	17,998
Kitchen	91	27,970	2,533
Bath	137	13,706	1,874
Bedroom	250	20,462	5,121
Recreation	96	15,784	1,520
Other	410	16,957	6,949
Outside Attachments	1,855	8,408	15,598
Porch, deck, patio or terrace	1,608	6,881	11,068
Garage or carport	338	13,418	4,530
REPLACEMENT	18,819	6,400	120,445
Exterior	7,193	7,109	51,136
Roofing	3,567	8,207	29,272
Siding	1,034	5,933	6,133
Windows or doors	3,663	3,763	13,785
Chimney, stairs or other major improvements to exterior	665	2,928	1,946
Interior	6,178	3,872	23,923
Insulation	1,290	1,921	2,479
Carpeting, flooring, paneling or ceiling tiles	4,899	3,349	16,406
Other major improvements inside home	869	5,797	5,038
Systems and Equipment	13,899	3,266	45,387
Internal water pipes	1,515	1,962	2,972
Plumbing fixtures	4,078	1,415	5,769
Electrical wiring, fuse boxes or breaker switches	2,347	1,886	4,427
HVAC	4,029	6,154	24,794
Central air conditioning	2,863	5,453	15,614
Built-in heating equipment	2,400	3,825	9,181
Appliances/Major Equipment	8,414	882	7,425
Water heater	3,490	1,040	3,630
Built-in dishwasher or garbage disposal	3,716	562	2,087
Security system	2,557	668	1,708
OTHER	7,861	8,181	64,308
Disaster Repairs	1,112	23,054	25,632
Outside Property Improvements	7,042	5,492	38,675
Septic tank	218	4,227	922
Driveways or walkways	1,886	3,690	6,962
Fencing or walls	2,127	2,706	5,755
Swimming pool, tennis court, or other recreational structure	497	14,349	7,134
Shed, detached garage, or other building	1,133	6,526	7,392
Landscaping or sprinkler system	2,853	2,730	7,789
Other major improvements to lot or yard	493	5,519	2,722
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Notes: Homeowner numbers do not add to total because respondents may report projects in more than one category. Major remodels are defined as professional home improvements of more than \$30,000 for kitchen projects and more than \$15,000 for bath projects, and DIY improvements of more than \$12,000 for kitchen projects and more than \$6,000 for bath projects.

Improving America's Housing 2021 was prepared by the Harvard Joint Center for Housing Studies. The Center advances understanding of housing issues and informs policy. Through its research, education, and public outreach programs, the Center helps leaders in government, business, and the civic sectors make decisions that effectively address the needs of cities and communities. Through graduate and executive courses, as well as fellowships and internship opportunities, the Center also trains and inspires the next generation of housing leaders.

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DIGITAL TABLES & RESOURCES

Data tables, interactive charts, and additional detail on historical home improvement expenditures are available at www.jchs.harvard.edu/improving-americas-housing-2021.

