Joint Center for Housing Studies

Harvard University

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Evidence from the 2001 Consumer Practices Survey

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Abstract

Household's net-worth increase at the end of the 1990's had an effect on home remodeling financing. Using the 2001 Consumer Practices Survey (CoPS) this paper analyzes the use of home secured products to finance home improvements. The data show that the cost of the project and household characteristics play an important role in the decision for tapping home equity. The paper suggests that the existence of alternative assets and household's portfolio management are key explanatory factors for understanding home remodeling financing.

Introduction

Totaling $214 billion in 2001, home improvement spending has emerged as a major sector in the national economy. With annual increases of almost 6% since 1999, the remodeling industry represented more than 4% of the overall growth in the economic activity from 1999 to 2001, as other sectors suffered from the economic downturn[1].

Despite the importance of home improvement spending on the overall economy, most research overlooks the financial aspects of home remodeling. Some studies have focused on household use of financial products such as cash-out mortgage refinancing, home equity loans and lines of credit. However, the reasons driving homeowners to finance their remodeling projects have attracted so far little attention.

The lack of reliable data is a major factor on the limited research done on home improvement financing. The 2001 Consumer Practices Survey (CoPS) undertaken by the National Association of Home Builders Research Center (NAHB-RC) is one of the few data sources including information on the origin of funding sources for home improvements. The data reports the type of funding source and the estimated amount from that source invested in remodeling, as well as further information on the characteristics of the project and the socioeconomic background of the household. The information gathered from the CoPS is an important tool for understanding the ways that homeowners fund their home improvements, the impact of wealth and home equity on the market for home remodeling, and the characteristics of the homeowners searching for external funding for improvement projects.

Results from the CoPS shows that financing, either in the form of home equity debt (cash-out refinancing, home equity loans or lines of credit), or through unsecured credit (consumer loans or regular credit cards), accounts for almost a third of the expenditures on home remodeling projects. The extent of spending on home improvements has a measurable impact on a household's use of housing wealth. Substantial investments on home improvements are more likely to be financed through home equity products while inexpensive projects tend to be paid using unsecured credit**.** The household net-worth, particularly home equity, plays a significant role in the home improvement finance market. Households' portfolio management and their

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[1] "Measuring the Benefits of Home Remodeling" Improving America's Housing 2003. Joint Center for Housing Studies.

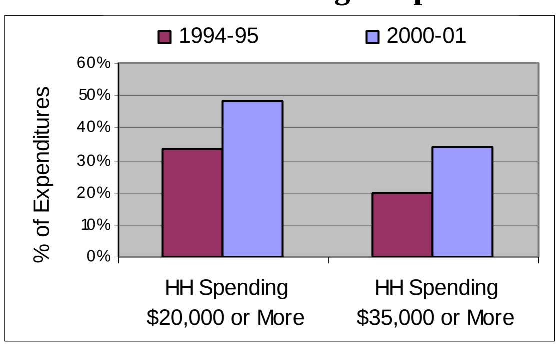
capacity to assume debt have an important effect on the decision to tap home equity to fund improvement projects. Other important factors determining the use of wealth and home equity as a financial resource for home remodeling are the age of the homeowner and the length of household occupancy.

The first section of this paper briefly describes the environment of home improvement finance in the last few years, pointing out the changes in the remodeling market and the parallel expansion on household wealth in the late 1990s. The second section examines some of the characteristics and limitations of the data and further develops findings from the 2001 CoPS on home remodeling finance.

Background

As the rapid run up of home prices pushed housing wealth to record levels, spending on home improvement, particularly in the high end of the market, soared from 1995 to 2001[2]. Homeowners spending more than $20,000 on home improvements from 2000 to 2001 accounted for almost half of the total expenditures (48%), 15 percentage points higher than the share recorded six years earlier (33%). The difference is even more pronounced for owners with remodeling improvements of more than $35,000 [Figure 1].

Figure 1: Share of Homeowners with High Expenditures on Remodeling



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

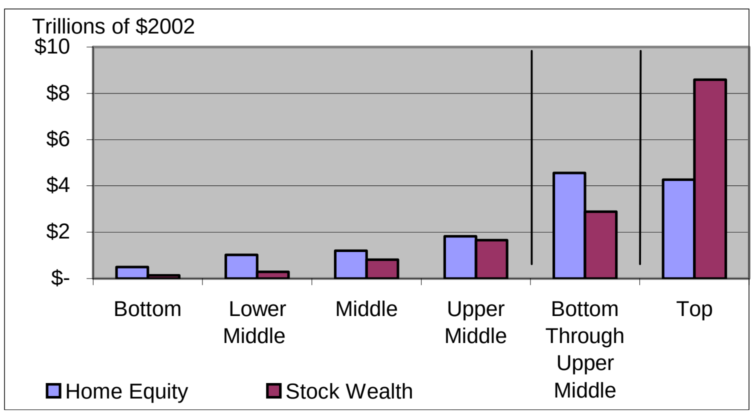
In part, the surge in high-end expenditures reflects the substantial growth in household wealth occurring in the late 1990s. From 1995 to 2001, household net-worth from mutual funds and corporate equity increased 46% in real terms and housing wealth also rose by almost a third

[2] "Measuring the Benefits of Home Remodeling" Improving America's Housing 2003. Joint Center for Housing Studies.

(32.5%)[3]. But while stocks and other financial assets affected a relatively small share of the population, the rise of home prices had a significant impact on a greater number of households due to the broad distribution of housing wealth. Over a third of the total stock wealth (33.5%) is owned by the top one percent of stockholders, while the top one percent of equity holders own only 13% of the total housing equity[4].

Home equity is the single most important asset for a large number of households. For the majority of low and middle-income households, housing wealth surpasses the value of their stock. In fact, the value of the aggregate housing wealth for the poorest 80% of the population surpasses their holdings in stock by a factor of more than 1.5 [Figure 2]. Housing is, therefore, an important component of household wealth for low and middle-income households.

Figure 2: Volume of Home Equity and Stock Wealth by Income Quintiles



Source: Survey of Consumer Finance 2001

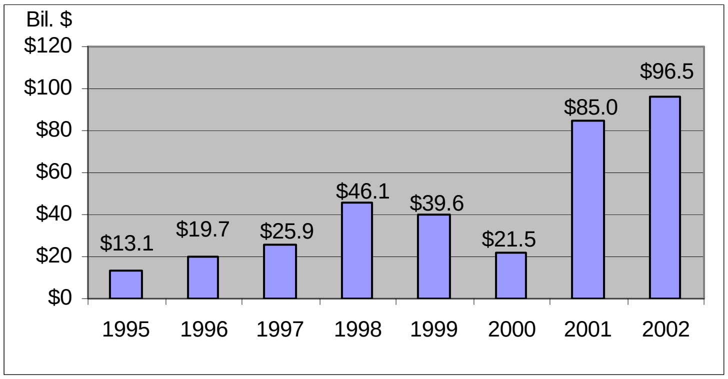
Gains in stock and home equity boost consumer expenditures. According to Federal Reserve Board estimations, for each dollar increase in home equity, households spend 15 cents on consumer goods and services in contrast with the 3 to 5 cents for every dollar rise in stock wealth[5]. Consequently, the increase in wealth from home equity is translated into a rise in the level of consumer spending and a re-investment into existing assets. As an example, homeowners re-invested in capital or real estate markets 21% of all dollars cashed out from

[3] Balance Sheet of Households and Nonprofit (Table B.100) Federal Reserve Board.
[4] State of the Nation's Housing 2003, Joint Center for Housing Studies
[5] Alan Greenspan Speech at the Federal Reserve in Kansas City (August 31st 2001)

mortgage refinancing in 2001 and early 2002 and spent another 16% of those dollars on general consumer purchases[6].

As a result of increasing home prices and the substantial reduction of interest rates, more homeowners are cashing out significant amounts of their housing wealth. The volume of cash out refinances reached $85 billion in 2001, more than 6 times greater in inflation adjusted terms than in 1995 and almost double the $46.1 billion cashed out in 1998, the highest cash-out year of the 1990s [Figure 3]. The upward trend continued in 2002 reaching a historical high of $96.5 billion.

Figure 3: Total Home Equity Cashed Out (In 2001 $Bill)



Source: Freddie Mac Annual Cash-out volume. CPI-UX adjusted in $2002

A strong relationship exists between cash out mortgage refinancing and home remodeling. Homeowners cashing out home equity through mortgage refinancing reinvest a substantial amount of those funds into their properties. According to a survey from the Federal Reserve Board in 2001[7], about 43% of homeowners who cashed out part of their home equity utilized these funds (in part or whole) for home improvement projects. Furthermore, home improvement is the prime destination for cash-out from mortgage refinancings, accounting for almost 35% of the total volume of cash-out refinancing. Considering the $131.5 billion estimate of the homeowner improvement market, the study from the Fed suggests that funds obtained through cash-out mortgage refinancing helped to pay 23% of homeowner expenditures on home improvements in 2001.

[6] G. Canner et al. "Mortgage Refinancing in 2001 and Early 2002". Federal Reserve Bulletin December 2002
[7] G. Canner et al. "Mortgage Refinancing in 2001 and Early 2002". Federal Reserve Bulletin December 2002

Even so, little is known about the origin and flow of funding sources used for home improvements. Notably, some of the issues that remain unknown in the analysis of home improvement finance are the characteristics of the households using housing wealth and the factors driving the tapping of home equity or other assets for home improvements. So far, the lack of reliable data has been the main disincentive for the analysis of home improvement financing.

CoPS data and weighting method

Gathering detailed information on the origin of funding sources for home improvements, the 2001 Consumer Practice Survey (CoPS) randomly sampled 8,210 homeowners clustered in 9 geographical area. Unfortunately, the voluntary basis of the survey leads to an observable response bias in comparison with similar sources for the same period, such as the American Housing Survey (AHS). In general terms, CoPS respondents are older, whiter, with slightly lower incomes and reported higher expenditures on home improvements than the average AHS homeowner. (Table A in the Appendix). This paper uses a weighting method to adjust CoPS, using as a reference the share of AHS 2001 respondents with similar socioeconomic characteristics. The appendix section describes the weighting method in greater detail, as well as some of the data limitations.

A previous paper from the Joint Center analyzed certain aspects of home improvement financing using 1998 CoPS[8]. It is difficult, however, to compare the 1998 to the 2001 CoPS, since the methodologies and characteristics of both surveys are significantly different. The 1998 CoPS surveyed a pre-screened sample of under 5,000 homeowners who previously reported annual expenditures on home remodeling of over $2,000. In contrast, the 2001 survey sampled a larger number of homeowners without a previous screening. Furthermore, the 2001 CoPS questionnaire included information on the amount used through each funding source, while respondents on the 1998 CoPS reported only the type of source but not the amount used. These differences prohibit using these two surveys to track home improvement spending and financing patterns over time.

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[8] "Financing Home Improvement Projects: The use of Home Secured Credit" Alvaro Martin-Guerrero. Joint Center for Housing Studies N02-1, February 2002.

Findings from the 2001 CoPS:

Most home improvements are funded from savings

Almost 86% of homeowners used savings or tax refunds to pay in part or in whole their home improvements [Table 1]. The vast majority of homeowners did not borrow for their home improvement projects. Less than 30% of households used some sort of financial product, either credit cards, unsecured consumer loans, or home secured credit including equity lines, loans and cash-out mortgage refinancing.

Table 1: Share of Homeowners and Expenditures on Remodeling by Funding Source

	Share of Homeowners (1)	Expenditures by Source
Savings/Tax Returns/Gifts	85.5%	63.4%
Total Home-Secured Credit	**7.0%**	**17.7%**
HE Loans	2.9%	7.4%
HE Lines	2.2%	4.7%
Cash Out Refinance	2.0%	5.5%
Total Unsecured Credit	**22.1%**	**12.3%**
Credit Card	20.2%	8.3%
Loan	2.3%	4.1%
Insurance	5.1%	4.2%
Other Sources	2.7%	2.5%
Total All Sources	122.9%	100.0%

Source: Weighed 2001 CoPS

(1) Sum not equal to 100 as homeowners may report more than one funding source.

Savings, tax returns and family gifts also represent an important share of the market for home remodeling; almost two out of three dollars (63.4%) paid for home improvements came from these types of funding sources. It is difficult to know what respondents included under the category “savings” but it seems reasonable that an important share of respondents reported assets in the form of regular checking or savings accounts.

Without truly knowing what homeowners reported as “savings”, however, the overwhelming response among homeowners raises a question about the ultimate origin of those funds. As mentioned previously, capital gains from stock and home price appreciation soared in the late 1990s and in contrast savings rates decreased during that period. Measuring personal savings as the difference between households’ income and outlays, in 1994 the savings rate

(6.1%) was more than two and a half times higher than in 2001[9]. The funding category “savings” may not only include unused disposable income but it may also refer to capital gains from other assets in the form of cash accounts.

The substantial decrease in savings from income and the swelling in household wealth from capital gains from home price appreciation or stock in the late 1990s suggest that what some homeowners reported as “savings” assets may have had their ultimate origins elsewhere. It is reasonable to believe that at least part of the built up wealth from stock was not re-invested in the market but spent on consumer goods or services. It is also possible that the poor performance of markets at the beginning of the decade drove out households who preferred to invest their funds directly into home improvement projects. It should also be noted that the CoPS questionnaire included only eight response options for funding sources for remodeling and none of them refer to other potential financial assets such as mutual funds or money market accounts. For the purpose of this paper, funds from savings, tax returns and family gifts should be interpreted as “*readily available*” cash accounts.

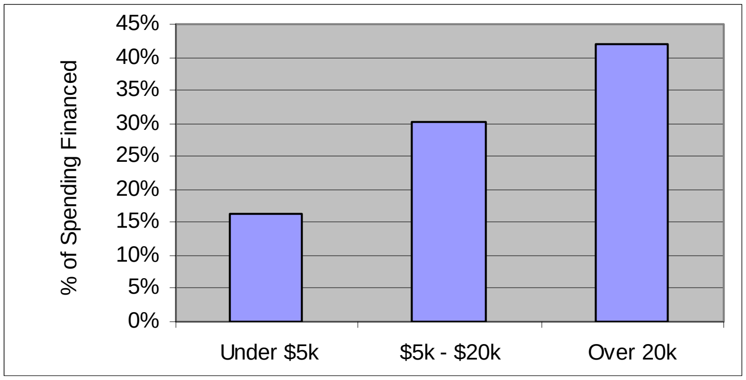
Nevertheless, homeowners financed nearly a third of the dollars spent on remodeling: notably 22% of homeowners reported using unsecured credit (unsecured loans and credit cards), and another 7 % of households reported using at least part of their home equity for remodeling purposes. As a share of total expenditures, credit cards and unsecured loans accounted for 12% of the market, compared to the almost 18% from home-secured credit. The substantial differences between the number of home secured borrowers and the share of the market suggests that although home equity products tend to be more sporadically utilized than unsecured credit, they are also used more intensively.

The Extent of Home Improvement Spending Has an Effect on Financing

The magnitude of the remodeling project and the total amount spent on home improvements has an observable effect on the way homeowners use financing sources to pay for their home improvements. Homeowners who spent a significant amount on remodeling are more inclined than households with small projects to use financial products to fund their investments.

[9] Maki, Dean and Palumbo, Michael, "Disentangling the Wealth Effect: A Cohort Analysis of Household Saving in the 1990s" (May 04, 2001). FEDS Working Paper No. 2001-21. http://ssrn.com/abstract=268957

Figure 4: Average Homeowner Use of Financing for Home Remodeling by Project Spending



Source: Weighted 2001 CoPS

Borrowing, either through home-secured or unsecured credit, accounts for less than 17% of all expenditures made by homeowners who spent modestly on home improvements and maintenance (under $5,000) [Figure 4]. On the other hand, borrowing accounts for almost 42% of the expenditures made by homeowners who spent substantially on their properties.

The level of spending on remodeling projects not only affects homeowners' decisions to use external funding sources but also the type of financial product they choose to pay for the improvement. Homeowners who spent substantially on remodeling are more inclined to tap part or most of their home equity to finance in part or in whole their home improvement projects, while remodelers who spend moderately rely more on unsecured credit [Table 2]. Households spending over $20,000 paid on average almost 34% of their improvement budget through home-secured credit, as opposed to 2.7% for households spending under $5,000.

Table 2: Average Homeowner Use of Secured and Unsecured Credit for Home Remodeling by Project Spending

Amount Spent of Remodeling	Home Secured Credit	Unsecured Credit
Under $5k	2.7%	13.7%
$5k - $20k	14.2%	16.1%
Over 20k	34.0%	7.9%
All Remodeling	5.3%	13.9%

Source: Weighted 2001 CoPS

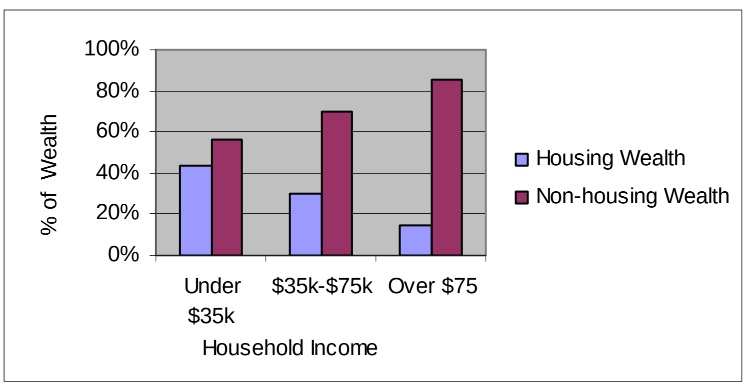
The data suggest that credit cards and unsecured consumer loans supplement moderate and medium size projects (between $5,000 & $20,000), but play a smaller role for larger home improvement projects; on average, less than 8% of the budget for remodeling projects that cost over $20,000 came from credit cards or unsecured loans.

Determinants for the use of housing wealth as a funding source for home improvements

In principle, homeowners who live in their homes longer or who have higher house price appreciation rates will accrue greater housing wealth. Not all homeowners, however, are willing to tap their home equity to pay for their remodeling projects. Cashing out housing wealth entails costs and requires a capacity to assume a debt burden. The opportunity cost of using alternative wealth assets and the capacity for debt repayment seem to be the main factors driving homeowners' choice to use housing wealth for funding their home improvement projects.

For high income households, home equity typically represents a small share of their net-worth. As opposed to all other household assets such as stock, bonds or pensions funds, housing accounts for less than 15% of the estimated total wealth among households with annual incomes over $75,000 [Figure 5]. Among middle-income households, home equity equals half of their estimated wealth value. As a result, home equity may play a less relevant role in financing home improvements for high-income households than for middle-income households.

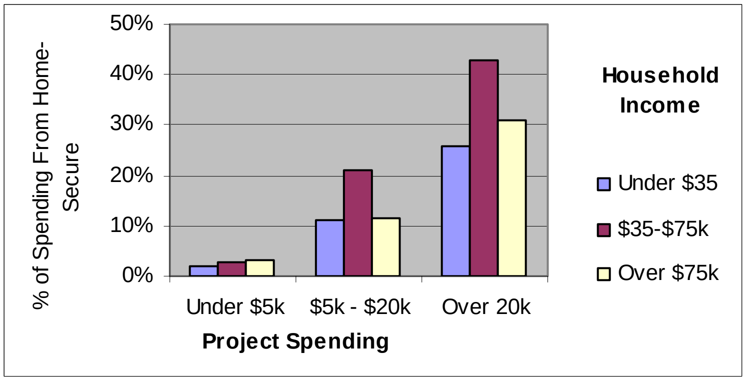
Figure 5: Distribution of Housing and Non Housing Wealth



Note: Non Housing Wealth includes all reported assets excluding home equity such as stock, bonds, pension funds or other investments.
Source: Survey of Consumer Finance 2001

Controlling for the extent of expenditures on remodeling, there are differences among income groups concerning the use of housing wealth. Middle-income homeowners (earning between $35,000 & $75,000), spending substantially on home improvements (over $20,000) financed on average over 43% of their remodeling budget through home-secured loans, lines of credit or cash-out from mortgage refinancing [Figure 6]. This share is 16 percentage points higher than the average use of home equity among lower income owners and 12 percentage points higher than the high-income households with similar spending on remodeling.

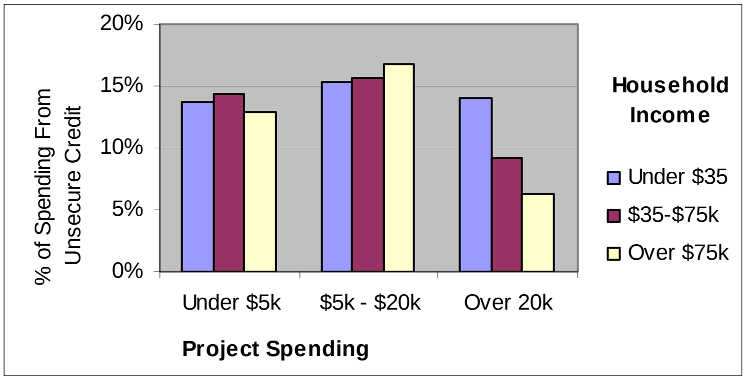
Figure 6: Average Homeowner Use of Home-Secured Credit by Project Spending & Household Annual Income



Source: Weighted 2001 CoPS

The use of unsecured credit for moderate and medium level expenditures on remodeling ($5,000-$20,000) remains almost constant for all income groups. The use of credit cards and unsecured loans at the high end of the remodeling market show, however, significant differences by level of income. The average high-income household with remodeling expenditures over $20,000 paid on average only 6% of their total remodeling budget through credit cards and consumer loans, 3% less than a middle-income household with a similar remodeling budget [Figure 7].

Figure 7: Average Homeowner Use of Unsecured Credit by Project Spending & Household Income



Source: Weighted 2001 CoPS

The data suggests two things. First, middle-income households are more inclined than any other group to borrow and cash-out housing wealth for the payment of their home improvements. This income group is also more capable than lower income homeowners of carrying debt and borrowing may complement funding sources for home improvements. Middle-income households represent almost a third of the market for home improvements in 2001, and this group financed more than 35% of its expenditures either through home equity related products or through unsecured credit cards and consumer loans. For households with an annual income between $35,000 and $75,000 housing is probably their principal asset. In fact, home secured credit accounts for 23% of all remodeling payments among homeowners with incomes between $35,000 and $75,000 [Table 3].

Second, housing wealth is not always the best option to finance home improvement projects. The average high-income homeowner with substantial remodeling expenditures (over $20,000) financed less than 30% of his/her remodeling costs through home equity products [Figure 6]. High-income homeowners managing diversified assets may find it more attractive to invest in home improvements through alternative assets rather than borrowing against their home equity. Considering that some of the expenditures reported as “savings” may include other assets in the form of *readily available* cash accounts, the data suggest that the use of housing wealth for high-income households entails opportunity costs that may be avoided by using other assets.

Portfolio management requires a careful evaluation of the cost of using existing assets. With many financial markets providing diminishing returns in 2001, homeowners may find cheap *readily available* cash in their money market accounts. The use of home equity as a financial tool requires originating a new loan or expanding an existing debt, entailing certain costs. Tapping financial assets also entails certain costs such as the reduction in capital gains. Homeowners may contemplate using existing assets by balancing the cost of borrowing at a certain interest rate with the loss of potential gains from stock, a bond fund or a money market account.

Table 3

	Share of Expenditures by Funding Source and Income Group				Share of Expenditures by Income Group and Funding Source				Average Use of Funding Source by income Group			
	Under $35k	$35k-$75k	Over $75	All Incomes	Under $35k	$35k-$75k	Over $75	All Incomes	Under $35k	$35k-$75k	Over $75	All Incomes
Savings/Cash Accounts	65%	57%	67%	63%	19%	29%	52%	100%	$ 1,721	$ 1,912	$ 3,354	$ 2,396
Total Home Secured	**14%**	**23%**	**16%**	**18%**	**14%**	**42%**	**44%**	**100%**	**$ 7,687**	**$ 8,742**	**$ 7,906**	**$ 8,198**
HE Loan	9%	10%	5%	7%	23%	45%	31%	100%	$ 8,820	$ 8,595	$ 7,583	$ 8,296
HE Line	2%	5%	6%	5%	6%	33%	61%	100%	$ 4,412	$ 7,002	$ 7,234	$ 6,879
Cash out Refinance	3%	7%	5%	6%	10%	44%	47%	100%	$ 7,140	$ 9,975	$ 8,739	$ 9,031
Total Unsecured	**12%**	**12%**	**12%**	**12%**	**18%**	**33%**	**49%**	**100%**	**$ 1,293**	**$ 1,504**	**$ 2,500**	**$ 1,803**
Unsecured Loan	5%	3%	4%	4%	21%	25%	53%	100%	$ 3,137	$ 5,760	$ 8,344	$ 5,684
Credit Card	8%	9%	8%	8%	17%	36%	47%	100%	$ 885	$ 1,194	$ 1,774	$ 1,319
Insurance	5%	5%	4%	4%	21%	37%	42%	100%	$ 1,469	$ 3,035	$ 3,723	$ 2,635
Other Sources	4%	3%	2%	2%	28%	34%	38%	100%	$ 1,862	$ 3,345	$ 4,823	$ 3,017
Total All Sources	100%	100%	100%	100%	18%	32%	49%	100%	$ 2,190	$ 2,889	$ 4,345	$ 3,234

Source: Weighted 2001 CoPS

High-income households are less likely to borrow for their home improvements. Households with annual incomes above $75,000 borrowed only 28% of their expenditures for home improvements, and among those expenditures 16% came from cashing out housing wealth. On the other hand, more than two thirds of the remodeling expenditures among high-income households came from savings and cash accounts, almost 10% more than among middle-income homeowners, even though their average remodeling expenditures are 1.5 times higher than those of middle-income households and almost double those of low income homeowners [Table 3].

The limited use of external funding sources and the overwhelming use of cash accounts among high-income homeowners again raises the question about the ultimate origin of assets reported as "savings or cash accounts". Findings from Maki and Palumbo (2001) support the idea that high-income households use capital gains from assets for consumption. The authors found that between 1992 and 2000 the greatest difference between personal savings rates and household net-worth occurred at the higher quintiles of the income distribution[10]. The drop in savings and parallel increase on household net-worth for the top income quintile, as well as the

[10] In fact the authors estimated, in the most conservative approach, that personal savings rates among the top quintile of the income distribution dropped 4% while the boost on the net-worth income ratio among the top richest households was estimated in almost 80%. Maki, Dean and Palumbo, Michael, "Disentangling the Wealth Effect: A Cohort Analysis of Household Saving in the 1990s" (May 04, 2001). FEDS Working Paper No. 2001-21. http://ssrn.com/abstract=268957

relatively small use of housing wealth for that income group, reinforces the idea that for the richest households, capital gains from stock and other financial assets may be considered savings in the form of *readily available* cash.

The difference between income group uses of cash accounts and home equity products for the payment of home improvements also suggests that the capacity to assume debt has an effect on homeowner's decision to use housing wealth. Even if households with annual incomes between $35,000 and $75,000 are more capable than lower income households to carry additional debt burden, home equity still represents a fundamental wealth asset for this group.

The type of project has a small effect on the funding source for remodeling

The type of project has little impact on the method used to fund home improvements. On average homeowners paid almost 27% of major home remodeling expenses using home-secured or unsecured credit. In contrast, the share of financed expenditures accounts for only 19% of the average homeowner's replacements and repairs budget [Table 4].

The extent of the project or the total investment has a greater impact on home improvement financing than by the type of project. Households with projects that require a significant investment, such as building an addition or remodeling the kitchen, are more inclined to cover some of their expenditures through home equity borrowing. Among households who undertook major remodeling projects, almost 11% of the spending came from tapping housing wealth. On the other hand, the average homeowner who undertook less expensive replacement projects financed around 5% of their spending through housing equity.

Among major remodeling projects, those with higher average costs, such as major kitchen remodeling or alterations, are more likely to be financed through home-secured credit than inexpensive projects, such as minor bathroom or kitchen remodeling. Small repair and replacements jobs, however, tend to be financed using credit cards and unsecured loans. For example, homeowners used unsecured credit to pay for 20% of drywall and paneling projects and 19% of insulation projects.

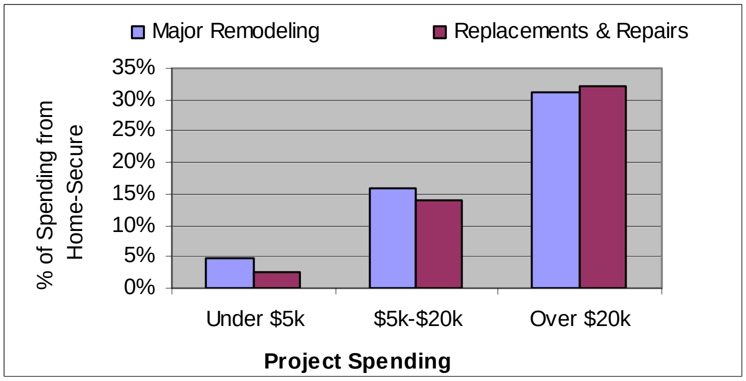
Table 4: Average Expenditures by Remodeling and Replacement Project & Average Homeowner Use of External Funding

Major Remodeling Projects	Avg. Expenditures	Avg. Use Home Secured Credit	Avg. Use Unsecured Credit	Avg. Use Credit Any Source
Building Addition	$ 10,892	16%	13%	29%
Alteration of Existing Space	$ 4,218	16%	15%	31%
Remodeling Kitchen	$ 2,961	9%	18%	27%
Remodeling a Bathroom	$ 1,787	7%	16%	23%
Major Kitchen (+$4k)	$ 8,719	17%	11%	28%
Minor Kitchen (-$4k)	$ 1,211	7%	20%	26%
Major Bath (+$2k)	$ 5,049	12%	10%	22%
Minor Bath (-$2k)	$ 553	4%	19%	23%
Rebuild due to fire	$ 6,275	5%	8%	13%
All Major Remodeling	**$ 5,121**	**11%**	**16%**	**27%**
Replacements and Repair Projects				
Roofing	$ 1,804	6%	14%	20%
Siding	$ 2,595	12%	13%	24%
Windows	$ 1,273	10%	16%	26%
Insulation	$ 415	8%	19%	27%
Drywall	$ 474	10%	20%	31%
Flooring	$ 1,188	8%	18%	25%
Garage	$ 404	8%	12%	21%
Doors	$ 502	10%	18%	28%
Locksets	$ 110	7%	12%	19%
Plumbing	$ 450	5%	16%	20%
HVAC	$ 1,160	6%	15%	21%
Electrical	$ 327	6%	17%	23%
Painting	$ 464	5%	14%	20%
Deck/Patio	$ 1,711	9%	16%	25%
Landscaping	$ 528	5%	17%	22%
Other Lumber	$ 452	8%	22%	30%
Termite/Pest	$ 261	4%	14%	18%
Other Replacements	$ 1,669	7%	15%	22%
All Replacements & Repairs	**$ 2,468**	**5%**	**14%**	**19%**

Source: Weighted 2001 CoPS

Controlling for the total cost of the project, the average use of equity related products among homeowners does not show significant differences between major remodeling projects and homeowners undertaking repairs and replacements [Figure 8]. Homeowners who spend substantially on home improvements (over $20,000) used home equity products to pay for 32% of their replacements and repairs projects and 31% of their major remodeling projects.

Figure 8: Average Use of Home-Secured Credit on Remodeling and Replacement by Project Spending

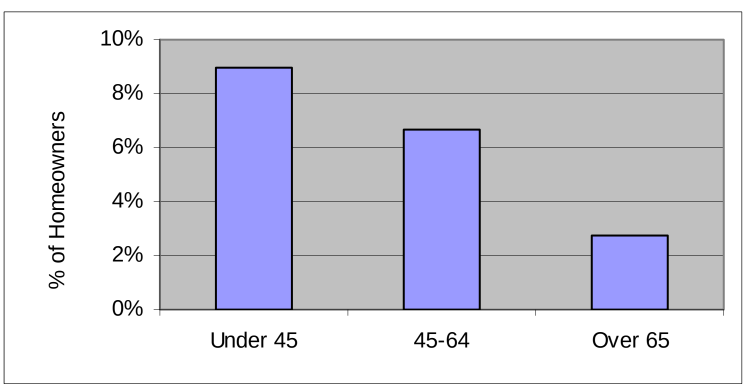


Source: Weighted 2001 CoPS

Young homeowners and recent movers are more inclined to use home secured credit on their home improvements

A homeowner's choice to finance home improvement has much do with the opportunity cost of using alternative assets and the capacity for carrying debt. Not all homeowners are equally willing to borrow or capable of using alternative funding from existing assets. Young homeowners are more inclined to borrow, not only because of their lack of potential alternative resources, but also because they are in a better situation to support debt.

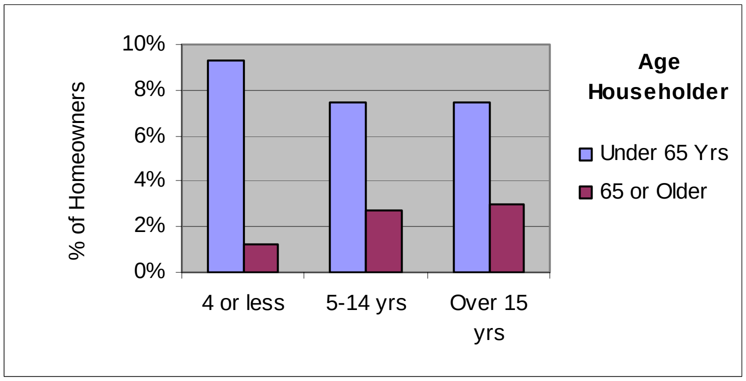
Figure 9: Share of Homeowners Using Home Equity by Age of the Householder



Source: Weighted 2001 CoPS

The age of the homeowner and the length of housing tenure are two factors that prove to affect the choice to finance home improvement projects. Seniors owners are less inclined to use home equity to finance projects. About 3% of senior homeowners used equity related products to finance home improvements, while 9% of young owners used some sort of home-secured credit to pay for their remodeling projects [Figure 9]. More than nine percent of all non-senior households living in their unit less than four years used part of their home equity for repairs and maintenance projects [Figure 10].

Figure 10: Share of Homeowners Using Home Equity by Length of Tenure and Age of Householder



Source: Weighted 2001 CoPS

The CoPS data show that the use of housing wealth to finance home improvements varies more among homeowners with short tenures than among owners with longer occupancies. Decreasing interest rates and growing home prices expands the margin between mortgage debt and home value. This encourages young homeowners with little tenure to maximize their housing wealth by borrowing against home equity to finance home improvements.

There is little difference in the share of home-secured credit used to pay for home improvements between recent movers and long-term stayers. The average non-senior homeowner with less than 4 years in the home tapped enough home equity to pay 6.7% of all expenditures, while payments through home equity for those long-term stayers (more than 15 years) accounted for 6.1% of all spending [Table 5]. This suggests that homeowners with short tenures use their housing wealth at the same rate as homeowners with longer occupancies.

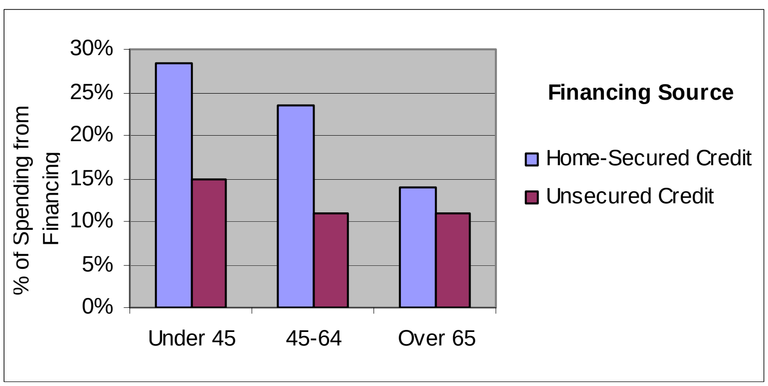
Table 5: Average Share of Expenditures from Home Equity Related Products by Number of Years in the Home and Age of the Householder

	Under 65	Over 65	All Homeowners
4 yrs or less	6.7%	0.9%	6.4%
5-14 yrs	5.5%	2.5%	5.2%
Over 15 yrs	6.1%	2.6%	4.9%
Total	6.0%	2.4%	5.4%

Source: Weighted 2001 CoPS

For substantial home improvement projects, young homeowners are more inclined to borrow than any other group. The average young household spending over $10,000 in remodeling will finance about 43% of a remodeling project (28% through home secured and 15% through unsecured credit), almost 20% more than the average senior household [Figure 11]. The average use of credit cards and unsecured loans remains fairly steady through all age cohorts. Home-secured credit, however, shows dramatic differences across age, supporting the idea that senior homeowners are less inclined to support home equity debt burden, and rely more than younger households on their cash accounts or alternative assets.

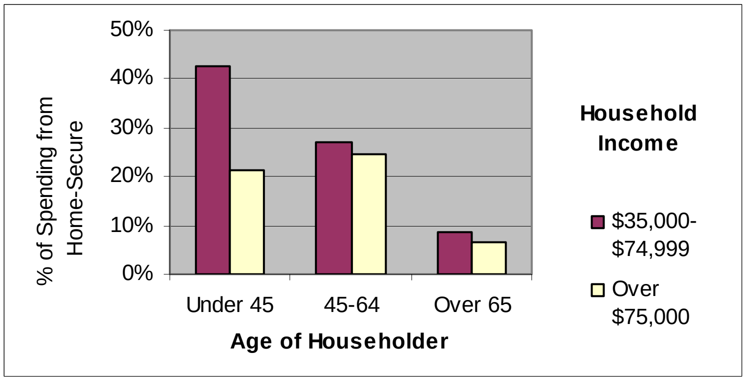
Figure 11: Average Use of Financing for Home Remodeling Projects for over $10,000 by Age of Householder



Source: Weighted 2001 CoPS

Controlling for household income and spending on home remodeling, young homeowners will more likely spend part of their housing wealth to finance their home improvements. For the group of homeowners with reported expenditures of over $10,000 on remodeling, the average young middle-income household will finance up to 41% of its remodeling budget through equity related products [Figure 12], more than four times that of a senior owner with a similar income and improvement project.

Figure 12: Average Use of Home-Secured Credit for Remodeling Projects of Over $10,000 by Age of Householder



Source: Weighted 2001 CoPS

The differences among households with substantial spending on remodeling and reported income of over $75,000 a year are subtler. The average high-income, young owner (under 45 years of age) will pay up to 21% of the cost for a substantial remodeling project with home equity, almost three times more than a senior with similar income and remodeling expenditures. There are, however, noticeable differences between middle-income and high-income owners' use of home equity related products. The average share of home equity used on remodeling among young middle-income households doubles the average share used by those owners with higher incomes. Again the data suggest that the access to alternative assets, particularly among younger households, plays a key role in the choice of funding for home improvement.

The extensive use of equity among young and middle-income homeowners suggests that these households are more inclined and better prepared to support debt burden as they have higher expectancies on their future disposable income. Young households generally have accrued less wealth, therefore home equity provides access to funding for households with capacity for carrying debt and limited alternative assets.

Conclusions

Findings from the 2001 Consumer Practice Survey (CoPS) show that borrowing on home equity through loans, lines of credits and cash out from mortgage refinancing represent an important share of the market for home improvement financing, accounting for almost 20% of all expenditures on remodeling. The level of spending on home improvement plays a significant role in choosing the type of funding source to finance a project. Home-secured products account for almost a third of expenditures among households with substantial investment on remodeling. In contrast, owners reporting less than $5,000 in remodeling paid merely 2.7% through home-secured products.

Home equity is an important funding source for home improvement among certain income groups. Middle-income households are more inclined than any other group to use home equity to pay for their home improvement projects. For these households, housing represents an important asset in their portfolios and they are in a better position than lower income households to carry debt. CoPS data suggest that households with incomes between $35,000 and $75,000 rely on housing wealth more than higher income households, in part due to the importance of housing in their portfolios. Housing represents almost a third of total wealth for middle-income households, as opposed to 15% for households with annual incomes above $75,000. The existence of alternative assets among higher-income households may influence their decisions to finance home improvements. The opportunity cost of using home equity to pay for home remodeling for households at the top of the income distribution may be higher than that of other assets.

The 2001 CoPS also shows that certain socioeconomic characteristics, such as a homeowner's age and the length of tenure, have an effect on the use of funding sources for home improvement, particularly on the use of home equity related products. Recently established young homeowners are more inclined than seniors and long-term homeowners to use housing wealth to finance their home improvements. Again, the capacity to support debt burden and the opportunity cost of using alternative assets may play a key role on the choices of young homeowners and recent movers.

Household wealth management is the fundamental explanatory factor for understanding home improvement finance. Housing wealth becomes an important funding source for home improvements when alternative assets cannot provide the needed liquidity. The information provided by the CoPS makes it difficult to track down the origins of many funding sources for remodeling. The heavy use of savings and tax returns, particularly among high-income homeowners, raises the question about the ultimate origin of the funds in the savings accounts. Further analysis should consider the relationship between remodeling expenditures and variations in the homeowners' portfolio as a way to assess the impact of housing equity and other wealth assets on home improvement finance.

Appendix

Weighting CoPS 2001 data using AHS 2001

The 2001 Consumer Practices Survey (CoPS) surveyed a panel of 8,210 homeowners nationwide clustered in 9 geographical areas. Fifty six percent of the respondents or 5,344 households reported some home remodeling in 2001. Certain bias on the response is natural as the questionnaire is completed on a voluntary basis by a panel of respondents who previously agreed to participate.

In CoPS 2001 some socioeconomic groups showed higher rates of response than others. In comparison with other remodeling sources for the same period such as the American Housing Survey (AHS), CoPS shows a significantly higher share of response among non-minority households [Table A]. The survey also shows some overrepresentation of senior homeowners and middle-income homeowners. Understandably, households with higher remodeling expenditures appear more likely to report their activity on a voluntary basis survey than households with lower expenditures. This may also explain the differences between the average annual CoPS expenditures on remodeling and that of the AHS. CoPS reported average annual expenditures on remodeling that are ($4,162) 30% higher than the estimated annual on AHS 2001 ($3,181). Although the two samples are not totally identical and the questions regarding remodeling are different on both questionnaires, the margin for comparison between both surveys suggests that the sample surveyed by CoPS overestimates homeowner expenditures on remodeling.

A weighting method is proposed to correct some of the deviations of the CoPS using a comparable sub-sample of homeowners with reported remodeling expenditures from the 2001 AHS. To allow inferences onto the entire population, a combination of four comparable characteristics (household annual income, homeowner age, reported annual expenditures -or intensity- of remodeling and ethnic affiliation) clustered into 47 groups will be used to compare both surveys [Table A] The CoPS sample distribution shows some of the features pointed out above. The proportion of white, senior households and middle-income households is over represented on CoPS in comparison with AHS. There is also a dramatically low response rate on CoPS among minority households. Minority households with low remodeling expenditures show the highest discrepancy rates between AHS and CoPS.

There is a small share of ethnic affiliation responses not reported or missing on the CoPS (3% or 156 out of 5,344). In comparison with AHS, CoPS is strongly skewed towards white respondents. Controlling those missing cases for the subsequent adjustment of the CoPS distribution, missing cases of minorities will be randomly allocated considering the ratio on the CoPS for a combination of factors such as income and the intensity of remodeling. As a result, 10 out of 156 cases (around 6% of the missing cases) will be randomly allocated as minority households.

Some of the combined characteristics are not present on the CoPS. The CoPS sample does not include a single minority homeowner over 65 years old with reported expenditures over $10,000. This group represents only a small fraction of the comparable sample (0.1% of the AHS distribution). Clustering all annual expenditures by income for the senior minority households will, therefore, have little effect on the adjustment of CoPS distribution.

Table A: Distribution of Homeowners who underwent home remodeling by selected socioeconomic characteristics for AHS and CoPS 2001

Ethnic Affiliation	Age Householder	Household Income	Spending on Remodeling	Homeowners 2001 CoPS	Respondents 2001 AHS	Share CoPS	Share AHS	Weighting Factor
Minority	Under 45	*Under $35*	*Under $2.5k*	21	704,730	0.0039	0.0175	33,559
		Under $35	*$2.5-$10k*	3	204,145	0.0006	0.0051	68,048
		Under $35	*Over $10k*	1	19,411	0.0002	0.0005	19,411
		$35-$75	*Under $2.5k*	35	937,046	0.0065	0.0233	26,773
		$35-$75	*$2.5-$10k*	5	286,080	0.0009	0.0071	57,216
		$35-$75	*Over $10k*	4	51,855	0.0007	0.0013	12,964
		Over $75	*Under $2.5k*	8	621,477	0.0015	0.0154	77,685
		Over $75	*$2.5-$10k*	5	290,217	0.0009	0.0072	58,043
		Over $75	*Over $10k*	3	85,852	0.0006	0.0021	28,617
	45-64	*Under $35*	*Under $2.5k*	16	725,278	0.0030	0.0180	45,330
		Under $35	*$2.5-$10k*	6	148,132	0.0011	0.0037	24,689
		Under $35	*Over $10k*	7	41,258	0.0013	0.0010	5,894
		$35-$75	*Under $2.5k*	18	758,726	0.0034	0.0189	42,151
		$35-$75	*$2.5-$10k*	7	238,226	0.0013	0.0059	34,032
		$35-$75	*Over $10k*	5	39,637	0.0009	0.0010	7,927
		Over $75	*Under $2.5k*	19	559,732	0.0036	0.0139	29,460
		Over $75	*$2.5-$10k*	5	278,050	0.0009	0.0069	55,610
		Over $75	*Over $10k*	4	69,611	0.0007	0.0017	17,403
	Over 65	*Under $35*	*All Expenditures*	20	793,659	0.0037	0.0197	39,683
		$35-$75	*All Expenditures*	7	227,993	0.0013	0.0057	32,570
		Over $75	*All Expenditures*	8	112,910	0.0015	0.0028	14,114
Non-Minority	Under 45	*Under $35*	*Under $2.5k*	386	1,779,103	0.0722	0.0442	4,609
		Under $35	*$2.5-$10k*	94	360,493	0.0176	0.0090	3,835
		Under $35	*Over $10k*	32	76,889	0.0060	0.0019	2,403
		$35-$75	*Under $2.5k*	616	3,930,734	0.1153	0.0977	6,381
		$35-$75	*$2.5-$10k*	225	1,143,454	0.0421	0.0284	5,082
		$35-$75	*Over $10k*	76	306,399	0.0142	0.0076	4,032
		Over $75	*Under $2.5k*	196	3,046,250	0.0367	0.0757	15,542
		Over $75	*$2.5-$10k*	104	1,694,875	0.0195	0.0421	16,297
		Over $75	*Over $10k*	44	584,888	0.0082	0.0145	13,293
	45-64	*Under $35*	*Under $2.5k*	348	2,038,091	0.0651	0.0507	5,857
		Under $35	*$2.5-$10k*	88	524,165	0.0165	0.0130	5,956
		Under $35	*Over $10k*	23	123,283	0.0043	0.0031	5,360
		$35-$75	*Under $2.5k*	591	3,298,763	0.1106	0.0820	5,582
		$35-$75	*$2.5-$10k*	210	1,137,561	0.0393	0.0283	5,417
		$35-$75	*Over $10k*	72	263,179	0.0135	0.0065	3,655
		Over $75	*Under $2.5k*	491	3,379,041	0.0919	0.0840	6,882
		Over $75	*$2.5-$10k*	221	1,761,411	0.0414	0.0438	7,970
		Over $75	*Over $10k*	109	621,397	0.0204	0.0154	5,701
	Over 65	*Under $35*	*Under $2.5k*	403	3,571,968	0.0754	0.0888	8,863
		Under $35	*$2.5-$10k*	123	795,193	0.0230	0.0198	6,465
		Under $35	*Over $10k*	31	138,880	0.0058	0.0035	4,480
		$35-$75	*Under $2.5k*	147	1,137,671	0.0275	0.0283	7,739
		$35-$75	*$2.5-$10k*	60	401,400	0.0112	0.0100	6,690
		$35-$75	*Over $10k*	26	55,518	0.0049	0.0014	2,135
		Over $75	*Under $2.5k*	261	513,837	0.0488	0.0128	1,969
		Over $75	*$2.5-$10k*	109	265,613	0.0204	0.0066	2,437
		Over $75	*Over $10k*	51	84,642	0.0095	0.0021	1,660
All Households				**5,344**	**40,228,723**			**7,528**

Source: 2001 CoPS & 2001 AHS

The weight for the CoPS survey will be the result of applying a factor to each household on CoPS considering the reported combination of the four characteristics shown on the last column of Table A. In other words, each record for young non-minority households with a reported annual income of less than $35k and annual expenditures on remodeling under $2,500 will represent 4,609 estimated households. The average CoPS respondent with reported expenditures on remodeling represents 7,528 estimated households.

Weighting significantly corrects the CoPS sample, probably by factoring ethnic affiliation and intensity of remodeling into the weight. The estimated average weighted expenditures on remodeling for the CoPS ($3,346) are only 3% higher than the weighted average remodeling expenditures in the AHS ($3,250) for the comparable group.

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