

Rehabilitation Data Needs

A Building Industry Forum

Organized by

Joint Center for Housing Studies, Harvard University
and the NAHB Research Center

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Foreword

The Forum on Rehabilitation Data Needs convened a select group of leaders representing industry, government, lenders, associations, practitioners, and scholars to identify major research issues related to the rehabilitation and improvement of U.S. housing, the required data sources to address these issues, and appropriate strategies to implement these data collection efforts. It was sponsored by the U.S. Department of Housing and Urban Development (HUD) and held on November 13, 2001 in Washington, DC. The NAHB Research Center and the Joint Center for Housing Studies of Harvard University organized the event.

The forum was designed to provide an in-depth perspective of the data required to understand housing rehabilitation activity, and opportunities to meet these needs. The broad cross-section of experts in attendance shared their perspectives, and offered suggestions for strategies to provide better information. This document includes the presentations from this conference and summarizes the discussion following each of the panels from the rehabilitation experts in attendance.

As our metropolitan areas increasingly are developed, and our housing stock continues to age, the rehabilitation of older homes becomes a key method for providing housing opportunities in our major urban areas. However, to be effective, this strategy needs to be a partnership of our nation's home remodeling industry, federal state and local policy-makers, and nonprofits and other associations. There needs to be a shared base of information for this sector of our housing stock. This forum was an important step in documenting the deficiencies and beginning to develop a strategy to assemble this information.

Lawrence L. Thompson
General Deputy Assistant Secretary for
Policy Development and Research

Executive Summary

At an estimated \$180 billion per year, spending on home rehabilitation and maintenance activities comprises a significant part of the nation's economy. Every year more than 25 million homeowners make improvements to their homes. In addition, there are over 35 million units in the rental stock, which are periodically rehabilitated. The repairs and enhancements made by homeowners and rental property owners help to ensure that our \$10 trillion housing stock—and the communities that support it—offers safe and adequate housing opportunities for our nation's households. Moreover, the rehabilitation process plays an important role in adapting our homes to a changing population whose housing preferences are continually evolving, and helps to provide cost-effective housing opportunities to those households seeking affordable housing options.

Yet, there are limited data available to private businesses to make informed decisions to support our home improvement industry, and to help government policy makers design programs to encourage greater levels of housing rehabilitation. Most information that is used to track and analyze rehabilitation activities was designed for other purposes, such as to gauge the impact of this industry on the national economy, or to estimate building product utilization in the U.S. remodeling industry. Using these data sources to document housing rehabilitation activities typically has been an afterthought, and typically is ill designed to serve this purpose.

Bringing experts and decision-makers to the table, the Forum resulted in concrete suggestions about how to develop additional data sources that will more accurately depict the status of housing rehabilitation. Participants offered ideas for acquiring the kinds of data required to determine the needs and impact of rehabilitation on the revitalization of neighborhoods, as well as to inform private industry to respond to market opportunities. Many of these suggestions require resources unidentified to date, and most involve a heightened cooperation between private industry, public agencies, and research entities. Forum participants acknowledged that collaboration could result in both a market-responsive private industry and an efficient targeting of public rehabilitation initiatives.

Panels focused on data and research issues in four areas: Geographical Dimensions of Rehabilitation Activity; Rental Housing; Financing Rehabilitation Activity/Government Rehabilitation Programs/Insurance Rehabilitation; and Evaluation of Data Sources and Strategies for Generating Improved Rehabilitation Data. Each panel consisted of presentations by experts in the field followed by a discussion by panelists and attendees. The key conclusions from these panels are summarized below.

Geographical Dimensions of Rehabilitation

Currently, limited data exist that can be used to estimate local rehabilitation patterns. Neither local nor regional differences in rehabilitation can be well distinguished from national trends. Estimation of local levels of rehabilitation is virtually impossible, and no serious investigation of local causes and consequences of rehabilitation projects can be conducted.

There are two strategies for improving the geographic quality of rehabilitation data. Existing surveys can be improved (either through expanded spatial coverage or the addition of rehabilitation questions), or existing records of rehabilitation gathered by municipal governments could be more systematically collected. Unfortunately, there are serious hurdles to be overcome with either of these approaches.

Developing a comprehensive database to address local estimates of rehabilitation activity would be prohibitively expensive. A household-based survey would require an enormous sample to adequately estimate total rehabilitation spending for any small area. However, the more cost-effective approach of collecting and analyzing administrative records also has serious shortcomings. Previous analysis indicates that only a small portion of all rehabilitation activity is reflected in rehabilitation permit data.

Still, there are partial solutions to these problems. The American Housing Survey (AHS) is an appropriate database for studying rehabilitation activity and the context in which it occurs. The national file, however, has insufficient coverage to develop local estimates. Until recently, the metro AHS surveys questioned homeowners on their home improvement activities. Since the metro files had smaller sampling ratios than the national file, there was greater opportunity to estimate home improvement activity at finer levels of geography.

While the coverage of rehabilitation permit data is limited, there may be ways of leveraging its usefulness. Permit data from a single location that is particularly comprehensive could be compared to data available through surveys and other sources. It may be possible to develop weighting factors that would make permit data more accurate in estimating the size and composition of the industry.

Forum recommendations: Improved local data on housing rehabilitation could be obtained through two strategies. The first is to reinstate the home improvement questions on the metropolitan AHS surveys. Secondly, an improved reporting mechanism should be developed for local residential repair and alteration permits.

Rental Housing

Unlike the single-family owner-occupied housing market, there is currently very little systematic information on the rental market. The 1995 Property Owners and Managers Survey (POMS) was a one-time supplement to the AHS that provided information to assess the characteristics of properties actually undergoing capital repairs. However, there were many concerns associated with the survey, including the cost to replicate the survey, particularly if it is expected to generate small area estimates. Also, respondent burden is a concern, since for each unit selected, information on the entire property needs to be provided.

Currently, the larger, professionally managed apartment firms are willing to pay substantial sums for data that is available only from private firms. When data and quantitative analysis are important for business decision-making, the cost of not having the appropriate information is often seen as greater than the cost of obtaining the information. There is the potential, therefore, that rental property owners might be willing to help fund such an effort or consider a joint public-private survey.

Forum recommendations: A survey of residential property owners and managers should be initiated. This survey could be similar to the one-time Property Owners and Managers Survey conducted by HUD. This effort should have collaboration—and potential funding—from private sources.

Financing Rehabilitation Activity

Little research has been done to study the financing of rehabilitation projects. Further study is impeded by the lack of systematic data on funding sources as they relate to rehabilitation activity. The vast majority of lending is done by the private sector. Most federal government support for rehabilitation activity comes through loan insurance programs such as Title I or 203(k), block grant programs like CDBG and HOME, or Tax Credits like LIHTC. However, it is difficult to assess the impact of government rehabilitation programs.

The crux of the problem with the data sources used to analyze financing of rehabilitation activity is that they were never intended for this purpose. The American Housing Survey (AHS) has extensive information on rehabilitation as well as questions on financing, but it does not link the two. The Survey of Consumer Finance (SCF) provides good information on home finance, but only sketchy data on rehabilitation activity.

Several data enhancements would significantly improve our understanding of the role of finance in rehabilitation activity and the impact of government programs in this area. First, general questions on home financing behavior have recently been added to the national AHS. However, the more direct approach of asking the homeowner (or rental property owner in a POMS survey) the specific sources of funding used for home improvement projects would greatly improve the understanding of rehabilitation financing. Alternatively, focused follow-up surveys could efficiently solicit information from those households that have financed rehabilitation projects.

Secondly, many federal and state government agencies, associations, and private industry groups collect information on rehabilitation financing and government support for rehabilitation activity. While any individual source is insufficient to develop a complete understanding of rehabilitation activity, collectively they offer a comprehensive overview. In particular, better documentation of rehabilitation activity under government-funded programs would significantly improve the amount of information available.

Forum recommendations: Better information on home improvement financing could be obtained by supplementing the AHS to ask homeowners directly how they financed their home improvements. Additionally, increased understanding of the impact of HUD funded programs on housing rehabilitation could be obtained by requiring recipients of HUD funding to document rehabilitation activity undertaken through this funding.

Background

Expenditures for repairs and improvements to the nation's stock of homes totaled almost \$180 billion in 1999 according to recent estimates by Harvard University's Joint Center for Housing Studies,¹ approaching 2 percent of total output of our economy. Every year about 26 million homeowners make improvements to their homes. About one million of these owners spend \$10,000 or more on structural modifications, indicating that almost as many owner-occupied homes each year undergo significant modifications as are added to the housing stock through new construction. In many areas of the country, particularly older central cities in major metropolitan areas, rehabilitation of older homes provides more housing opportunities than does new construction.

However, there is extremely limited data available to document the extent of this rehabilitation activity, much less the motivation behind these activities. For example, the U.S. Government's two principal sources of information on home improvement spending—the Commerce Department's quarterly survey of spending on residential alterations and repairs (C50) and HUD's American Housing Survey (AHS)—yield very different estimates of the amount being spent annually on these activities. In spite of inconsistent estimates of spending activity, neither data source adequately meets the needs of policy makers, academic researchers, or industry planners to understand home improvement activities.

As a large supporter of rehabilitation and renovation in the country, particularly in affordable housing sectors, the U.S. Department of Housing and Urban Development (HUD) has a special interest in the acquisition of data on these activities even beyond the AHS. Several of HUD's core programs -- including Federal Housing Administration (FHA) 203(k), Title 1 Insurance, HOME Investments Partnerships Program (HOME), Hope VI, Community Development Block Grant (CDBG), Home Equity Conversion Mortgages (HECM) and other specialized housing assistance programs -- support rehabilitation. Hundreds of millions of public dollars are spent annually on affordable housing rehabilitation. As a result, HUD, especially through the Policy Development and Research Office (PDR), is strongly committed to preservation, rehabilitation and renovation and is therefore very interested in promoting the collection of relevant information to evaluate and modify these programs.

Housing rehabilitation is such a significant and important activity for both the public and private sectors that much effort has been expended identifying data deficiencies. In February 2000, a group of individuals representing academic research institutions, trade associations, private industry, and government data collection agencies convened a forum in Washington DC to discuss the information needs of the home improvement industry. These discussions helped document some of the key issues that need to be addressed to provide a more complete information infrastructure.²

¹ *Remodeling Homes for Changing Households*. Cambridge, Mass.: Joint Center for Housing Studies, 2001.

² *Remodeling Industry Information Summit Proceedings*. Cambridge Mass.: Joint Center for Housing Studies, 2000.

The *Forum on Rehabilitation Data Needs*, sponsored by HUD, convened a select group of leaders representing industry, government, lenders, associations, practitioners, scholars and others to identify major research issues related to the rehabilitation and improvement of U.S. housing, the required data sources to address these issues, and appropriate strategies to implement these data collection efforts.

At the Urban Land Institute on November 13, 2001, approximately forty participants convened for the *Forum on Rehabilitation Data Needs*. The conference facilities were organized to encourage interaction and discussion. Introductions and welcoming remarks were made by David Engel, U.S. Department of Housing and Urban Development; Nic Retsinas and Kermit Baker of the Joint Center for Housing Studies; and Liza Bowles and Ed Hudson of the NAHB Research Center.

The Forum was structured through four panel presentations, each with ample time following for discussion. Experts in the field were selected to present thoughtful and thorough evaluations of specific rehabilitation issues and the ways in which enhanced data could address these issues. In the concluding panel, experts offered appraisals of current ongoing data collection efforts as well as possible supplements. *The presentations are included in this report as written by the authors.* Each panel prompted a rich discussion by forum participants into the types and quality of data that are or should be collected. *This discussion has been organized by topic – following each panel – in this report.*

Panel One: Geographical Dimensions of Remodeling

Moderator: Nic Retsinas, Joint Center for Housing Studies, Harvard University

Presenters: Julia Reade, Joint Center for Housing Studies, Harvard University
Michael Carliner, National Association of Home Builders

This panel reviewed existing sources of rehabilitation data that provide locational information, and considered the basis of need and possible implementation of a strategy to collect market information at the *transaction* level so that data might be placed in a local context.

GEOGRAPHIC DIMENSIONS OF HOUSING REHABILITATION

by Julia Reade, Joint Center for Housing Studies, Harvard University

Research on residential rehabilitation activity will be tremendously improved if data with finer levels of geographic detail become available. At this time, only very limited data exist that can be used to estimate local rehabilitation patterns. Currently, neither local nor even regional differences in rehabilitation can be well distinguished from national trends. Estimation of local levels of rehabilitation is virtually impossible, and no serious investigation of local causes and consequences of rehabilitation projects can be conducted.

Research Questions

Housing policy-makers are not the only group who will benefit from better data on local rehabilitation patterns. Private industry strongly desires such information to improve their market targeting capabilities. Although housing policy-makers and private industry often have differing interests, opportunities exist for mutually beneficial action. When industry discovers underserved local areas that can be profitable markets, both private companies and communities can benefit. Whether through natural market forces or explicit partnerships between government and industry, barriers to rehabilitation can be reduced with lower levels of government intervention or funding. Because of these mutually beneficial possibilities, housing policy-makers are likely to indirectly benefit from industry's use of better data.

Housing Policy-Makers

Evaluating the feasibility and success of any public policy requires data. Measurements must be made of both baseline and post-program conditions. No data currently exist that allow estimates of community-level rehabilitation needs, activities, or outcomes. Data are also required to help understand the mechanisms between how rehabilitation may or may not play a role in achieving policy goals.

Revitalization of Communities

- Does rehabilitation help to revitalize central cities?
- Do rehabilitation investments stem a community's decline?
- What are the returns to rehabilitation investments in declining communities?
- Is rehabilitation spending occurring in places with the strongest underlying needs?
- What rehabilitation programs are best suited for what communities?
- In what ways do rural areas and small towns benefit from rehabilitation?

Improvement of Housing Conditions

- Does rehabilitation improve housing conditions for the residents with the greatest needs?
- Can we estimate an underlying need for rehabilitation? Are there counts of at-risk or unlivable units?
- Where are retrofits for the handicapped being installed?
- Are energy-efficiency programs affecting the housing stock that would best benefit?

Expansion of Housing Availability

- Does rehabilitation provide low-cost housing options?
- Does rehabilitation save marginal units from demolition / conversion to nonresidential use?
- How does rehabilitation convert nonresidential structures to housing?

Private Industry

Industry groups have tremendous interest in local area rehabilitation data. Companies profit from knowledge of where to target marketing and expansion. Distributors and remodeling contractors are the industry groups most likely to take advantage of local market information.

Where is the demand for housing rehabilitation?

- Where are expanding markets for rehabilitation?
- Is targeting underserved areas profitable?
- Do stock profiles predict future rehabilitation needs?

Data Sources

Data sources fall into three main categories: large government surveys, administrative records, and private industry sources. Sources will be evaluated according to geographic detail, rehabilitation information, sample size, survey frequency, and timeliness.

Large Government Surveys

Housing and Household Surveys

Surveys of households and housing units tend to have the best data available for research on housing rehabilitation, but the utility of this data for local area studies is severely restricted by the strong effect of rare, high-spending outlier households.

High-spending households are very important to rehabilitation. For owner-occupied households, spending on rehabilitation is highly skewed - that is, a very small proportion of households account for a very large proportion of spending. Bi-annually, only 9 percent of U.S. homeowners spend over \$10,000 on rehabilitation projects, but these few households account for over half of all U.S. remodeling spending by homeowners. Even more dramatically, the 2 percent of U.S. homeowners spending over \$25,000 account for a quarter of the total.³ It is critical that these high-spending households be well represented in the sample. Therefore, housing surveys require very large samples to catch these important, rare households. Furthermore, large samples are required to offset the strong effect of these outliers when they occur.

Currently, data on homeowners is far better than for renters. Although homeowners make up a larger share of households, it is likely that housing policy-makers require more to target the needs of renter households. The best source of data, the American Housing Survey, only collects rehabilitation data from owner-occupied households. Data for renters is far more limited. The best source of data on rental properties is the Property Owners and Manager's Survey, which has far too small a sample (1,630) to allow coverage of local area conditions.

In a large survey, such as the AHS National Sample, the sample size is not a problem for national estimates of homeowner rehabilitation. As geographic detail is refined, however, sample sizes fall dramatically. In the 1999 AHS national sample, only 35 metropolitan areas had samples including over 100 owner-occupied homes. This is most likely too small a sample to capture an accurate estimate of local patterns.

The AHS metropolitan surveys are large enough to minimize this problem - generally over 3,000 owner-occupied units per metropolitan area. Sample sizes are even large enough to allow estimates of rehabilitation activity at the submetropolitan zone level. The AHS metropolitan survey divides metropolitan areas into "zones," which delineate clusters of households. Each household in the survey is assigned a zone number. Zones are not necessarily spatially contiguous, but instead are socio-economically homogenous. Originally designed to represent over 100,000 people, in 1996 zones represented weighted populations from 30,000 to 200,000. Unfortunately, rehabilitation data collection in the AHS metropolitan survey was terminated after 1996. Although the four metropolitan areas oversampled for the AHS national survey still offer data on local remodeling trends, the value of the data is far lower, because the submetropolitan zone information is no longer collected.

Other household surveys with data on remodeling, such as the Residential Finance Survey and the Consumer Expenditure Survey, also have samples too small to allow local area estimates. A number of routes exist for improving current housing survey

³ Calculated from AHS National Samples, which are top-coded for high-spending households. Therefore these estimates of the impact of outliers are conservative.

data sources. Large-sample surveys with fine levels of geography, such as the American Community Survey, might be amended to include data on rehabilitation, or surveys with good rehabilitation data, such as the American Housing Survey, might be extended for better geographic coverage. Expanded coverage could come through larger representative samples of U.S. patterns or through better coverage of a smaller set of local areas.

One issue with housing survey geographic detail is confidentiality. Because these are all mailed surveys, street address and zip code information exist for each household, but these data are not made available to the public. Although release of such data is inappropriate, agencies could offer tabulations of data with finer levels of geography than currently available without risking confidentiality breaches. Furthermore, if HUD or the Census were conducting the analysis, no further risks to confidentiality would be added.

Economic Surveys

The greatest problem with economic surveys is that the data collected on rehabilitation activity generally measure gross spending or employment related to rehabilitation, but offer little information on how rehabilitation affects housing. Improvement to economic surveys is not likely to enhance the ability of housing policy-makers to research local area rehabilitation patterns. However, as discussed earlier, if industry can benefit from finer geographic detail of economic conditions relating to rehabilitation, the possibility exists that it can be used to indirectly further policy objectives.

Administrative Records

Numerous rehabilitation activities are recorded for administrative purposes. The records most likely to help in rehabilitation research are building permits and appraisals. The challenge to using administrative records for rehabilitation research is to ensure that data coverage is systematic.

There are issues on which rehabilitation activities are recorded. For example, permits for rehabilitation are not required for all improvement projects, and the set of projects requiring permits vary across municipalities. Incidence of appraisals raises a similar issue for variation across local areas. Although these local differences lead to problems for cross-sectional estimates of rehabilitation activities, time-series estimates for any one local area will be consistent so long as the local rules (and their enforcement) do not change. These administrative records offer very fine levels of geographic detail. For more stable measures, time periods can be extended so that records capture a higher number of rehabilitation projects in any given area.

It is difficult to assess the quality of detail that administrative records may capture by project type. For construction permits, it is possible that separate permits are required for different types of projects, such as plumbing or electrical work. In

appraisals, no specific rehabilitation activity may be recorded, but longitudinal linkages of homes will allow researchers to impute the occurrence of some projects.

Home Mortgage Disclosure Act (HMDA) records offer very weak data on rehabilitation activities, collecting data only on home improvement loans. However, they are important as an example of the level of coordination possible for administrative record collection.

Records of rehabilitation projects already exist in businesses, banks, and government offices. These data sources would be very useful if steps were made to have these groups collect their data in a systematic way and then report it to a central clearinghouse. Although costs would be involved for both the administrative unit collecting data and the government or private group serving as a clearinghouse, it is likely that these costs would be substantially smaller than those associated with improving coverage in surveys.

Private Industry Data Sources

A final source of rehabilitation data is industry records and business surveys. Private companies or trade associations often collect data from companies involved in rehabilitation work, pool that data to preserve confidentiality, and produce summaries of the information.

This source of data tends to be limited in that the companies pooling data tend to be manufacturers and distributors. This leads to the same problems encountered with economic surveys; product sales can be tracked, but it is difficult to infer the effect on the housing stock.

If a third party could collect data from rehabilitation contractors, the link to individual homes would be direct. Unfortunately, the fragmented and unstable nature of the rehabilitation contractor industry makes data collection from this universe virtually impossible.

Summary and Recommendations

If HUD or other housing-related groups wish to measure or understand the effects of rehabilitation on local communities or on underserved areas, data on rehabilitation projects must be collected or reported for finer levels of geography. Current data deficits lead to two main problems. First, lack of geographic coverage is too weak to allow estimates of rehabilitation activity. Second, no analyses of the interactions between households, communities, and rehabilitation activities can be conducted.

There are two general options for improving the geographic quality of rehabilitation data. Existing surveys can be improved (either through expanded spatial coverage or through addition of rehabilitation questions), or existing records of rehabilitation could be

codified and pooled. To best serve the diverse needs of researchers, both options for improvement should be pursued.

Developing one comprehensive data source to address all research issues would be prohibitively expensive and burdensome. Due to issues described earlier, a household-based survey would require an enormous sample to adequately estimate total rehabilitation spending for any small area. This is much better accomplished through systematic collection of administrative records. Large, expensive rehabilitation projects, which comprise a large share of total rehabilitation spending, are the jobs most likely to be captured through administrative records. However, administrative records are likely very weak for measuring small and moderate rehabilitation projects. Although small projects make up a small share of total spending, they affect a large proportion of households and the housing stock. A household-based survey would be much better at providing estimates of numbers of rehabilitation projects. Policy-makers and researchers interested in the upkeep of the housing stock will benefit from household surveys, while those interested in capital expenditures will benefit from administrative records.

Furthermore, administrative records alone offer little data on the households and communities engaged in rehabilitation activities. Research on the causes and consequences of rehabilitation projects requires information on the people and places involved. Household surveys of small areas are the best sources of this data.

Because of the differing strengths and weaknesses of types of data sources, focus on one data source alone will leave an incomplete knowledge of rehabilitation. Policy-makers will best benefit from improvements to both administrative record collection and household surveys, because one data source cannot sufficiently address the varied research questions still unanswered about rehabilitation.

ADMINISTRATIVE RECORDS AS A SOURCE OF REHABILITATION DATA

by Michael Carliner, National Association of Home Builders

Need to Supplement Data from Surveys

It is unlikely that there will ever be useful local area remodeling data across many areas based on surveys of households. The incidence of major remodeling is too low, and there are other measurement problems as well. Even at the regional level--for populations of over 50 million—the numbers from surveys such as those used to produce the C50 data on residential alterations and repairs are imprecise and unreliable.

There may be greater potential for developing local measures based on surveys where the sampling frame is not all households or all housing units, but instead draws samples from permits or lists of remodeling contractors. The Census Bureau's data on new homes started, completed, and sold are constructed in that manner, using a sample of permits drawn from local records and determining the actual activity conducted by the people who were issued permits.

Administrative Records Provide Data

Most likely, however, the only hope for measuring remodeling activity at the local level is from administrative records such as building permits, tax assessments, building inspections, or mortgage lending. The Census Bureau is scheduled to reinstate in 2002 the collection of data on building permits for residential remodeling. The collection of that information, along with permits for nonresidential construction and for demolitions, was terminated in 1995.

The new data on permits for residential remodeling will provide valuable measures of local activity. Each of the roughly 19,000 local permit-issuing jurisdictions will be asked to indicate the total number of permits and the aggregate value. Differences among areas in permit requirements and the stringency with which requirements are enforced will limit the value of the data for comparisons among areas. Also, the Census Bureau will not collect the value of plumbing, electrical, or mechanical "installations." For looking at changes over time within areas, however, there will be more consistency.

Analysis of the data available until 1995 showed that permit values were only a fraction of the remodeling identified in the C50 and AHS data. In 1993, for example, total permit value was \$15 billion, compared to \$54 billion in additions and alterations estimated for 1993 in the C50 data. The C50 data show an additional \$21 billion in major replacements in 1993, some of which, at least theoretically, should also be subject to permit requirements. Changes in the national totals for remodeling permits did not move in concert with other measures. While the C50 data showed a decline in additions and alterations from \$42 billion in 1989 to \$34 billion in 1991, with a rebound to \$54 billion in 1993, the permit totals were virtually unchanged over that cycle, remaining at \$15 billion. There were larger changes in permit values at the state level, and those changes

were generally consistent with the relative economic and housing market strength of the states, but there was no alternative local measure to compare to the permit data.

For many of the potential analyses of remodeling at the local level, it would be desirable to have information about individual permits, rather than the total number for the jurisdiction. In the simplest application of such microdata, it would be possible to calculate median values that would not be distorted by a single large project. Analysis of individual permits would also make it possible to pinpoint the location of activity, which would indicate whether it was rehabilitation of housing at risk or gilding of high-end homes.

Further extensions of the use of individual permits would include matching permits to data on grants or tax credits, to property tax records, etc. The technology for that type of matching has been improving, and has been used in developing repeat-sale price indices.

Recently, the Census Bureau conducted a telephone survey of 73 local permit offices to assess the availability of remodeling permit data and the criteria determining whether permits were required. While virtually all permit offices said that additions required permits, a substantial share did not require permits for alterations within the structure, and many did not require permits for major replacements.

Other than that survey, there has been little investigation of inter-area differences in administrative records, regulatory processes, and data management. The first step toward improving local housing data, not only for remodeling but also for new construction and other key housing market information, should be to collect information about current practices. Beyond that, it may be possible to influence future practices in ways that provide better data and improve the efficiency of local government, such as by providing manuals with suggested procedures or computer software for managing permits and linking to inspections, tax records, etc.

Improving the Collection of Data

Concrete steps to improve the availability and usefulness of local data might include the following:

- Include the value of plumbing and electrical work, where possible, rather than instruct local officials to exclude that value from their reports of permits.
- Create a file of permit criteria for each of the local permit-issuing jurisdictions, showing, for example, whether permits are only required if the value of the work being done exceeds a specific threshold, or whether specific types of major replacements are included or excluded.
- Do a study of the administrative processes for a number of jurisdictions, to better understand what is typically done and how it might offer opportunities or constraints for expanding the information available.
- Collect information about individual permits from selected areas where such data are already available in computer-readable form. Matching against data collected for the

C50 and/or AHS for the same areas, see whether permits were issued and whether the value of work reported in the surveys is consistent with the permit value.

DISCUSSION

Following the formal presentations by Julia Reade and Michael Carliner, Forum participants commented on the suggestions raised and offered other potential solutions to the paucity of rehab data within a local context.

Surveys Could Provide Additional, Useful Data

Regarding the viability of surveys to produce useful, reliable data, Michael Carliner underscores the concerns raised in his presentation and feels that researchers should look to other means to collect needed information to inform public policy and industry. While some agreed that surveys were expensive and imprecise and may be limited due to confidentiality concerns, others argued that they were often the only source of comprehensive and meaningful data on particular communities.

Ronald Sepanik, HUD, offers that they have added questions to the AHS survey in the past and may opt to do so again. Sepanik thinks it is worth exploring if adding several questions would vastly increase knowledge about the rehab industry, but even adding new questions to a preexisting survey can be costly and this will need to have a private sponsor or a groundswell of political support for public funds to be invested here.

Permits as a Source of Local Data

Barry Rappaport, U.S. Bureau of the Census, reports that the Bureau's revised survey will collect information about permits for improvements in January 2002, including the number of permits by place. This has the potential to provide specific, local data available through permit applications.

George Roff, U.S. Bureau of the Census, believes the new survey will capture permit values, and the number of permits by place, and that this will be useful to some extent except for places that do not issue permits or are less stringent about permit issuance. Carliner states that permits won't give accurate comparisons of the relative magnitude of activity in different markets, but they will measure changes over time in particular places. To emphasize how much information might be missed through permit analysis, Dave Engel, HUD, polls the group to ask who has done rehab, even significant rehab, without pulling permits and argues that this will be an ineffective way to track rehab. Barry Rappaport, U.S. Bureau of the Census, also thinks we'll miss some, but it would be useful to help fill in some of the information gaps that currently exist.

Kermit Baker, Joint Center for Housing Studies, wonders if we would have more luck capturing the information we need from permit-issuing offices if they were provided specialized software to help track recipients and data about particular projects. Rappaport doubts that this would be successful, responding that there are 19,000 permit issuing offices that each conducts business in its own way. Carliner suggests evaluating the helpfulness of permits by reviewing a particular place where the permit records are in searchable, computer-readable form to see if they adequately represent the local market.

Paul Emrath, National Association of Home Builders, thinks there might be increasing pressure on rehab customers to pull permits and “follow the rules” if it would impact their ability to resell their property. Emrath continues, commenting that easily transmitted information may encourage homebuyers to be more diligent about buying a home that is fully compliant with local regulations, including proper permits.

Michael Collins, Neighborhood Reinvestment Corporation, reminds participants that permits provide very little information about the customer and the surrounding community, and that these rehab “instances” would need to be cross-referenced with AHS data or other sources to get at what we really need to know about occupants, decision-making, etc. Reade agrees, that if we want the information to educate public policy, we need to know a lot more than what the permits alone can tell us. Carliner nods in agreement, asking the participants if they believe that many HOME recipients pull permits for their rehab. Mimi Kolesar, HUD, affirms that this has been a problem but that increased training is helping practitioners follow defined procedures including pulling permits. She believes that evaluation of permits may ultimately provide better data than it would today.

Gathering Data from Industry

Bill Asdal, Asdal Builders, suggests that an effective way to gather information closer to the transaction would be to collect product sales data from manufacturers and distributors. He believes this would avoid the confidentiality issue, and provide a comprehensive means to information about the type and location of rehab. Asdal comments that it is revealing that there are very few manufacturers present during this forum and thinks they should be engaged as to how the data would be useful in their marketing and forecasting and how they can contribute to the information collection.

Asdal believes that the biggest issue has been sufficient coordination of the different players and their self-interests. He argues that industry might be incentivized to collect data about how and where their product is being used, that there are some natural market incentives already and that, with the right coordination, including a clear definition of what the data needs are, industry could be supportive and cooperative. Bob Czechowicz, Masco, agrees that this would be a useful way to collect information about the kinds of rehab projects that are actually occurring. He believes that do-it-yourselfers – particularly on smaller projects – could easily be missed unless suppliers (more than manufacturers) provide information about the kinds of product sold. Czechowicz argues that retailers, distributors, and wholesalers would know their rehab customers and could provide useful information about the kinds of products used and activities undertaken.

Blaine Verdoorn, Andersen Corporation, agrees that it would be useful to know how much of their product goes to new vs. rehab customers, and while they have a hypothesis about how much of their market is new vs. rehab, they don’t feel they have sufficient data to know for sure. Another participant offered that product distributors would know the difference between new construction and rehab customers and could help researchers find

the boundary between these two industries as well as a broadly defined location of use. This information would be useful for both industry and public programs. The challenge is getting cooperation from industry, according to Carliner, who believes that manufacturers and distributors don't necessarily recognize "rehab" as an industry and therefore don't think in terms of their business that way. Reade mentions, too, that remodeling contractors would not be very helpful since many of these are difficult to track from year to year; contractor attrition is estimated at 10 percent per year.

Paul Sen, U.S. Bureau of the Census, argues that relying on product information to assess the rehab market would miss the significant service and installation costs that generally accompany the product. He also wonders how to determine and quantify the service costs of do-it-yourselfers. Ellen Roche, National Association of Realtors, asks the group to take a step back to define what we're trying to measure. If we're only looking for the major rehab projects, we'll miss frequent small investors and those households that are careful maintainers.

Other Suggestions for Data Collection

Mimi Kolesar, HUD, suggests that we might review existing public programs for their rehab activities. For example, through required reporting that accompanies public funding, HUD knows a great deal about how their HOME funds are used, including very specific addresses for approximately 30,000 affordable housing units each year and that each of these units is rehabbed with an average of \$15,000 in each unit.

Marcie Cohen, AFL-CIO Housing Investment Fund, suggests that we might turn to lenders for critical information regarding the kinds and whereabouts of investment being used for rehab.

Another participant argued that tax records can supply the value of the units with the ability to track values over time and possibly track the occurrence of major vs. cosmetic rehab. In addition, tax assessments should report the value of each rehab project.

Panel Two: Rental Housing

Moderator: Kermit Baker, Joint Center for Housing Studies, Harvard University

Presenters: Meryl Finkel, Abt Associates
Mark Obrinsky, National Multi Housing Council

This panel reviewed what little sources of data exist on rental housing rehabilitation and considered how to create a market interest in developing reliable data useful to both industry and public entities, and some effective strategies for determining rehab spending on rental housing stock.

DATA SOURCES FOR RENTAL HOUSING REHABILITATION

by Meryl Finkel, Abt Associates

Unlike the single-family owner-occupied housing market, there is currently very little systematic information on the rental market. We have very little information necessary to describe the ownership profile of the nation's rental stock, let alone the data needed to describe the rehabilitation needs and activities in the rental stock. Basic questions such as: What types of owners are out there? and What proportion of the stock is owned by what type of owner? cannot be answered in a systematic way. Questions specific to rehabilitation such as: What factors affect rehab needs? and How rehab is being financed? can also not be answered.

The goal of this panel is to discuss the status of information needed to address research issues relating to rental housing rehab. The following four topics will be covered:

- What are the key research needs in the area of rental rehab?
- What data sources exist to address these research needs, and how well do they address them?
- What are the remaining data gaps?
- What is needed to fill these gaps?

Research Needs

- What are the rehab needs of the rental stock?
 - What are needs overall and by segment of the stock (location, property size, rent level, tenant characteristics, government assistance)?
 - How do needs vary by owner type?
 - What factors affect rehab needs?
- What rehab is being done?
 - What is being done overall and by segment of the stock (location, property size, rent level, tenant characteristics, government assistance)?
 - How does rehab vary by owner type?
 - What factors affect rehab activity (projects and timing)?
- How much is being spent?
 - How much is being spent overall, and by segment (location, property size, rent level, tenant characteristics, assistance)?
 - What are spending by project type?
 - What factors affect costs?

- How is it being financed?
 - How does financing vary by segment of the stock (location, property size, rent level, tenant characteristics, assistance)?
 - How does financing vary by owner type?
 - Is rehab typically financed only as part of a larger acquisition?
 - What is the role of government programs in rehab finance?
- What are the motivations for owners in rental rehab?
 - How do owner motivations for conducting rehab vary by type of owner?
 - How does project type vary by owner type?
 - How does timing of rehab vary by owner type?

Data Sources

As noted above, very little data is available to help analyze rehabilitation issues in the rental stock. Below we describe what is available to address each of the five research areas listed above. For each of the databases presented, we list the topics covered, database size, geographic coverage, frequency of collection, timeliness of the data, and issues related to reliability.

Rehab Needs

The American Housing Survey (AHS) provides some information on the condition of the stock overall and by segment. Condition may be a useful proxy for estimating rehabilitation needs. The AHS shows that about 88 percent of rental units are considered “adequate”. These units typically have few system failures, although a portion may require some form of rehabilitation in order for them to remain competitive with other properties in their rent range. Another 9 percent are considered “moderately inadequate”. These units have problems in 2 to 4 systems such as incomplete kitchens, leaking ceilings, or faulty heating, wiring or plumbing. The final 3 percent of the stock are defined as “severely inadequate”. These units have failures in several major systems and are likely not providing acceptable housing to their occupants. The AHS allows comparison of quality by building size, building age, rent, tenant characteristics, receipt of government assistance, and location.

As shown in Exhibit 1 the AHS includes data on housing quality by location, property and tenant characteristics. The sample size is large enough to provide reasonably reliable information for some subgroups.

Exhibit 1: Summary of AHS Database Regarding Rental Rehab

	AHS Database
Rental topics covered	Quality of the stock by broad location, property and tenant characteristics
Database size	About 13,000 rental units, (about 5,000 in single unit properties, close to 3,000 units in 2-4 units buildings, and 5,000 units in 5+ unit properties)
Geographic coverage	Available by region, for large MSAs and by central city/suburb/non-metro
Frequency of collection	Every 2 years
Timeliness of data	Data released within 1 – 2 years of collection
Reliability of data (response rate issues)	Fairly complete data for the relevant variables

Capital Improvements Made in the Last Five Years

The 1995 Property Owners and Managers Survey (POMS) was a one-time supplement to the AHS that provides some information that can be used to assess the characteristics of properties actually undergoing capital repairs. The POMS collected information on capital improvements made during the five years prior to the survey, but, for multifamily properties, did not collect information on the level of spending for these improvements. Thus, we can report on whether or not the property reported any improvements, but not on the level of improvements made.

Nearly half of all rental properties had some sort of capital improvements during the period. Bathroom renovations were the most common types of capital improvement, occurring in nearly one quarter of all rental properties. About one fifth of all properties reported heating improvements, plumbing improvements, or kitchen improvements. The POMS allows comparison of quality by property size, property age, rent, receipt of government assistance, location, and owner type and size.

Comparisons between POMS and AHS are somewhat complicated by the unit of analysis – AHS looks at units and buildings, POMS at properties.

As shown in Exhibit 2 the POMS includes some data on rehab activity by location, property and typical tenant characteristics. The sample size is large enough to provide reasonably reliable information for some subgroups, though not as large as AHS. As currently envisioned, it was a one-time effort.

Exhibit 2: Summary of POMS Database Regarding Rental Rehab

	POMS
Rental topics covered	Recent rehab activity (yes/no) by broad location, property characteristics, usual occupants, and some owner characteristics
Database size	About 8,000 rental properties. (2,500 1-unit properties, 1,500 2-4 unit properties, and 4,000 5+ unit properties)
Geographic coverage	Available by region, and by central city/suburb/non-metro
Frequency of collection	One time – 1995
Timeliness	One time
Reliability of data (response rate issues)	Some variables have high percent missing

How Much is Being Spent?

The U.S. Census collects quarterly data on expenditures for residential improvements and repairs. Data on total improvements are available by region and by property size. For all rental properties combined, the Census provides total expenditures for various categories of rehab.

A key shortcoming of the data is that it does not provide any estimate of the number of properties or units undergoing rehab. For example, the series shows that in 1995 (the same year as the POMS), about \$4 billion was spent on rehab of single-unit rental properties in the South and Midwest, while \$617 million was spent in the Northeast. Among 2-4 unit rental properties in the South \$196 million was spent on rehab, and in the northeast \$1.7 billion was spent. Among 5+ unit properties \$2.6 billion was spent in the Northeast and \$814 million in the Midwest. Without making assumptions on the size of the stock by region, it is hard to make sense of the data. To estimate the per-unit or per-property activity, one needs to make additional assumptions, which do not necessarily yield believable results.

For example, if we assume that the number of properties and average property size by region and size is accurate in the POMS we can estimate the per-property average expenditure and the per-unit average expenditure. Using these assumptions, rehab in the Northeast and South averaged about \$500 per single unit-property compared with about \$2,000 per property in the Midwest and West. Among multifamily rental properties average expenditure per unit is highest in the Northeast at about \$880 in both 2-4 unit and 5+ unit properties, and lowest in 2-4 unit properties in the South at \$178 per unit.

If we further assume that the percent of properties with any rehab is accurate in POMS, and still assume the average property size is accurate; we can estimate the average expenditure per unit in properties that have had some rehab. The range is from about \$1,300-1,500 per unit in the both 2-4 unit and 5+ unit properties in the Northeast and in 5+ unit properties in the South, to under \$400 in 5+ unit properties in the West. Among single-family properties the range is from about \$1,000 per rehabbed property in the Northeast and South to over \$4,000 in the Midwest and West.

As shown in Exhibit 3 the Census rehab series provides limited data on rehab expenditures by region and property size. Sample sizes and data collection methods make the data somewhat unreliable.

Exhibit 3: Summary of Census Database Regarding Rental Rehab

	Census C50 Rehab Series
Rental topics covered	Dollars spent on renovations by region and by property size
Database size	About 3,000 properties queried (includes all rentals)
Geographic coverage	Only by region
Frequency of collection	Quarterly
Timeliness	Released about 3 quarters after collection

Reliability of data (response rate issues)	High standard errors for individual components
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How is it being financed?

No published information is available on financing of rehab of rental properties. Data on financing is only available anecdotally from developers and lenders. In a study for HUD we spoke with lenders and developers and found that rehab is typically done upon sale of a property and financed as part of the overall deal.⁴

What are the motivations for owners in rental rehab?

The POMS provides some basic information on ownership of rental properties – number of owners, ownership type, and total number of rental units owned. Thus, we can say, for example, that properties owned by individuals are less likely than properties owned by real estate corporations and by limited or general partnerships to have carried out rehab in the five years prior to the POMS survey. Similarly, entities that own additional properties were more likely to have carried out rehab. However, because the POMS does not include information about property condition, we cannot analyze the relationship between owner characteristics, property characteristics, and rehabilitation decisions. Nor can we say anything about owner motivations.

Gaps Between What Exists and What We Would Like to Know

Exhibit 4 summarizes what is known and the remaining gaps in each of the four research topics.

Exhibit 4: Gaps in Data Availability

	What We Know	What We Don't Know
What are the needs?	Housing quality by segment	How does quality relate to rehab decisions? Housing quality by owner type Factors that affect rehab need
What is being done?	Incidence of some types of rehab by segment	Factors affecting timing of rehab Factors that affect what projects get done
How much is being spent?	Can get very broad estimates of spending by region and property size with a lot of assumptions	Spending by segment Spending by type of project Factors affecting costs Spending by owner type
How is it being financed?	Only anecdotal information	How does financing vary by segment of the stock? Is rehab typically financed only as part of a larger acquisition? Role of government programs in rehab finance Financing by owner type
How does ownership type relate to rehab issues?	No data available	What motivates owners to rehab when they do and to the extent they do? Do different owners do different things?

⁴ See Meryl Finkel, Laura Dueñas, Eliza Edelsberg Revised Draft Final Report *Analysis of Rehabilitation Financing for Multifamily Properties* (Abt Associates, August 2001)

What is Needed to Fill the Gaps

Exhibit 5 shows the properties of an ideal database that could be used to address the rental rehab issues raised above.

Exhibit 5: Characteristics of Ideal Rental Rehab Database

	Ideal Database
Rental rehab topics covered	Quality of stock, planned rehab, actual rehab, costs and financing of rehab – all by property segment and by owner type
Database size	Sufficient to obtain reliable information by region, property size and for large MSAs
Geographic coverage	All regions, central city/suburb/non-metro
Frequency of collection	Can be annual, or even every 2-3 years
Timeliness of data	Perhaps aggregate data needed shortly after collection, but detail can be released later (1-2 years after collection)
Reliability of data (response rate issues)	Data collection must be better than a mail survey to ensure reliable results

STRATEGIES FOR ACHIEVING DATA NEEDS

by Mark Obrinsky, National Multi Housing Council

The need for additional information regarding rental housing rehabilitation is great, but very little information is currently collected. Obtaining high-quality, timely information on planned rehab, current (and recently completed) rehab, rehab financing, and rehab motivation represents a very ambitious project. These data cannot be obtained from existing periodic surveys, even if enhanced. Consequently, a new survey (or surveys) will have to be implemented to produce the kind of data we need. New surveys pose challenges, however, even above and beyond funding.

Whom to Survey?

Virtually all surveys that capture housing variables interview residents—examples include the American Housing Survey (AHS), Current Population Survey (CPS), Decennial Census, Consumer Expenditure Survey (CES), and Survey of Residential Alterations and Repairs (SORAR). The problem is that when the resident is a renter rather than an owner, the resident will know little, if any, of the information we would like to have.

But owners must be surveyed if we are ever to get answers to questions like:

- What rehab is currently underway (by location, property size, structure size/type, rent level, tenant characteristics, and government assistance)?
- How much is being spent?
- How is rehab being financed?
- What is the motivation for rehab?

Some data on the condition of the stock can be obtained from the AHS. But it is difficult to estimate the level of rehab “need” based on AHS data, particularly at the micro level—for example, metro area rehab need estimates for high-rise apartments in the central city vs. garden apartments in suburbs.

Only the Property Owners and Managers Survey (POMS) surveyed owners. Unfortunately, this was a one-time survey that is not scheduled to be repeated.

Clearly, we need to survey owners. One sensible strategy, therefore, is to build on the work of the POMS by making it a regular, periodic survey. The fact that the sample is drawn from the AHS allows the research to match housing unit and tenant characteristics obtained from the AHS to the property information obtained from the POMS. (To be sure, the ability to use this information is limited, however, as such research must be undertaken at the Census Bureau offices and only the information that meets confidentiality restrictions may be used.)

There are a number of issues to be resolved, however.

- Cost. Surveying owners, even if in the form of a resurrected POMS, is effectively a new periodic survey, and consequently involves more substantial costs than would be the case if the desired data could be collected by altering, or “tweaking,” an existing survey. The exact cost would depend on the periodicity.
- Sample size. The POMS sample consisted of about 16,000 housing units. This included:
 - single-family detached and attached houses
 - condos and coops
 - single-family homes with an extra unit in basement, garage, or attic
 - mobile homes
 - apartment buildings

This sample size limited geographical information to regions, and the central city/suburb/non-metro breakdown. To also obtain reliable information for large MSAs, particularly by property type, requires a larger—perhaps much larger—sample size.

- Sampling unit. It is useful to have information aggregated by the number of units in a property and also by the number of units in a building. The former framework is the typical yardstick in the apartment industry: a collection of 7 buildings with 8 units each is viewed as a property with 56 units (and would appear in the category of 50-100 units). This is regarded as more useful than viewing them as a collection of buildings with 5-9 units, which would group this property in the 5-9 units category along with many “mom and pop” properties. Even so, almost all of our information about multifamily housing is grouped by number of units in a structure. In order to relate this new information to be collected to existing data sets, it would be helpful to be able to aggregate the data by units in the structure. To the extent that collecting the information both ways increases the cost prohibitively, it would be better to collect the information based on the number of units in a property.
- Response rate. Although the apartment industry is relatively unconcentrated, certainly compared with many industries in the U.S., the fact remains that the larger, professionally managed firms have a substantially higher likelihood of being sampled than does the average homeowner. In addition, there is a possibility that one firm—and this is particularly true for large firms—may get surveyed regarding more than one property. Finally, since after a unit is selected for sampling, information may be collected not just on that unit, but on the entire property, owners of larger properties will have to submit more information than would owners of smaller properties. Consequently, there appears to be a greater burden placed on such firms. In response, there may be a higher degree of resistance. A similar issue arose in collecting data for the *Survey of Residential Finance*.

Two questions suggest themselves here.

1. Should there be different procedures and questions for different kinds of properties (that is, “mom and pop” owners as opposed to large, professionally managed owner firms)?
2. Whom should be surveyed, the owner or the manager of a property? It would be useful to have survey specialists talk with a few different owners, either independently or in a focus group setting, to arrive at optimal solutions.

The usefulness of the data may open up some opportunities, however.

- Firms in the apartment industry would find such data useful. When considering any kind of acquisition or development, private firms want to know everything they can about the market (and sub-market), including specific information on individual properties under development or rehabilitation and the likely asking rent at every possible competitor. Although the proposed data set would not provide that level of detail, aggregate information within geographic regions and property types would provide a useful yardstick for apartment firms. Among the most useful information would be the change in rent following rehabilitation, grouped by the amount or extent of the rehabilitation. In a similar vein, it ought to be possible to calculate the return (measured as the increase in rents) to various kinds of improvements.
- Local policy makers ought to be interested in such information. Affordable housing is inadequately supplied in many areas. Knowledge about the quality of the rental housing stock—including vacant (and abandoned) units—and the potential costs and benefits of rehabbing such units, would better equip local officials to make informed decisions about whether to assist in such rehabilitation.

Would private firms financially support additional data collection?

- Currently, the larger, professionally-managed apartment firms are willing to pay substantial sums for data that is available only from private firms. Additionally, some firms pay substantial sums for one-time research projects. In other words, when data and quantitative analysis are important, even crucial, for business decision-making, the cost of not having the appropriate information is often seen as greater than the cost of obtaining the information. There is the potential, therefore, that they might be willing to help fund such an effort, if they believe the data would truly be valuable.
- There is a “free rider” problem here that needs to be dealt with. In the context of private data collection, firms pay the cost of the survey largely through the cost of receiving the data. If the federal government were to collect the data, presumably it would supply the data to the public at little or no cost. This creates a “free rider” problem. Alternatively, private firms have sometimes sponsored individual

research and data efforts for which they are “compensated” by having their names and/or logos on the final product. Is there an equivalent in the public sphere?

- It is not clear whether there is a useful precedent here in which private firms have helped fund government surveys. Back in the 1990s, there was discussion of such an arrangement regarding the collection of mortgage origination data, but it did not come to fruition.

Can private apartment firms facilitate data collection?

- The value of the data may make firms willing to respond to surveys—or at least, more willing to be influenced by persuasion.
- The problem is that one doesn’t know, in advance, which firms will be sampled. And after the sample is selected, confidentiality presumably would prevent any attempt to “jawbone” or otherwise encourage participation by specific firms.
- Even so, some statement of support by individual firms, or by a consortium of firms, or perhaps even by trade associations, may be of assistance.

“Outside the box” solutions

- In principle, one might consider a joint public-private survey, in which a private firm with experience in surveying apartment firms might be given the responsibility for surveying for some, or perhaps even all, the data.
- There is at least one precedent for this. HUD’s now-defunct *Survey of Mortgage Lending Activity* aggregated survey results for a variety of lender types; at least two different trade associations were responsible—under a contract with HUD—to provide data for specific lender types.
- The obstacles are large, however.
 - Selecting one firm means not selecting that firm’s competitors, which may have repercussions in the data marketplace beyond the rental rehab survey.
 - Confidentiality may be an issue.
 - Quality control is critical. Designing the methodology and selecting the sample are critical to data quality. Who would be responsible for that?
 - What level of control would HUD, or the Census Bureau, have over a private firm?

Conclusion

New data that could provide high-quality estimates of rehabilitation activity in rental housing generally, and at apartment firms in particular, would be of great value and should be pursued. The critical task in implementing a new survey is finding a sponsor—an agency or group that will take responsibility for designing and implementing (including funding) a new periodic survey. This survey needs to interview rental property

owners and/or managers, rather than residents, as the latter will not have the information needed. The experience of the Property Owners and Managers Survey (POMS) should be useful in this new endeavor.

DISCUSSION

Following the formal presentations by Meryl Finkel and Mark Obrinsky, Forum participants commented on the suggestions raised and offered other sources and methods for multifamily rehab data.

Existing Data Sources

Participants agree that pieces of the information they seek about the rental rehab market may be available through a number of sources. Marcie Cohen, AFL-CIO Housing Investment Trust, believes that a database of multifamily properties assembled by the Urban Land Institute and others was the result of similar discussions held a number of years ago with Fannie Mae, Freddie Mac, the AFL-CIO and others. Cohen was unaware of the result of these meetings and what information was collected through the survey. JoAllen Gause, Urban Land Institute, reports that the resulting survey collects information about operating and vacancy data on multifamily properties but may not include rehab data specifically. Gause offered to check into what specific information is collected through the ULI survey.

Cohen suggests that other sources might be used to supplement the ULI data to reach an understanding of the rental rehab market. For example, Fannie Mae and Freddie Mac collect very detailed financial data that could supplement the information known from the ULI survey. In addition, mortgage lenders (who do most of the multifamily property lending) and public funds (where those that are not financed through mortgage lenders get their resources) could be polled to provide supplemental information. Finkel agrees, stating that the Mortgage Bankers Association may already have this information or they could survey their members. She cautions, however, that most rehab loans are included in other types of loans and even though Fannie and Freddie require this information, they would potentially miss those loans that are not ultimately sold to the secondary market.

Darryl Hicks, Home Improvement Lenders Association, comments that the multiple layers of financing that most of these deals require makes them difficult to piece apart and thinks we would need to survey developers to get at the actual rehab information.

While pieces of information about the multifamily rehab market might be available from different sources, the challenge exists to combine data in a way that is meaningful, has credibility, and is not cost-prohibitive.

State HFAs as a Source of Financial Data

David Listokin, Rutgers University, suggests that, while there is no substitute for surveying, there may be a few “half-measures” worth looking at in the meantime. One is the Office of Multifamily Housing Restructuring, at HUD, which has data on stock now being rehabbed. Another source could be the State Housing Finance Agencies, which have financial information regarding tax credits. Cohen believes HFAs would be a good source of data and Mimi Kolesar, HUD, adds that they collect information that could be broken out into rehab vs. new construction. Finkel cautions that HFAs don’t report to

HUD and have therefore been less than helpful on this data collection. Abt recently put together a database with information from HFAs and their experience was that it is very difficult to collect comprehensive information from all HFAs. The Department of Treasury would have to be involved and even still, Finkel believes the data is limited. Participants agree that it seems unlikely that questions could be answered by this data.

Property Owners and Managers Survey

The POMS provided some useful information about the market in 1995 but, as a one-time only survey with limitations – relatively small sample size, confidentiality issues, no questions related to total rehab dollars spent during that five year period – it cannot offer a great deal of information about the rehab rental market. On the positive side, the fact that the sample is drawn from the AHS allows the research to match housing unit and tenant characteristics obtained from the AHS survey respondents to the property information obtained from the POMS.

Ron Sepanik, HUD, reports that the POMS cost around \$3 million. It would be possible for HUD to redo it, but resources would have to be raised. For POMS, there had been a HUD interest in surveying property managers and landlords for many years and this propelled the first survey, but there may be less of an internal political will to redo the survey at this time. HUD would like to work with industry on these types of projects but they had an unsuccessful experience trying to generate support for the Residential Finance Survey. HUD convened lots of meetings with industry stakeholders but, in the end, HUD financed that survey themselves.

Mark Schroder, HUD, wonders how useful the POMS data has been, since he's seen it used very rarely. Several participants offered that the data has been extremely useful for researchers in this area and would be even more useful if it were provided on a regular basis. Furthermore, participants believe that industry would find it useful, but they might need to be convinced over time.

Industry Interest in Rental Rehab Data

Obrinsky suggests that industry would be willing to pay for some of this data collection, "It's a lot less expensive to pay for the data than to not know this information." In addition, Obrinsky believes that involving industry -- convincing them of the importance of a survey -- would ensure a higher response rate, a more efficient process, and more accurate outcomes. The challenge is to connect with property owners and managers rather than the more accessible residents.

David Engel, HUD, wonders if industry sees a need for this data and challenges the National Multi Housing Council and other associations representing industry to work with their members to develop an appetite for a survey of this kind because it's unclear that there really is a groundswell of interest. Jack Goodman, Hartrey Advisors and former Vice President of Research at the National Multi Housing Council, suggests that

this is outside the scope of the Council and that it really would be HUD's responsibility to acquire this information.

Baker asks participants, "Are there currently any incentives for manufacturers to focus on the needs of multifamily rehabilitation?" Since available data is almost exclusively on the single-family rehab market, what would drive any interest by industry on multifamily? Blaine Verdoorn, Andersen Corporation, offers that code and structural regulations keep Andersen products focused on single-family. Bob Czechowicz, Masco, adds that his company is as interested in multifamily properties as any remodeling segment, but they don't know enough about the market to focus on it. Sylvia Kellogg, USG Corporation, agrees that because there is little data, they devote less time to marketing their products for multifamily property use. While industry seems less inclined to directly invest their company's resources, it seems they would be interested in participating in a process to acquire information that would allow them to better understand the rehab market.

Collecting Data to Ensure Quality Properties

Bill Asdal, Asdal Builders, suggests that we take a step back to look at the bigger picture, to evaluate what we really need to know and why. For public entities, improving the quality of housing is the goal. But for private firms, they need to see a return on investment that makes the business worthwhile. He argues that we should consider developing a system that brings the two interests closer together. For example, if we rated the quality and durability of construction or rehab, it would ultimately result in better quality buildings for longer periods of time -- in less need of constant rehabilitation -- and therefore, provide more adequate multifamily housing. Asdal comments that too often what we see in the field is the job award going to the lowest bidder, whether the resulting building will serve its residents well or last very long.

Asdal suggests the development of a durability rating that would quantify the quality of housing. This would impact the desirability of properties as well as the ability for quality work to receive a fair price. Asdal believes that there are some examples out there already of how the market could be swayed to do the right thing: energy efficient mortgages, or safety insurance, for example. He suggests we speak in terms of *life-cycle costs* rather than *first costs*. "We'll incent longer lasting buildings." A *Core Durability Rating System* would require collecting comprehensive data on each property that resulted in the assignment of a rating such as a number from one to 100. Participants debated briefly over to what extent industry or buyer decisions are currently made by more than first cost and whether this rating would have any impact on decision-making. According to Carliner, data suggests that buyers will need to see a 30 percent savings the first year in order to be interested in life-cycle costs. Of course, additional incentives could help change buyer preference from first cost to life-cycle cost and a rating system could help this happen.

Panel Three: Financing Rehabilitation Activity/Government Rehabilitation Programs/Insurance Rehabilitation

Moderator: William Apgar, Joint Center for Housing Studies, Harvard University

Presenters: Alvaro Martin-Guerrero, Joint Center for Housing Studies,
Harvard University
David Listokin, Center for Urban Policy Research, Rutgers University

This panel reviewed the challenge of the methods that are used to finance rehabilitation, from household savings to equity loans, to mortgage refinance, to credit card debt, to public grants and, very often, a combination of these. Using data about financing rehabilitation could help determine the unmet potential for rehabilitation and reveal market opportunities as well as a means to evaluate the effectiveness of current public programs. Insurance payouts may be an important source of funding home rehabilitation.

HOME REHABILITATION FINANCE AND GOVERNMENT REHABILITATION PROGRAMS

by Alvaro Martin-Guerrero, Joint Center for Housing Studies

Introduction

The gap between the cost of renovation and available financial resources is a major challenge for rehabilitation. It has been estimated that nearly one-third of the \$623 billion needed nationwide for rehab is unaffordable without external financial support.⁵

Little research has been done to study the way people finance rehab projects. Some studies have focused on the relationship between home-secured lending and home rehabilitation.⁶ Other studies show that home rehab is the main purpose for home equity borrowing and home mortgage refinance.⁷ Further study of finance is impeded by the lack of systematic data on funding sources and rehab activity.

The vast majority of the rehab activity lending is done by the private sector. Most federal government support for rehab activity comes through loan insurance programs such as Title I or 203(k), block grant programs like CDBG and HOME, or Tax Credits like LIHTC. Many studies and reports have been done on the impact of public programs on rehab activity.⁸ Most of these studies used case studies or discretionary surveys.

The research on home rehab finance and government rehabilitation projects has implications not only for the housing industry but also for private lenders and government programs. The construction industry, lenders and government officials are also interested in the characteristics of the demand for rehab finance and the impact of public programs on the rehab market.

The purpose of this overview is to discuss the available information on rehab finance and government rehabilitation programs. The first section highlights relevant research questions on rehab finance and government rehab programs. This is followed by a discussion on the main information sources available for these topics, their limitations and some suggestions for improvement. Finally I will address some of issues related with government rehab programs.

Research Questions

⁵ David Listokin et al. *Barriers to the Rehabilitation of Affordable Housing: Findings and Analysis* Revised Draft Report, April 2001

⁶ Eric Belsky *Borrowing Against Home Equity to Remodel* Housing Economics, October 1993

⁷ G.B. Canner et al. *Recent Development in Home Equity Lending* Federal Reserve Bulletin, April 1998; P. Brady et al. *The Effects of Recent Mortgage Refinancing* Federal Reserve Bulletin, July 2000

⁸ Mark Duda *Federally Sponsored Rehabilitation Activity* Joint Center for Housing Studies, July 2001 Working Paper Series W01-8

With little available data on the financing of home rehab projects, many of the research questions look basically for descriptive information. Some of the main questions on home rehab financing can be summarized as follows:

- How are rehab projects financed? How much is borrowed and how much comes from savings?
- What financial products are commonly used for rehab? (home-secured lending vs. unsecured credit) What do they use it for? (types of projects) What are the needs for rehab and what are the needs for financing?
- Who are the people that finance rehab projects? (private individuals or public programs, socioeconomic types, characteristics of the borrower's home). Do geographical areas differ on rehab finance? (location of hot markets for rehab finance vs. declining areas)
- What impact does government have on rehab finance? How much rehab activity does government support? (loan insurance programs and grants)

Home Rehab Data Sources and Limitations

The available data sources do not provide direct information on how rehabilitation projects are financed. Some data sources contain information on housing finance, usually on home-secured equity credit. Other sources include detailed information on home rehabilitation. Although extensive data are available on housing finance, and some data exist on rehabilitation activities, very few sources measure both components. The main characteristics on publicly accessible data sources can be seen in Exhibit 1, while detailed information on home rehab and home finance variables are in Exhibit 2.

Several government agencies gather data for the analysis of home finance. The Federal Reserve collects information on household finance and on home-secured lending through several surveys and public records. Some of this data also contains information on home rehabilitation activity, and therefore may be used as measure of residential rehab finance.

Probably the most relevant information on household finance is the Survey of Consumer Finance (SCF). This survey is undertaken every three years over a sample of 5,000 households. It provides detailed information on home-secured borrowing (outstanding balances for Home Equity Lines of Credit (HEL), Mortgage Refinance, Second Mortgages, whether the loan is secured by a governmental agency) as well as information on non-secured credit (credit and purchase cards, unsecured loans). The survey also includes data on overall expenditures for home improvement and repairs.

As SCF collects information on the purpose of borrowing, it can be used to estimate the relationship between home rehabilitation expenditures and home-secured lending or unsecured credit. Unfortunately, the data have shown inconsistencies, particularly when individuals reported having used the loan for rehab but do not record their total expenditures for home improvements. SCF also does not collect data on the type of project. Finally, although SCF includes information on government insurance programs

(e.g. Is this loan federally insured? What kind of insurance?), no data are provided on other public programs such as tax credits.

The information provided by the SCF helps to approach the question of how people pay for rehab. But the SCF is limited if we want to assess the size of the market for residential rehab. Although the survey provides the amount expended on property improvements, we ignore the share of those expenditures that was financed.

The Home Mortgage Disclosure Act (HMDA) is a regulatory act that provides public information on home-secured loans. The data are annually submitted by lending institutions to the Federal Financial Institutions Examination Council (FFIEC). Although the main goal of HMDA is to evaluate the lending activity of lenders, it has shown to be an accurate means of establishing lending patterns at a very small geographical level. The data include basic information on borrowers, the purpose of their applications and whether the loan has been secured through a government program.

These data are not intended to track rehab activity, but through HMDA we can determine the volume of lending stated to be used for home improvements and the impact of government loan insurance programs in a precise location. HMDA only deals with home-secured lending; it may be unreliable for certain analyses. Although FFIEC has attempted to standardize and unify HMDA coding among lending institutions, the data still do not differentiate between home equity lines of credit (HEL) and second mortgages, or identify whether a home mortgage refinance was actually used for home rehab⁹.

The Department of Housing and Urban Development (HUD) gathers financing information through many surveys. The American Housing Survey (AHS) and the Residential Financial Survey (RFS) provide significant information on home rehabilitation.

Conducted by the U.S. Census Bureau, the AHS has proven to be a useful survey for determining the amount of residential remodeling activity. It is the only publicly available data source that provides detailed information on home improvements and repairs. In recent surveys, (1997 & 1999) the AHS also included detailed information on financing, particularly for home-secured borrowing and characteristics of the loan. Even so, the analysis done so far using AHS for home rehab finance demonstrates limited ability to identify how households pay for their rehab projects.

Using the AHS, we can only estimate the level of rehab finance using home-secured lending as a proxy. The questionnaire doesn't include the purpose of the borrowing. Therefore we can only assume that the usage of liquefied funding from refinanced mortgages or HEL was at least in part for home rehab projects when the household has also reported home improvements.

⁹ For further information on HMDA coding see "Guide to HMDA Reporting: Getting It Right!" <http://www.ffiec.gov/hmda/qnadoc.htm> (31 October 2001).

Therefore, the AHS may be an effective tool to provide information on the impact of home-secured lending on residential rehab, but it doesn't provide information on how people finance rehab. In addition, the AHS only reports improvement and repairs to owner-occupied units. Through this data source we cannot make estimations on the rehab activity for other units such as renter-occupied units.

The RFS is conducted by the U.S. Census Bureau, and surveys over 60,000 households every ten years. The data provided by the RFS help to measure the amount of debt on properties and the trends of secured lending among owner-occupied units as well as rental and vacant units. It also includes questions about the purpose of borrowing against home equity, or the purpose of refinancing, and whether the credit is government secured, as well as on the expenditures on capital improvements for owner-occupied units and rental property.

Even so, the RFS offers limited information on household rehab activity, as it only reports information on the total expenditures for home rehab (defined as capital improvements). Therefore we cannot assess the amount spent on home rehab that was financed. On the other hand even if RFS can be used to assess the relationship between home-secured lending and rehab for owner occupied houses and rented units, the survey doesn't provide information on type of home improvement project.

Suggestions for Improving the Data on Home Rehab Finance

Some suggestions that may help to improve data sources for the analysis of home rehab finance could be:

- Expand AHS questionnaires: AHS could include questions on payment methods for the home improvement reported. It could also include the purpose for home secured borrowing (HEL, Second Mortgages, Mortgage Refinance) and expand questionnaire to non-owner occupied households (such as renters and vacant properties).
- Follow-up surveys. HUD has performed follow-up surveys in the past using the AHS. The Property Owner and Manager Survey (POMS) performed in 1995 has been shown to be an effective way to gather data after targeting a subgroup of the population. Using the RFS we may be able to identify subgroups such as households who reported rehab expenditures (or capital improvements) in the last three years. Once identified, this subgroup could be issued an expanded RFS questionnaire that asks the type of capital improvements, the types of funding they used, and how much of their home equity was used for those improvements.
- Usage of industry surveys: The NAHB Research Center (Research Center) undertakes annually the Consumer Practices Survey. In 1998, that survey included variables on home rehab finance. The questionnaire could be amended to request information on how owners pay for their home improvement projects.

Data Limitations on Government Programs

It is difficult to assess the impact of government rehab programs through any of data sources mentioned above. There are a significant number of government rehabilitation programs (see Exhibit 3 for a summary). They could be grouped into three basic types: insurance programs, tax credit programs and grant programs.

Many block grant programs (e.g. HOME, CDGB) are not exclusively focused on home rehabilitation.¹⁰ To estimate total government expenditures on rehab through these programs we need to know the share devoted to rehabilitation, and in many cases this becomes a difficult task. Block grant programs also tend to be combined with other public funding sources, which makes it even more difficult to assess the total public expenditures on home rehab.

Most program files include information in their questionnaires as to whether the loan was federally insured and by what agency, but there is no information on the type of government program that insures the credit. The AHS, RFS or SCF questionnaires report on the types of loans and the securing agency, but there is no information about whether the loan was for rehab (Title I or 203(k)).

Federal programs make estimates of the number of units and households affected by the program but many rehabilitation projects obtain public funding through different programs. Public programs on rehab tend to overlap within single projects making it difficult to assess the number of people or units affected by government programs.

Conclusions

There is no public data available that reports on home rehab finance. Most information on this topic comes from secondary data, and so far the analysis has been focused on the impact of home-secured lending on home rehab projects. The available data, and especially the AHS, can be improved through small changes in the questionnaire or by undertaking follow-up surveys that inquire more about home rehab finance.

There is little publicly available data on government rehab programs that indicate the number of units affected or the characteristics of the recipients. Most public data files only report on government loan insurance.

¹⁰ Urban Institute. *Implementing Block Grants for Housing: An Evaluation of the First Year of HOME*. U.S. Dept. of Housing and Urban Development, Office of Policy Development and Research, November 1995

Exhibit 1: Available Data Sources with Information on Home Rehab Finance

	America Housing Survey	Residential Finance Survey	Survey of Consumer Finance	Home Mortgage Disclosure Act
Owner	U.S. Census for HUD	U.S. Census for HUD	NORC for the Federal Reserve	FFIEC
Periodicity	Every Two Years	Every Ten Years	Every Three Years	Annual
Last Available Data	1999	1991	1998	2000
Unit of Analysis	Housing Unit (Households)	Housing Unit (Property Owners, Homeowners and Lenders)	Primary Economic Unit (Households)	All Home Mortgage Loan Applicants
Data Type	Longitudinal Survey	Survey	Survey	Government Record
Sample Size	Approx. 50,000	Approx. 68,000	Approx. 4,500	Approx. 6,000,000
Geographical Information	Unit location (MSA)	Unit Located on Metro or Non-Metro Area	No	Detailed Geoinformation on applicant location at Tract level
Data on Unsecured Credit	No	No	Yes (Credit Charge Cards and other loans includes non home secured loans purpose)	No
Data on Home-Secured Credit	Home Mortgage, Second/Third Mortgage (Lump sum Equity Credit), HEL (Line of Credit)	Home Mortgage Refinance, Second/Third Mortgage and HEL	Home Mortgage, Second/Third Mortgage and HEL	Includes data on Home Mortgage. Unable to identify whether the loan is First, Second Mortgage or HEL. We may identify home mortgage refinance but not for multifamily dwellings.
Data on Amount from Liquefied Home Mortgage Refinance	No direct information. Difficult to assess.	Yes	Yes	No (It only includes information on the loan amount whether it was first mortgage or mortgage refinance)
Amount of first Mortgage	Yes AMMRT How much was borrowed? What is the current periodical payment? PMT	Yes	Yes	No
Amount Second/Third Mortgage	Yes	Yes	Yes	No
Amount HEL	Yes	No	Yes	No
Purpose Home Mortgage Refi	No	Yes	Yes	We cannot identify the type of home improvement loans (whether it was HMR, Second Mortgage or HEL). The Loan Purpose may be: 1) Home Purchase 2) Home Improvements 3) Home Mortgage Refinance 4) Multi family dwelling
Purpose Second Mortgage	No	Yes	Yes	
Purpose HEL	No	Yes	Yes	
Information on government support	Is this mortgage FHA, VA or Farmers? Is this loan federally insured?	Is this mortgage government secured?	Is the first or main mortgage a federally guaranteed mortgage, such as FHA or VA?	Type of loan & Purchaser within the calendar Year
Type of Home Improvement Project	11 Remodeling Cat. And 44 Different types of improvement / Repair Jobs	No	No	No
Cost of Home Improvements	Includes Cost for Every Single Improvement/Repair Job	Total Cost on Capital Improvements (Owner occupied) and Cost on Maintenance and Capital Improvements (Rental)	Total cost of Home Improvements/Repairs	No
Rental Units Covered	No	Yes	No	No

Exhibit 2: Relevant Information on Home Rehab and Home Financing on Selected Data Sources

		America Housing Survey	Residential Finance Survey	Survey of Consumer Finance
DATA ON REHABILITATION	Type of Home Rehab Project	11 Remodeling Categories and 44 Different Types of Home Improvement and Repair projects done over the last 2 years (only over owner occupied households)	NA	NA
	Home Rehab Cost	Total Expenditures for Every Single Job (44)	Total expenditures on Capital Improvements over the last 3 years (for owner occupied and renting units) Annual Expenditures on Maintenance (for rental units only)	Total Expenditures on Home Improvements/Repairs and existing borrowing for that purpose. No time frame e.g there is no information whether in the last year or in the last 25 years.
	Variable & Question	Variable RAC. Total Cost on Replacements and Additions (44) Questions: How much did the entire... Job cost including your costs and any amount covered by insurance not counting your time?	Homeowners (Q18), Rental & Vacant Units (Q25): In the past 3 years (1998-2000), how much was spent on capital improvements or upgrades at this property? (excluding costs for routine maintenance) ONLY Rental & Vacant (Q24f): What were the expenses for this property in 2000 for maintenance & Repair?	Var (X1201 & X1202) Only for Homeowners (QD54): Have you and your family living here) ever made any major additions or done extensive remodeling to this property? (QD54.1) Roughly what was the total cost of all such major additions or remodeling?
DATA ON HOME FINANCE	Amount of first Mortgage	Var (AMMRT1) How much was borrowed on your first mortgage? Var (PMT1) What is the current periodical payment?	Homeowners (Q8d) Rental & Vacant (Q6d) What was the amount of your current first mortgage when you placed, assumed or refinanced it?	Var (X1004 & X1005). (QD28) About the Mortgage/land contract/Second Mortgage/other loan on house... How much did you borrow or refinance? (QD29) How much is still owe on this loan?
	Amount from Liquefied Home Mortgage Refinance	NA	Homeowners (Q9d) Rental & Vacant (Q7d) How much money did you receive as a result of refinancing the previous mortgage or for placing a mortgage on a property owned free and clear of debt?	
	Amount Second/Third Mortgage	Var (AMMRT2) How much was borrowed on your second/third mortgage? Var (PMT1) What is the current periodical payment?	Homeowners (Q11b) Rental & Vacant (Q9b)	
	Amount HEL	Var (HECR1) What is your total credit limit on your Lump sum/Line of credit home equity loan? Var (HELMP) How much was the Lump sum? Var (HEBAL) Do you have an outstanding loan borrowed against Lump sum/Line of credit? Var (HEBAN1) What is the current outstanding balance?	Questionnaire for LENDERS. (Q25a) What is the current unpaid balance on this home equity line of credit?	(QD69.1) What is the maximum amount you could borrow on this line of credit? (QD69.4) How much is currently owe?
	Purpose Home Mortgage Refi	NA	Homeowners (Q9e) Rental & Vacant (Q7e) How did you use the money you received from refinancing the previous mortgage or for placing a mortgage on a property owned free and clear of debt? Coding #2 (all that apply) for additions, improvements or repairs to this property.	(QD37) Was the money from this loan used for the purchase of this home or for some other purpose? (What other purpose) Master Loan use Coding # 3 & 4 Home improvement/additions/repairs/maintenance/upkeep
	Purpose Second Mortgage	NA	Homeowners (Q11f) Rental & Vacant (Q9f) What was the MAIN reason for obtaining the current second/third mortgage on this property? (Only apply one) Coding #2 additions improvements or repairs to this property.	
	Purpose HEL	NA	Homeowner (Q10b) Rental & Vacant (Q8b) What was the MAIN Reason for obtaining HEL on this property? (Only apply one)	(QD69.3) What was the money used for? (What is the major use) Master Loan use Coding # 3 & 4 Home improvement/additions/repairs/maintenance/upkeep

Exhibit 3: Contemporary (Year 2000) HUD Programs that Support Housing Rehab¹¹

Program	Description	FY 2000 Funding in Millions
Community Development Block Grants (CDBG)	Funds a range of activities including planning, infrastructure, affordable housing, economic development, and public service. In FY 1999, 30.2 percent of CDBG expenditures supported affordable housing through rehabilitation, new construction, and home buyer assistance.	\$4,800
Economic Development Loan Fund (Section 108)	The loan guarantee provision of the CDBG program, Section 108 offers a source of long-term financing for economic development, housing rehabilitation, public facilities, and large-scale physical development programs.	\$30
Economic Development Initiative Grants	Improves the economic feasibility of Section 108 loans by providing an added subsidy for such large-scale activities as shopping centers, industrial facilities, and housing development, including rehabilitation.	\$31
Empowerment Zones/Enterprise Communities	Designed to promote large-scale economic development in selected cities through strategic planning and leveraging private investment. Rehabilitation of residential units in distressed areas through EZ/EC grants has produced 11,000 housing units. Homeownership programs have increased the homeownership rates in these areas as well, where rehabilitation also has a role.	\$55
Rural Housing and Economic Development	HUD grants are being used in rural areas, often for rehabilitation. The HUD Colinas Initiative is helping to build and rehabilitate affordable housing in settlements along the U.S./Mexico border.	\$25
Brownfields Redevelopment	Appropriated funds for the redevelopment of brownfield sites have helped to leverage millions in Section 108 loan guarantees and private and public investment and will create thousands of jobs. This money is used for clean-up costs for the sites and rehabilitation of existing structures, including housing units.	\$25
Disaster Recovery	HUD funds and additional CDBG and HOME funds are often needed in the event of a natural disaster. These grants are used to rehabilitate housing and commercial buildings, assist homeowners, restore public facilities, and aid local businesses.	
Community Outreach Partnership Centers (COPC)	Grants given to 18 colleges and universities to develop partnerships with local governments, private companies, and nonprofit organizations in an effort to revitalize their communities. COPC grants are used to expand affordable housing opportunities, for job training programs, to fight housing discrimination and homelessness, research community problems, and assist new businesses.	\$8
Lead Hazard Reduction	Lead is a common cause of poisoning, especially in young children living in older homes or apartments. HUD gives grants to state and local governments, nonprofits, public relations firms, and research organizations in an effort to reduce lead hazard effects. The money is used for its removal, in research, and for public awareness campaigns.	\$80
Section 8 Assistance	The project-based assistance component of the Section 8 program allows owners of multifamily rental units to receive housing assistance payments directly from HUD. This money can be used for maintenance and rehabilitation of the housing units.	
HOPE VI	A source of funds used to demolish, rebuild, and rehabilitate obsolete public housing units and create mixed-income communities.	\$564
HOME	HOME funds are among the largest sources of money for the construction and rehabilitation of affordable housing in the nation. HOME funds are used for multifamily rental housing, improving substandard housing for current owners, and assisting new home buyers with acquisition, construction, and rehabilitation.	\$1,600
Low-Income Housing Tax Credit (LIHTC)	States are given a federal tax credit to support the construction and rehabilitation of affordable housing units by private and nonprofit developers.	\$1.25 per capita by state
Native American Housing	HUD has initiated an effort to begin bringing direct federal funding with autonomy to tribal lands to assist with their unique housing situation. These funds will help ensure that substandard and overcrowded conditions are ameliorated with rehabilitation and new construction of housing units.	\$620
Housing for Elderly and Disabled Persons	HUD helps nonprofit organizations finance the construction and rehabilitation of housing designed to support the needs of the elderly and disabled.	\$911
FHA Multifamily Insurance	FHA insurance programs insure lenders in case of loss on first mortgages and make possible the construction, rehabilitation, and preservation of multifamily rental properties. These loans are made available to private developers, nonprofit organizations, and cooperatives that build affordable housing.	

Source: Building Communities and New Markets for the New Century. 1998 Consolidated Report. U.S. Department of Housing and Urban Development

¹¹ Listokin “Barriers to the Rehabilitation of Affordable Housing Vol I Exhibit.1.4

HOLISTIC REHABILITATION DATA NEEDS AND SOURCES

by David Listokin, Center for Urban Policy Research, Rutgers University

Introduction

The crux of the problem with the data sources used to analyze financing of rehabilitation activity is that for the most part they were never intended to track rehab activity and/or rehab finance activity. Consequently, they contain disparate elements of information rather than a unified series of data that yields the desired comprehensive home rehab finance information. The American Housing Survey (AHS) has extensive information on rehab as well as questions on financing, but it does not link the two by querying how the rehab was financed (e.g., refinanced first mortgage, second or third mortgages, or home equity credit line [HEL]). The Survey of Consumer Finance (SCF) provides good information on home finance, but only sketchy data on rehab (e.g., the rehab indicated could have been done in the past year or the last 25 years), so a complete picture on rehab financing is not forthcoming.

What can be done to improve the rehab finance data? The AHS could specifically ask how rehab was financed (e.g., first mortgage refinancing, second or third mortgage, and/or HEL). The AHS's rehab financing query could also serve to ascertain if any government subsidy or other assistance was secured (e.g., government mortgage insurance, grant, or property tax abatement). Improving AHS's ability to track rehab financing would be especially beneficial because the survey already provides data across an array of rehab topics (Exhibit 1).

Other data sources could be enhanced. For example, the SCF could be improved upon by tightening the link between its financing questions and specific rehab outlays. Home Mortgage Disclosure Act (HMDA) data could also be enhanced as a rehab finance data source, for example by differentiating in the HMDA loan application register (LAR) between refinancings earmarked for home purchase and refinancing intended for home improvement.

The remodeling industry can play a role in raising the level of available data on rehab finance. The NAHB's Consumer Practices Survey (CPS) already elicits detailed information on repair and remodeling purchases. The CPS contains such questions as "What were the total expenditures by category of repair or improvement?" "Who made the purchase?" "Who installed it?" and "Where was the material purchased?"¹² Perhaps the CPS could add questions pertaining to how the repair or improvement was financed, including whether any government assistance was tapped. The CPS could then be a source of information on both rehab activity and financing.

¹² Joint Center for Housing Studies of Harvard University and National Association of Home Builders. 2000. *Remodeling industry information summit—proceedings*. Cambridge, MA: Joint Center for Housing Studies of Harvard University.

Remodelers themselves can offer insight into how rehab is financed. The larger remodelers sometimes have their own financing subsidiary; at the least, they work closely with a financing entity. Perhaps some questions related to consumer rehab financing could be added to the Home Improvement Research Institute's (HIRI) Remodeler Study. While this likely will be less useful than adding financing questions to the NAHB's CPS would be, it is worth exploring how the remodeling industry, through HIRI or some other entity, can add to our rehab financing knowledge.

Government Rehabilitation Programs: Comments and Recommendations

Although there is much that we do not know about publicly aided rehab, and there are frustrations with the existing data (e.g., determining the discrete number of housing units receiving assistance, given the typical layering of subsidies), the situation is somewhat better than this conclusion would indicate. To illustrate, we will consider tax credit support for rehab.

The low-income housing tax credit (LIHTC) is the premier affordable housing program in the United States. In 1996, HUD commissioned Abt Associates (1996) to prepare a data file on LIHTC activity.¹³ The Abt database contained many fields of general project data, such as project location, project size, and project construction type (new or rehab). Limited LIHTC financial information (e.g., tax credit rate, use of tax exempt bonds and Section 515 loans) was also assembled. Abt updated this database in 2000,¹⁴ again under HUD sponsorship.

The Abt-HUD database is very helpful in creating a profile of LIHTC projects. More detailed financial information would enhance the usefulness of this source. Cummings and DiPasquale^{15,16} of City Research secured data from major syndicators on LIHTC activity. Like Abt-HUD, City Research collected information on general project characteristics. Unlike Abt-HUD, however, City Research assembled a variety of detailed LIHTC characteristics, such as project total development cost (TDC), sources of financing for the TDC, project operating income and expenses, and return to equity and debt investors. The City Research database is proprietary, however, with only limited public release of information. The latter indicates, for instance, that LIHTC rehab projects nationwide tend to use somewhat more gap financing than their new construction counterparts. Making such information more widely available, as well as adding more financial fields to the Abt-HUD database (both admittedly hard to do given the sensitive nature of these data items), would improve our knowledge of the LIHTC. The Rehabilitation Forum should consider how to do this.

¹³ Abt Associates. 1996. *Development and Analysis of the National Low-Income Housing Tax Credit Database*. July. Study prepared for the U.S. Department of Housing and Urban Development

¹⁴ _____. 2000. *Updating the Low-Income Tax Credit (LIHTC) Database*. November. Study prepared for U.S. Department of Housing and Urban Development

¹⁵ Cummings, Jean L., and Denise DiPasquale. 1998. *Building Affordable Rental Housing: An Analysis of the Low-Income Housing Tax Credit*. Washington, DC: City Research

¹⁶ _____. 1999. The Low-Income Housing Tax Credit: An Analysis of the First Ten Years. *Housing Policy Debate* 10: 251-308. Washington, DC: Fannie Mae Foundation

Another important tax aid is the historic rehabilitation tax credit (HRTC). From data maintained by the National Park Service (NPS), it can be determined that about half of all HRTC activity has targeted housing and another 20 percent to 25 percent has consisted of mixed uses, typically housing and another use. From its inception in the late 1970s through the late 1990s, the HRTC has been used in the rehabilitation of about one-quarter of a million housing units, including more than 40,000 low- and moderate-income units. The HRTC is often used in conjunction with other subsidies, such as the LIHTC, state historic tax credits, property tax abatement, and so on.

The HRTC is an underappreciated support for rehab. Knowledge about the HRTC could be enhanced as follows:

- Make the NPS's HRTC database more readily available to the public (as is the Abt-HUD LIHTC information).
- Formulate common fields of information for both the LIHTC and HRTC databases. For instance, our knowledge of the LIHTC would be furthered if the Abt-HUD data had the "other incentives used" field of information that is collected for the HRTC.
- Add to the HRTC database detailed financial information comparable to that collected by City Research in its LIHTC proprietary studies—an admittedly difficult task.

It is beyond the scope of our discussion here to consider additional data issues pertaining to the numerous other government rehab programs, such as federal block grants (CDBG and HOME), federal loans (e.g., Title I and 203(k)), federal public housing modernization moneys, and a broad array of state and local tax credits, subsidized mortgages, and property tax incentives. An excellent paper by the Joint Center for Housing Studies¹⁷ has considered some of the data issues related to the federal programs. For instance, in the CDBG program, one has to first factor the share of CDBG funds going to housing (about 27 percent), then apportion the share of CDBG housing moneys used for rehab (about 80 percent), and finally translate the CDBG-supported rehab monetary assistance to housing units being aided. In my experience, some of these "translations" are, at best, rough approximations, (e.g., using a national average of the CDBG dollars invested per housing unit in order to estimate how many housing units are assisted). It would improve matters if we could more directly and accurately identify the housing units assisted by CDBG.

The rehab data sources previously identified could also be enhanced to expand our knowledge of the public sector financing. The potential financing module in the NAHB's Consumer Practices Survey might also include queries on public subsidies utilized. Besides adding questions to the AHS concerning how specific rehab activities were financed, a query on public-subsidy use could be added as well, perhaps along the lines tracked by the HRTC. We recognize that it is not a simple matter to add fields to the

¹⁷ Duda, Mark. 2001. Federally sponsored rehabilitation activity. Cambridge, MA: Joint Center for Housing Studies. Cambridge, Harvard University (Working paper series)

AHS, or other data sources for that matter. The benefits have to be weighed against the costs, which would include added interview time and the risk of survey respondents losing interest if too much detail is required in their answers. Those more knowledgeable about the AHS and other surveys need to be consulted. Nonetheless, adding to the AHS in the manner described here could make this information source a formidable “one stop” data set that could inform on rehab need, rehab affordability, rehab activity, rehab financing, and rehab government support.

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Exhibit 1: Holistic Perspective of Rehab Data Needs and Sources

Rehab Component	Rehabilitation “Need” and Affordability		Actual Rehabilitation Activity, Financing, and Government Participation	
	(1) Rehab Need	(2) Rehab Affordability	(3) Rehab Activity	(4) Rehab Financing
Current Data Sources (National–Regional)	<ul style="list-style-type: none"> •AHS (various housing quality measures) 	<ul style="list-style-type: none"> •Local Surveys 	<ul style="list-style-type: none"> •AHS •C-50 •C-30 •CPS 	<ul style="list-style-type: none"> •Abt-HUD LIHTC data base •NPS HRTC data base •HUD CDBG-HOME data ; other sources
Local Data	<ul style="list-style-type: none"> •Local Surveys 	<ul style="list-style-type: none"> •Local Survey 	<ul style="list-style-type: none"> •Local Building Permits 	<ul style="list-style-type: none"> •Local Data
“Enhanced” National Data Sources and Procedures	<ul style="list-style-type: none"> •“Connect” AHS housing quality measures to levels of rehab need (e.g., “minor,” “moderate,” and “extensive” •“Restart” annual housing goal rehab need projections by HUD–others? 	<ul style="list-style-type: none"> •“Cost out” rehab levels based on AHS “connections” and relate costs to affordability 	<ul style="list-style-type: none"> •Reinstate C-40 Building Permit Survey for rehab •Improve C-50 reporting (e.g.; better geographic detail) 	<ul style="list-style-type: none"> •“Expand” current data sources (e.g., add more financial detail in LIHTC-HRTC data) •“Enhance” access to available data (e.g., NPS HRTC data base) •Add parallel financing fields to available data (e.g., LIHTC and HRTC should incorporate common subsidy identifications) •Improve rehab “identification” in existing programs (e.g., CDBG) •“Enhance” other data sources to include government participation in financing rehab (e.g., in AHS)

Key:

- AHS American Housing Survey
- CPS Consumer Practices Survey of the National Association of Home Builders
- HMDA Home Mortgage Disclosure Act
- HIRI Home Improvement Research Institute
- HRTC Historic Rehab Tax Credit
- LIHTC Low Income Housing Tax Credit
- NPS National Park Service
- RFS Residential Finance Survey
- SCF Survey of Consumer Finance

DISCUSSION

Following the formal presentations by Alvaro Martin-Guerrero and David Listokin, Forum participants commented on the suggestions raised and offered other sources and methods for obtaining information about financing for rehabilitation.

Bill Apgar, Joint Center for Housing Studies, pointed out that as difficult as it is to define what we mean by *rehab, remodeling, repair, etc.*, it is even more difficult to determine how these activities were financed. Some households prefer to do their rehab piecemeal and *cash-n-carry*, some use credit cards, and others will take out a home equity loan or refinance their mortgage. Some households begin with savings and then move to borrowing as the need arises. There are so many options for financing that it is extremely difficult to define the market. And even still, it is not always clear that borrowers claiming rehabilitation as the purpose for a loan actually use the funds for remodeling. And, therefore, Apgar cautions that while more detailed information about financing could lead to a greater understanding of the market, it would not necessarily lead to conclusions about the rehabilitation industry.

Need for Rehab Loan Products

Richard Sullivan, Wells Fargo, has been a driving force in the bank's development of a special home equity rehab loan product. Sullivan reports that this new product has tripled their market share in home equity lending in the last few years, although they feel that their current level of activity is still just the *tip of the iceberg*. He feels that there are great opportunities to provide lending products for this booming business. Sullivan believes that more substantive information would help Wells Fargo and other lenders better define the market and therefore enhance their ability to serve rehab lending activity. What little data they do have about the size and nature of the market is from inspection and permit offices; they would like to be able to identify the part of the market that doesn't pull permits but still has a need to borrow funds to underwrite the rehab activity. The bank would be very interested to mesh its data with other information about the market to learn how to better serve the industry.

Who is Borrowing (or not) for Rehab?

Wells Fargo was somewhat surprised to find their new remodeling loan product attracting a high net-worth customer, and they would like additional information on how and why customers finance vs. pay outright for home rehabilitation.

Ellen Roche, National Association of Realtors, quotes a survey that NAR conducted (*available on their website at realtor.org*) that indicates that households use cash rather than their equity to rehab. A participant suggested that perhaps this is because of stock market gains and we may see this change as the market struggles. Apgar agrees that while this may be true for high-end homeowners, the bulk of rehab spending is by low and middle-income households for whom the stock market is not so much a factor, and whose wealth is in their home and pension funds.

Gopal Ahluwalia, NAHB, reports that they did a special survey two years ago that indicates that only 18 percent of its respondents used a home equity line, refinanced or took a second mortgage to finance rehabilitation, and, significantly, this percentage did not increase even for projects costing more than \$10,000.

How are Borrowed Funds Used?

Working backward from what data is available on borrowed funds, what is it possible to know about the use of these funds? When questioned if Wells Fargo really knows that the funds are being used for rehabilitation, Sullivan reported that these products generally involve a post-rehabilitation inspection, and so, yes, they do believe the loans are being used as reported by the customer.

Information collected by private lenders could complement the data collected by trade associations and public agencies. Darryl Hicks, Home Improvement Lenders Association, mentioned that the National Reverse Mortgage Lenders Association Survey collects information about the intended use of Reverse Mortgage funds and might be a resource. In addition, the Federal Reserve Board is considering changing Home Mortgage Disclosure Act (HMDA) reporting to include more information on home improvement and this will provide access to more detailed data on use of funds and borrower profiles.

Hicks offers that the American Bankers Association Home Equity Survey indicates that only 30 percent of home equity loans are used for rehabilitation. *The cost for the data is prohibitive and so Hicks has not actually used the data, only seen results as reported by the ABA.* Perhaps there is an opportunity to work with the ABA to add some questions.

Apgar warns that consumers report they will use the money for rehabilitation but that this might not actually be the case. Martin-Guerrero and Carliner both believe that any self-reporting on the use of refinance or home equity loan funds may not accurately reflect who is spending the funds on remodeling or who is liquefying for another reason. Therefore, any self-reporting survey might yield an overstatement of the market. It's unclear really how much we can know about how rehabilitation is financed and, Apgar reminds us, that survey answers reflect just one moment in time and may not adequately capture a household's more complex financial situation.

Will Increased Liquidity Impact the Rehab Industry?

Apgar remarks that the most recent refinance boom will bring billions of dollars into consumers' hands in a down market and it will be interesting to see how these mortgage savings are used, if consumers use the savings to conduct home improvement activities or perhaps clean up debt. Apgar suggests that families may use access to new resources to adjust the *balance sheet* -- borrow money from one source to retire debt in another, for

example. However the public uses this money could be significant to the nation's economy over these years.

Jack Goodman, Hartrey Advisors, reports that the Federal Reserve Board is interested in this question and has used the University of Michigan Consumer Sentiment Survey to gather information about how consumers spend their home equity loans and second mortgages. The results have been published in the Federal Reserve Board Bulletin and they may have continued to collect information on this. The contact at the Fed on this issue is Jim Kennedy.

Data on Government Sources

As Carliner points out, we do have some data on how much public funds are spent on rehab, including the LIHTC, as a percentage of the whole, but very little information on financing and even less on rehab financing. Mimi Kolesar, HUD, agrees that this is an issue and reports that while HUD has good information about the uses of HOME funds, data on additional financing for these properties may be complicated due to the fact that these projects often use other public subsidies or other sources of funding that will NOT need to be paid back or would put a lien on the property.

David Listokin asks, how can we collect better information on the amount of rehab conducted with CDBG funds, for example? Kolesar argues that HUD gave a strong incentive to get information before their recipients could get the HOME dollars. This is why they have a relatively strong database. If folks can see how the data will help them locally, they might be more inclined to collect and input the information.

Sharon Park, National Park Service, suggests that while the Historic Rehab Credits are generally used for very large extensive projects, there is information available through states on their historic rehab credits for smaller projects. Approximately 20 states have these which may be able to provide data on the rehab and the full financing situation of these smaller projects.

Sources for Credible Data on Financing

Would it be viable to add a question about rehab financing to the Survey of Consumer Practices? Ed Hudson, Research Center, offers that they did add some questions on financing in 1997-98 and this is something they could consider again. Alvaro Martin-Guerrero reports that there are some statistics on how rehabilitation was financed, including credit cards, home equity lines, etc. through the Survey of Consumer Finance, undertaken every three years for the Federal Reserve, although there are inconsistencies in the data and he does not believe it can lead to a useful understanding of the rehabilitation market.

David Engel, HUD, wonders if tax returns might yield more accurate results about how much households invest in home improvement. Since home improvement dollars are deductible from capital gains taxes, there would be an incentive to report all

rehabilitation activity and expenses as a homeowner prepares to sell his home. Carliner doesn't believe this will yield useful information since households are more likely to not report the capital gain in the value of their home as a way of getting out of paying these taxes than to report on all the rehabilitation dollars spent.

The AHS emerges as the one source that can provide comprehensive information, including financial data. Listokin would like to see finance questions added to the AHS. Apgar suggests that the HMDA questions might also demonstrate the breadth of this market. Participants feel that there are a number of useful data sources available but that the industry might need to piece bits together in order to fully understand the rehabilitation finance market. And, given the changes in the finance industry, perhaps this analysis should be done on an annual basis.

**Panel Four: Evaluation of Data Sources and Strategies for
Generating Improved Rehabilitation Data**

Moderator: Liza Bowles, NAHB Research Center

Presenters: Ed Hudson, NAHB Research Center
Gopal Ahluwalia, National Association of Home Builders
Barry Rappaport, U.S. Census Bureau
Kermit Baker, Joint Center for Housing Studies

This panel integrated the major issues previously addressed and suggested specific next steps to the development of data that could begin to answer some critical questions about the rehabilitation industry.

PRIVATE-SECTOR DATA SOURCES FOR HOUSING REHABILITATION

by Ed Hudson, NAHB Research Center

Private sector data sources for housing rehabilitation are important in fulfilling the information needs of both the private and public sectors. This paper will review rehabilitation data needs and sources of private sector data. Its objective is to explore various ways that HUD can leverage its data-gathering resources by using private-sector data sources. The paper will also review successful examples of public/private partnerships to increase the value of existing private-sector data sources, which may serve as models for future collaboration between HUD and private industry.

Needs for Information on Housing Rehabilitation

Both government agencies and the private sector rely on non-public data sources on housing rehabilitation to assist in public policy and business decisions. Among industry stakeholders, information needs vary widely. Manufacturers of building materials and consumer goods, for example, seek to understand the product purchases, expenditures, buyer motivations, and industry trends. This information is used for business and long-term planning, allocation of sales and marketing resources, coordination of its distribution system, new product development, and other activities. Professional remodeling companies, especially larger ones or those with dedicated marketing or sales staff, seek to understand where rehabilitation is occurring geographically, specific project details, buyer motivations, and industry trends. This information assists in business planning, allocating marketing resources, establishing which services to offer, which markets to serve, and understanding the needs of the market.

There are numerous valuable private sector sources of rehabilitation data. Certain dimensions, however, are largely lacking. Good quality geographic detail—typically requiring an extensive data collection effort—is generally not available for most information types. Timeliness, too, can be improved upon. Additionally, information on rehabilitation data for the rental sector is relatively sparse, in part because it is less well understood by data producers, and it is often ignored because this sector is smaller than the owner-occupied household sector.

Private Sector Sources of Information

Sources of residential rehabilitation data are broad in scope. These include:

- Industry associations and trade publications
- Private analysis of public data sources (AHS microdata and others)
- Private compilations of public record data (tax records, for example)
- Rehab studies through marketing research companies
- UPC (or “bar code”) data from building materials retailers

- Periodic national surveys of repair and remodeling purchases (Research Center surveys of owner-occupied households)

Industry Associations and Trade Publications

Associations that represent the housing, construction or building materials industries (both manufacturing and distribution) often carry out studies to help track industry progress or product market share, or they collect data as a part of their on-going operations. Membership profiles of associations that cater to the remodeling industry, for example, can shed some light on industry characteristics. For example, the National Association of Home Builders allows each member to classify itself by primary, secondary, and tertiary occupations; revenues; location of business; and, other useful information. Trade publications also put a great deal of effort into understanding the characteristics of its subscribers. The following are examples of organizations that produce data relative to housing rehab and existing home characteristics:

- **Home Improvement Research Institute**

Every two years, HIRI carries out the Product Purchase Tracking Study, a survey regarding 2,600 owner-occupied households about their remodeling expenditures. Information gathered includes incidence of product purchases, type and brand of product, type of retail outlet, who influences brand decisions, who installs new materials, most useful information sources for purchase decisions, and other types of information. This report is available at no cost to its membership—which is restricted primarily to manufacturers and distributors of home improvement materials. After a “blackout period,” of a few months, the public may purchase the report. The Product Purchase Tracking Study is somewhat flexible—HIRI members may suggest additions and modifications of questions, which are implemented if approved by HIRI.

HIRI also conducts a survey of about 600 professional remodelers from a nationwide sample. Questions relate to what remodelers are buying, where they buy their products, key determinants of product selection, motivations for choosing retail outlet, satisfaction with outlets, involvement in installed sales, and future outlook for their business. This survey, too, has some flexibility but is open to changes submitted only by HIRI members.

- **National Association of Realtors**

Each time a home is listed in a Multiple Listing Service (MLS), the specifications of the home are documented to facilitate the sales process. This information includes size of lot, presence of certain features, size of home, type of foundation, flooring type per room, age of home, and numerous other characteristics of the home. Although this data source does not include information on remodeling activity, it may help understand existing housing characteristics down to a small geographic area.

The National Association of Realtors has recently begun a process to gather this information into a central database. Impediments lay in the way, such as obtaining the cooperation of more than 8,000 individual Multiple Listing Services and assuring uniform data formatting is enforced for each MLS.

- **Freddie Mac**

Freddie Mac maintains a vast amount of data on homes financing in all 50 states that have been sold using a mortgage. With geographic precision, its databases contains information such as year built, zoning code, cost per square foot, and if property has certain features such as a pool and garage. Although most of Freddie Mac's databases are designed for the home lending industry, tools could be developed that would serve the remodeling industry. Access to this database, including information extraction software, is available through companies such as Dataquick.

Private Compilation of Public Record Housing Data

County and municipal governments throughout the United States maintain data on existing houses for purposes of tax assessment. This data includes purchase price, value, housing characteristics, location, size, and other general information. Although this information is public record, its access on a national basis would be impractical without the help of companies that compile this information. Dataquick, a company of San Diego, California, assembles the public data nationally and markets it through a variety of services. Presently, they claim to have assembled tax record data from 47 states. One common use for these data is to generate mailing lists based on type of housing, homeowner criteria, and other characteristics (size, value, mortgage type, amount of equity, date of construction, homebuilder, etc.) Additionally, users can assess values of homes down to a very small geographic area. Dataquick's services were designed primarily for the real estate and mortgage lending industries, but can be used by rehabilitation professionals and researchers.

Private Analysis of Public Data Sources

Additionally, the federal government has made much progress in recent years with making raw data public for independent tabulation, which has been a boon to researchers who wish to "mine" existing government datasets. An example of this is Harvard's Joint Center for Housing Studies' analysis of *American Housing Survey* and *Economic Census* data to improve the understanding of this industry beyond that which is provided in the standard Census tabulations. Many other such opportunities exist where funding is available.

Individually Sponsored Surveys

Probably the largest source of rehabilitation data is the independent survey commissioned by manufacturers, distributors, and other stakeholders of the residential rehabilitation industry. A key benefit of the independent survey is its flexibility.

Question content, survey timing, sample size, and other specifications are solely at the discretion of the sponsoring party.

There are challenges, however, to developing primary housing rehabilitation data through surveys. An effective rehabilitation survey may require an intimate understanding of the industry structure, components that make up a home, installation process, and the structure of decision making in this sector. For example, surveys may need to be directed at remodeling professionals, owner-occupied households, materials distributors, rental property owners, or any combination depending upon the intent of the study. Another limitation is that the incidence of certain remodeling activities (new additions to existing homes, for example) may be very small, and in order to obtain an adequate number of respondents, the sample size may need to be expanded. As a result, larger samples are required to maintain data reliability, which leads to higher cost. Despite these drawbacks, developing primary data continues to remain an attractive alternative to using existing rehabilitation data sources where expertise in administering surveys to this sector exists, and where the questions are broadly applicable to those being surveyed.

UPC Data From Building Materials Retailers

Retailers of building materials that sell to consumers generate a tremendous volume of data on rehabilitation materials sales from UPC (“bar code”) data. UPC data from home centers, (Home Depot and Lowes, for example) by itself represents only the amount and volume of material that flows through this channel—which traditionally caters to the repair and remodeling industry. Presently, major home center chains make UPC data available to its suppliers and selected marketing research firms. By itself, tabulations of UPC data could be used as a rough index of changes in overall remodeling and rehabilitation activity, but its precision would be greatly enhanced by developing a model that would factor out influences from purchases not related to residential rehabilitation and factor in activity outside this distribution channel (e.g. labor, other distribution channels). Additionally, this source can provide the basis for understanding very specific details for materials purchased since details can be tabulated by zip code and SKU.

Consumer Practices Survey

Since 1996, the NAHB Research Center, Inc. has carried out the *Consumer Practices Survey* (CPS), an annual survey of about 8,000 owner-occupied households regarding their repair and remodeling activities. This mail survey maintains a core set of questions that do not change, allowing annual comparisons for understanding trends. Other questions change annually according to the needs of CPS sponsors. Core questions include expenditures by type of remodeling activity, patterned after the C50 to allow for comparison to this benchmark. Other core questions relate to specific details of the products that were purchased; who purchased and installed the products and materials; where the product was purchased; which products were replaced; motivations for replacing; and numerous other topics.

The primary users of CPS data are building materials manufacturers who wish to track regional and national trends in materials usage. However, government agencies and trade associations use these data to track other rehabilitation trends.

Since the *Consumer Practices Survey* includes only owner-occupied households, vacation home and rental property expenditures are left unexplored. Periodically, however, the NAHB Research Center carries out a survey of rental property owners when sponsored by an industry client.

Increasingly, the *Consumer Practices Survey* program supports collaborations with government agencies and industry associations to reach their research objectives. For example, the National Institute of Standards and Technology (NIST) has sponsored several questions about window, siding, and roofing replacements in the survey. Their objective is to better understand how long materials last, why and how they fail, and the motivations for replacing old materials. Integrating new questions into an existing survey resulted in a reliable and cost-effective means of data acquisition—reliable due to the accumulated experience of surveying owner-occupied households, and cost-effective because many necessary questions already exist in the survey and the marginal cost of adding questions is much lower than initiating a new survey.

Another successful collaboration involves the inclusion of questions about the financing of repair and remodeling expenditures in the *Consumer Practices Survey* for Harvard's *Joint Center for Housing Studies*, which they have only recently tabulated and published. Numerous other successful partnerships have taken place and are currently underway. The *Consumer Practices Survey* remains a flexible vehicle for fielding questions about residential rehabilitation activities. Assisting government agencies, industry associations, and educational institutions to better understand housing rehabilitation falls well within the mission of the NAHB Research Center, Inc.

Conclusion

Presently, the private sector expends tremendous effort in developing data for the repair and remodeling industries. Information resources exist that, with assistance from HUD, could greatly increase the value of existing data to both the public and private sectors. Where bi-weekly or monthly expenditures updates are desired, sales data from building materials retailers has promise. If existing housing characteristics are deemed important, centralized MLS data could provide exceptional geographic detail. Where periodic information needs are desired, especially topics that require an understanding of the industry or housing technology, the Consumer Practices Survey promises to be a cost-effective, flexible instrument. These and other private sector sources may prove valuable to HUD in future research and data gathering efforts.

EVALUATION OF DATA SOURCES AND STRATEGIES FOR GENERATING IMPROVED REHABILITATION DATA

By Gopal Ahluwalia, National Association of Home Builders

Introduction

Every year more than 25 million homeowners make improvements to their homes. About one million of these owners spend \$10,000 or more on structural modifications. This means that in any given year, about 1.5 percent of all owner-occupied units undergo significant modifications – about the same share is added to their stock each year by new construction. In addition, there are over 35 million units in the rental stock, many of which undergo rehab work. Very little data is available to analyze activity in the rental stock.

The Bureau of Census produces data on home improvement from three principal different sources: 1) the survey of Expenditures for Improvements and Repairs of Residential Properties, 2) the American Housing Survey, and 3) the Census of Construction. The Census of Construction provides information on construction and remodeling establishments, but very limited data on types of remodeling activities. In addition the HUD sponsored Property Owners & Managers Survey (POMS) covering the 1995-1996 period provides limited information on the rehabilitation of rental housing. The POMS survey covered questions on type of remodeling work done but not dollars spent.

Survey of Expenditures for Improvements and Repairs of Residential Properties (C50)

The C50 quarterly data is the principle source of remodeling data available on a regular basis. The data for this series is collected from two surveys. Data on improvements to owner-occupied stock is collected in the Consumer Expenditure Survey (CES) conducted for the Department of Labor, and data on improvements to rental stock is collected through the Survey of Residential Alterations & Repairs (SORAR).

The intent of the CES is to collect data on how people spend their money. The remodeling data is only a by-product. The questionnaire is about 150 pages long but questions on improvements cover only about two pages. The sample covers 6,000 units every quarter. Incidence of some of the remodeling activities is very low. The second survey used to create the C50 series, the SORAR, has some difficulty in surveying owners of the rental units.

The sample size of the CES needs to be enlarged significantly, which will require substantial amount of funding. Realistically it may not be possible to get funding in the near future. There are other issues with the data about geographic details, timing and volatility.

American Housing Survey

The objective of AHS is to collect data on housing characteristics. The AHS has a sample of 50,000 housing units. The home improvement questions are asked only for owner-occupied homes. Estimates of owner occupied improvement activity are probably more accurate than those generated by the C50 survey, but it is bi-annual and has considerable lag-time for release. Additionally, AHS has a two-year recall period for improvement expenditures. This may be too long.

The C50 and AHS are the only two surveys providing national and regional estimates of home improvements. Limited data on remodeling activity at the SMSA level historically has been available through building permits issues for home improvement projects. Collection of these data by the U.S. Census Bureau was discontinued in 1996, but will be re-instituted in 2002. This data provides no details on the type of remodeling work and only covers improvement activity if a permit was issued. The coverage of remodeling activity with permits is very limited.

NAHB and Other Data Efforts

I want to share an example from NAHB's Consumer Survey on Remodeling Trends done in early 2000. To develop information on remodeling trends we used a panel of households maintained by National Family Opinion (NFO) – a nationally known survey research firm. The survey was completed in two phases. In the first phase, NFO mailed a screener question to 40,000 households and asked if they have undertaken any remodeling jobs costing \$2,000 or more in the past two years. From this panel we picked a sample of 2,000 households who had responded positively. The detailed questionnaire on remodeling trends mailed to these 2,000 households again included the screener question on whether they had spent \$2,000 or more on remodeling during past 2 years. We received 1,600 responses, but 400 of the households who had indicated in the first screener survey that they had spent \$2,000 during past two years indicated in the detailed follow-up questionnaire that they had not spent \$2,000 in past two years. This example illustrates the potential pitfalls of using consumer surveys to measure remodeling activity.

There are some private groups collecting detailed improvements data on a regular and systematic basis. The NAHB Research Center has been conducting the Consumer Practices Survey since 1997. The Consumer Practices Survey measures remodeling activity both by expenditures and by products. This survey is highly adaptable. The capabilities of this survey can be improved and expanded to prepare alternative detailed estimates of improvement activity. However, such enhancements will require a public-private partnership.

The Home Improvement Research Institute (HIRI), an industry-funded research group, undertakes a product purchase tracking study every two years. This study covers remodeling expenditures from 2,600 owner-occupied households. Another survey covering professional remodelers develops information about remodelers and their purchasing habits, channels of distribution, etc.

Market Indicators

Two remodeling indices recently have been developed to track the remodeling industry. The Joint Center for Housing Studies produces a quarterly index of remodeling activity called Remodeling Activity Indicator (RAI), which provides a timely and stable reading of activity levels for remodeling activity. The index was released in November 1998 and estimates the amount homeowners are spending to improve and repair their owner-occupied homes.

The NAHB has developed a Remodeling Market Index (RMI). The RMI will be produced every quarter on a national and a regional basis. The country is divided into four Census regions, Northeast, Midwest, South and West. The Remodeling Market Index is based on a series of questions relating to current conditions as well as to future expectations. Remodelers are asked to rate residential remodeling for both owner and rental properties at present compared to three months earlier for major additions and alterations (\$25K or more), minor additions and alterations (less than \$25K), for replacements, and for maintenance and repairs. In addition, the questions relating to future expectations include calls for bids now relative to three months earlier, the amount of work committed for the next three months, the backlog of remodeling jobs, and appointments for proposals. The three components rating the current market conditions are weighted to produce a single index evaluating the present market. The four components rating the expected market conditions are weighted to produce a single index evaluating the future market.

Conclusion

In order to improve the efficiency of the remodeling industry or it is very critical to have accurate, timely and detailed data on where the industry is at the present time and how it has been changing over time. Only then can businesses, professionals and analysts develop a road map of the industry.

STRATEGIES FOR THE ENHANCEMENT OF REHABILITATION DATA

by Barry A. Rappaport, U.S. Census Bureau¹⁸

Introduction

Based on my experience, I believe it would be difficult for the Census Bureau to obtain funding for new surveys or major enhancements to existing surveys for the collection of remodeling statistics. Federal data collection budgets have been tight for more than 20 years, and requests for new funding are rarely met. I cannot speak about other government agencies, but I would imagine their budgets are tight as well. In addition, government data collectors face more stringent Office of Management and Budget (OMB) oversight and burden-hour budgets.

The Census Bureau submits some 20-30 “budget initiatives” each year asking for funds for new surveys or major enhancements. These must pass through the Department of Commerce, the OMB, and the Congress, and few are accepted. Funding is sometimes provided to Census by other agencies on a reimbursable basis. The Department of Housing and Urban Development (HUD), for example, pays Census to conduct the American Housing Survey (AHS), and the Bureau of Labor Statistics funds the Consumer Expenditures Survey (CE).

WITH THAT SAID, DATA ENHANCEMENTS CONTINUE TO TAKE PLACE. As a matter of fact, we have had four important, even remarkable, enhancements in remodeling statistics in recent years. Each has come about in a different way. All deal with modifications or additions to existing surveys. They are:

- Increase in the CE sample

Although not done just for the sake of improving remodeling data, the CE sample was increased from 5,000 to 6,000 in 1999. As a result, the quality of the data shown in our C50 report *Expenditures for Residential Improvements and Repairs* was significantly improved.

- Increase in the number of AHS remodeling questions

Remodeling has become a major part of the AHS. The number of remodeling questions has grown from 9 in 1993 to nearly 40 in 2001.

¹⁸ The opinions and conclusions expressed in this paper are those of the author and do not necessarily represent those of the U.S. Census Bureau.

- Creation of a remodeling industry (statistically speaking)

A “Residential Remodeling Contractors” industry was created in the new North American Industry Classification System (NAICS). As a result, Federal government industry-level statistics, from the census of construction (CCI) to the Bureau of Labor Statistics employment data, will show separate data for remodeling contractors.

- Collecting remodeling building permits

At the request of the Joint Center for Housing Studies (JCHS) and the National Association of Home Builders (NAHB), Census will begin next year to collect data on the number and value of remodeling permits issued each month from more than 8,500 permit offices, and the balance (10,500) annually.

Types of Surveys

Before we address strategies for further enhancements, we should review the four types of data collection efforts by Census relative to remodeling statistics: (1) household surveys--the AHS and the CE; (2) surveys of the owners of rental housing--the POMS, RFS, and SORAR; (3) the census of construction industries; and (4) data obtained from government administrative records.

- **Household Surveys**

The two key measures of owner-occupied remodeling activity are the bi-annual AHS and the quarterly CE, both household surveys. Neither survey, of course, is conducted for the sole purpose of collecting remodeling data. The purpose of the CE is to capture all household expenditures. The purpose of the AHS to determine the characteristics and condition of housing. However, the remodeling data collected in both surveys are considerable and comprehensive. In addition, the study of these remodeling data in relation to other survey variables (demographics, unit characteristics, other spending, etc.) provides a wealth of analytical possibilities.

Household surveys, however, are the most expensive to conduct due to the substantial interviewer time and travel involved. (The most recent AHS cost \$16 million. The CE costs about \$23 million per year.) As a result, sample sizes must be kept relatively small which reduces reliability, and is a particular problem for remodeling since only a fraction of households do significant remodeling work each time period.

In addition, it has become increasingly difficult to interview households because people are more reluctant to be interviewed, are harder to find at home, and new barriers are in place--gated communities, security guards, and answering machines.

- **Surveys of the Owners of Rental Housing Units**

There are three important surveys of rental housing units which ask remodeling questions:

Property Owners and Managers Survey (POMS) – Sponsored by HUD and conducted between November 1995 and June 1996, this survey was designed to learn more about rental housing, the providers of rental housing, and what motivates their rental and maintenance policies. The survey was based on a national sample of 16,300 housing units which were rented or vacant-for-rent and was conducted by mail, phone and personal interview. Questions were asked on the type of remodeling work done on the sampled units and to the properties that contain them, but not on dollars spent.

Residential Finance Survey (RFS) – Sponsored by HUD and conducted after each Decennial Census, the RFS is a survey of owner-occupied households and the owners of rental housing units, with a follow-on survey of lending institutions to collect detail on mortgage information. The survey is designed to collect data about the financing of residential properties, and is conducted by mail, phone and personal interview. It includes a few questions on remodeling--how much was spent in the previous three years, and what was the main reason for obtaining second mortgages or home equity lines of credit, or funds from refinancing (with “remodeling” being one possible answer).

Survey of Residential Alterations and Repairs (SORAR) – SORAR is funded by Census for the sole purpose of collecting remodeling expenditures from the owners of CE sampled housing units found to be rental or vacant. The survey is conducted by mail with telephone follow-up. Results are published in the C50 report.

For all three surveys, in cases where sampled units are in multi-unit properties, data are collected for the whole property. One problem faced by these surveys is the difficulty locating and surveying the owners or representatives of rental housing units.

- **Census of Construction Industries (CCI)**

The Census Bureau surveys construction establishments every 5 years (in years ending in “2” and “7”) as part of its Economic Censuses program. The CCI is conducted by mail with telephone follow-up. In 1997, about 130,000 construction establishments (with employees) were sampled out of a total of more than 650,000 establishments. Receipts information on another 1.7 million nonemployer establishments was obtained from administrative records.

One problem with surveys of contractors (especially remodeling contractors) is that the great majority are small businesses, and surveys are burdensome. It is not feasible for us to ask detail questions such as what specific kinds of remodeling jobs were done.

- **Data Obtained from Administrative Records**

Administrative records are particularly valuable since they offer comprehensive data for entire frames. The administrative data provided to Census from the Internal Revenue Service (IRS) and the Social Security Administration (SSA) allow Census to build its list of all U.S. businesses, which in turn serves as the sampling frame for most economic surveys.

Problems with IRS and SSA administrative data include a lack of detail provided and in some cases, issues of reliability. For example, the construction nonemployer receipt data, based on tax returns, provides no detail information other than a NAICS industry code.

Administrative data in the form of building permit information are obtained by Census via a monthly mail survey (BPS) of building permit offices. Again, this information provides no detail on the type of work involved, and, of course, only covers cases where a remodeling permit was taken out. On the plus side, because the BPS data are public information, there are no confidentiality restrictions. We can publish local area data each month which is unlike any other economic data published by Census.

Strategies for Enhancement

With all this in mind, what are the general approaches for enhancing remodeling data?

1. As noted, it would be very expensive to create new surveys or to add samples to existing surveys, especially household surveys like the AHS and the CE.
2. It may be more realistic to consider adding questions to existing surveys as has been done with the AHS and BPS for remodeling. Additional costs can sometimes be absorbed by agencies, or funds could be provided by private organizations.
3. Consider follow-on surveys (especially by mail) which target sub-groups (like the ones in the AHS who said they did remodeling work). A survey like this may be affordable.
4. It is especially important to look for opportunities when data collectors are revising entire systems. Agencies are much more open to new ideas at these times. Sometimes the public is actively invited to offer suggestions as was the case with NAICS, but more often they are not. Examples of opportune times are when surveys are installing new computer systems or when periodic surveys such as the CCI, RFS, or POMS are gearing up. It is important to offer recommendations early. Although periodic surveys are normally put out for public comment as part of their OMB approval process, it may be too late to make significant changes by then.
5. Convince Federal agencies that the data will be useful to them. The Federal government will not pay for the collection of data it does not need for its own

purposes. Explain why the data are needed for specific reasons in order to measure something important. Enlist broad private sector support.

6. In cases where detailed, technical information is sought, it may be better to consider the use of private survey organizations like the NAHB Research Center. These organizations are better equipped to collect this kind of information; for example, the specific kinds of materials used in remodeling.

Conclusion

The Census Bureau and other government agencies are interested in working with the private sector to improve the statistical database. Census regularly meets with the NAHB and other advisory groups to discuss and develop new ideas and to learn more about the kinds of data people are interested in obtaining.

In addition to the strategies for enhancement listed above, it is always useful to remember that there may be opportunities for analyses using existing data. A good example of this was the extensive JCHS research into the characteristics of remodeling establishments using CCI data.

RECOMMENDATIONS FOR IMPROVING AVAILABLE DATA ON HOUSING REHABILITATION

by Kermit Baker, Joint Center for Housing Studies

Introduction

Every year, Americans spend about \$180 billion maintaining and improving their homes and rental property investments. The repairs and enhancements made by these 30 million or so homeowners and countless millions of rental property owners help to ensure that our \$10 trillion housing stock—and the communities that support it—offers safe and adequate housing opportunities for our nation's households. Moreover, the rehabilitation process helps to adapt our homes to a changing population whose housing preferences are continually evolving, and helps to provide cost-effective housing opportunities to those households seeking affordable housing options.

Yet, there is limited data to help private businesses make informed decisions to support our home improvement industry, and to help government policy makers design programs to encourage greater levels of housing rehabilitation. Most information that is used to track and analyze rehabilitation activities was designed for other purposes, such as to gauge the impact of this industry on the national economy, to document home financing decisions by homeowners, or to estimate building product utilization in the U.S. remodeling industry. Using these data sources to document housing rehabilitation activities typically has been an afterthought.

Priorities of Data Needs

While this patchwork series of data sources currently available to study housing rehabilitation clearly is insufficient to meet the broad range of information needs, they do provide a framework that could be improved to provide a better understanding of these activities. However, the decision of where to put scarce resources depends on the information priorities. Many of the current needs fall into one of three categories: documenting levels of rehabilitation activity; understanding the motivation for undertaking projects; or analyzing their impact on the local housing market.

One obvious information need is to better document the level of housing rehabilitation activity: How many homes are rehabilitated each year? Where are these homes located? What kinds of projects are undertaken? What is the result in terms of the number of housing units kept in the housing stock or converted to other uses by these rehabilitation activities? And so on.

To address this objective, an effective strategy is to systematize the identification of rehabilitation activities. The most efficient way is through the permitting process for residential alterations and repairs, which the U.S. Census Bureau will resume gathering and summarizing in early 2002 from local permit issuing places. However, the data gathered by the Census Bureau could be greatly enhanced by determining which types of projects are reported and which are not in each reporting jurisdiction, by requesting more

information on the activities undertaken in each project, and by documenting the location and condition of the unit prior to and following rehabilitation activities.

A second need is to provide a more complete understanding of the motivation for and the context of housing rehabilitation activities: What are the characteristics of homeowners and rental property owners who undertake rehabilitation projects? What are the characteristics of homes that get rehabilitated? In what areas are the rehabilitation needs the greatest?

These issues could be addressed with an enhanced version of the national American Housing Survey (AHS). Enhancements would involve greater attention to surveying owners of unoccupied housing units that may be in the process of rehabilitation, and expanding the questions asked of homeowners and rental property owners about their intentions and longer-term strategies for home improvement activities. Sample sizes might need to be expanded for certain types of respondents—such as residents of areas that have been identified as rehabilitation targets—depending on the types of rehabilitation activities that are desired to be captured with more accuracy.

A third need is to better determine the neighborhood and community impact of rehabilitation activities: Does individual rehabilitation activity help to encourage a broader revitalization of communities? What kinds of activities encourage other homeowners and rental property owners in the community to rehabilitate housing units? What incentives are effective at encouraging greater levels of rehabilitation activity?

Addressing these issues requires a concentration of information within a focused geographic area. The metropolitan AHS surveys offer a potential framework for assembling this information in that sample sizes are substantial for individual metro areas, and information on communities—or zones in the case of the metro AHS databases—exists that enables the determination of how local characteristics and conditions that influence rehabilitation activity. Information on rehabilitation activities was removed from these surveys in the mid-1990s, and therefore would have to be reinstated and potentially enhanced.

Recommendations for Data Collection Activities

With this range of objectives in mind, these suggestions for improving data on rehabilitation activity are presented in order of their priority. Priority considerations included the severity of the need for the information, the extent to which alternative data sources exist that meet a portion of the objectives, and the priority of the issues addressed by the data.

- 1. Reinstatement of the Property Owners and Managers Survey (POMS)** – The lack of information on the rental housing stock is the most glaring gap in documenting rehabilitation activity. What are needed are regular surveys of rental property owners and managers, both to document activities, and to get a better sense of the motivation behind these actions. A survey of property owners and managers of rental properties could achieve both of these objectives. In implementing this survey effort, a strategy

to work cooperatively with industry associations should be developed, both to solicit greater participation in the effort, and to ensure that the survey questions are phrased properly to elicit the most useful information.

- 2. Develop a reporting mechanism for residential repairs and alterations permits as the prime data source for identifying rehabilitation activities** – The most efficient way of gathering information on significant rehabilitation activities is to leverage the data available through permits for residential improvements. Given that a high share of home improvement spending is generated by a small share of the population, and that much activity occurs when the home is vacant, household surveys have inherent limitations in their attempt to track overall activity levels. Knowledge of what types of projects require permits, and practical enforcement details is then essential to the understanding of coverage issues. Optimally, individual permitting issuing places could provide a data file of individual permits. It may be helpful to interview a sample of projects to see exactly what was undertaken, and to better interpret the relationship between information presented on permits and what actually occurs.
- 3. Supplementing the national AHS file with questions on home improvement financing and rehabilitation activity on vacant units** – Questions on home financing behavior have recently been added to the national AHS. This additional information permits limited analysis of the impact of financing of rehabilitation activity. However, the more direct approach of asking the homeowner (or rental property owner in a POMS survey) the specific sources of funding used for home improvement projects would yield more accurate results. This information would give public agencies the ability to assess the impact of rehabilitation programs on rehabilitation behavior, and allow these agencies to tailor their financing and insurance programs to more directly meet desired goals. Additionally, the national AHS should expand its efforts to cover the rehabilitation of vacant units. Rehab activities are often undertaken when a unit is empty, either in preparation for a sale, by a developer, or by the household before they move into a unit. In the first two instances, the subsequent owner typically won't know the extent of the activity undertaken.
- 4. Reinstate the home improvement questions of the metropolitan AHS surveys** – Until recently, the metro AHS surveys questioned homeowners on their home improvement activities. Since the metro files had smaller sampling ratios than the national file, there is greater opportunity to estimate home improvement activity at finer levels of geography. This was aided by the fact that the metro AHS files create zones of approximately 100,000 households, which facilitates small area analysis of home improvement activity. Any future analysis of the impact of rehabilitation on broader community behavior will need a sizeable portion of homes sampled within a metropolitan area. Since the basic survey already exists, all that would be required is for home improvement questions to be added back to the survey.
- 5. Require the reporting of rehabilitation activities for HUD funded programs** – A starting point for gathering more information on rehabilitation would be to require recipients of HUD funding to report rehabilitation activity. Currently, it is virtually impossible, for example, to determine the number of units that might have benefited from Community Development Block Grant funding, the impact of programs on

improving the housing stock, and the types of homes that are being improved through HUD supported programs. Since HUD probably at least partially funds many of the most in-need units, documenting the impact of HUD programs on rehabilitation activity would be a useful start in gauging total activity levels.

DISCUSSION

Following the formal presentations by Ed Hudson, Gopal Ahluwalia, Barry Rappaport, and Kermit Baker, Liza Bowles asked the participants to explore specific suggestions as a result of today's forum. The resulting discussion underscored the availability of many data sources but also the issues that arise in trying integrate sources to paint a comprehensive picture of rehabilitation activity.

Combining Permit and Survey Data

Michael Carliner, NAHB, suggests that permit information has a lot to offer and that data collected through the AHS or C50 file would make the permit information more useful. If a study could be done to compare permit data with results from these surveys, it might illustrate why studies to date have shown a huge underreporting of permit data when compared to other industry figures. An analysis of the information resulting from both permits and surveys could result in firm hypotheses about why the permit data were so much lower than the expenditures survey data, and therefore result in numbers that more adequately reflect the market.

Carliner suggests that the data differential may be a result of 1) households not acquiring permits, and/or 2) households underreporting through the permit process what their actual rehab activities were. Studying the differential between the expenditures survey and the permit data would help us better understand these issues, including what kinds of rehabilitation jobs are not being permitted. This study could serve as a model for interpreting permit data in a useful way. Kermit Baker wonders if such a study is even possible, given the varying technologies used by different locales. Is it possible to search by address, for example? Bill Apgar, Joint Center for Housing Studies, asks the participants if there is a natural place to pursue this: do any states have good permit data?

One participant suggests that there are states that have permit information online, including Ohio. Bowles mentions that the Research Center has been trying to coordinate survey data with information collected by Prince George's County, Maryland, but they have been unsuccessful thus far because the data is not in a usable form. Bowles offers that they might want to pursue these efforts using data from a different location and Ohio might be a good place to look.

Sharing Data

Given the disparate sources of the desired data, Bob Czechowicz, Masco, suggests that it would be important to encourage partnerships between public and private sector players. Especially as the industry consolidates, he feels that it would be in every player's self-interest to understand more about the industry and therefore share proprietary information to gain more.

Czechowicz believes that the big retailers like Home Depot and Lowe's have critical information about products and geography, and the key distributors have information

about additional retail outlets, etc. He expects that industry will want greater information to understand the market for their own strategic business interests and, with proper incentives and coordination, may be essential to acquiring this bigger picture. Bowles cautions that the Research Center has tried to work, without much satisfaction, with the insurance industry and some suppliers who have proprietary data. She admits that these entities probably have their own good reasons for not sharing the information but hopes that the rehab industry will have greater success in the future on collaborations for data sharing.

Information on Multifamily Rehab

Mimi Kolesar, HUD, suggests that while HUD receives adequate data on larger projects, they don't currently have a means to understand the rehab financing and costs of the smaller projects and how these activities impact rent burden. How does the owner determine when and how much to invest in the rental property and how will it impact the renter? Bowles agrees that the smaller projects don't necessarily show up in permit data, but that there might be little bits of information in different sources. For the small property owners, it is difficult to determine their rehab activities and motivations.

Bar code data from retailers could help researchers see some of the patterns of purchasing behavior but Apgar suggests that we're trying to capture an unseen market and that policymakers probably need to be using the POMS on a regular basis.

More Rehab Finance Data

Bowles offers that, in response to interest expressed here today, the Research Center will gladly add back finance questions to the Consumer Practices Survey. Bowles hopes that with help from David Engel, HUD, and the Joint Center, that they can develop seven or eight properly worded questions that will arrive at the data they need. Meryl Finkel, Abt Associates, adds that collecting financial information on AHS and POMS would be very informative and useful for subsidy programs.

Changes to the AHS

Regarding changes to the AHS, Ron Sepanik, HUD, mentions that in recent years there has been a concerted effort NOT to make change for change's sake and this is taken very seriously. He believes that it will be important to catch HUD during a time when they are already considering changes to the AHS and are looking for input. HUD does turn to *users* for suggestions on the proposed changes.

HUD has a pretty strenuous and lengthy protocol for changing AHS questions, and final decisions are made by committee which can be a challenge. They've learned that the request to add *one or two* questions often turns into many additional questions in order to provide context and meaning for the initial *one or two*. Sepanik suggests that if there are some questions that can be removed, this would help. HUD is concerned that too many questions – and questions that seem redundant – may have a negative impact on

a respondent's inclination to participate in the AHS. Regardless, suggestions for changes will have the highest chance of success if they are supported by a solid constituency and are presented at a time when HUD is already considering survey changes.

Eye on the Big Picture

David Listokin, Rutgers University, reminds the group to stay focused on why we want this information, and what is likely to happen in the rehab market over the next several decades. Listokin draws the analogy to the U.S.'s own aging population. "If we have aches and pains as we get older, so increasingly will the housing stock." There are implications certainly for public policy attention to this matter but also for private industry. For example, it would be helpful and important to be able to define the size of the industry, "this could be the xth largest industry," and to understand how this market will be adequately served.

Presenter Biographies

Gopal Ahluwalia is the Assistant Staff Vice President and Director of Research for the National Association of Home Builders, Economics Department. He is responsible for the coordination of departmental economic research and for all NAHB statistical and economic research needs. Mr. Ahluwalia has over 25 years of experience in survey design, questionnaire development, economic analysis, forecasting, and the collection, analysis, and presentation of data. He holds a Statisticians Diploma from the India Statistical Institute in Calcutta, and a M.A. in mathematics with training in operations research and economic analysis.

William Apgar returns to Harvard's Joint Center for Housing Studies and Kennedy School of Government after a leave of absence as Assistant Secretary of Housing/Federal Housing Commissioner at the U.S. Department of Housing and Urban Development. Formerly the Joint Center Executive Director, Apgar now is a Senior Scholar at the Center and directs the Center's evaluation of the Community Reinvestment Act, national legislation to promote housing investment and economic development in low income communities. Other research interests include demographic analysis, housing finance, and housing and community economic development.

Kermit Baker, Ph.D., is a senior research fellow at Harvard University's Joint Center for Housing Studies, and is the project director of the Remodeling Futures Program. This in-depth research effort is the first comprehensive analysis of U.S. remodeling activity undertaken by the Joint Center. Prior to joining the Joint Center, Dr. Baker was vice president and director of the economics department at Cahners Business Information, where he was responsible for industry forecasting. Dr. Baker received his master's degree in urban planning from Harvard University, and holds a Ph.D. from the Massachusetts Institute of Technology in the same field.

Liza K. Bowles, President of the NAHB Research Center, oversees management, operations, marketing, and business and corporate development for the company. Prior to her appointment as president, Bowles served as vice president for operations and director of the Economics and Policy Analysis Division. From 1979 to 1983, Bowles worked for the HUD's Office of Community Planning and Development (CPD), Policy and Program Development Division. Bowles holds a B.A. in Political Science from Mary Washington College and a Masters Degree in Urban Affairs from Virginia Polytechnic Institute and State University.

Michael S. Carliner is the Staff Vice President for Economics at the National Association of Home Builders. He is responsible for economic analysis and forecasting, survey research, and analysis of government policies affecting the housing industry. Prior to joining NAHB in 1984, Mr. Carliner was Director of Regional Real Estate and Construction Economics at Chase Econometrics. He has also served as Vice President of Regional Data Associates and Senior Economist at Dynamics Associates. Mr. Carliner studied Economics and Finance at the University of Pennsylvania, where he was a Research Fellow.

Meryl Finkel is a Senior Associate in the Housing and Community Revitalization group at Abt Associates. Dr. Finkel recently directed a study for HUD that looked at the issues associated with financing rehabilitation of affordable multifamily developments. The study included analysis of American Housing Survey and Property Owner and Manager Survey data to assess the need for and recent experience in rehabilitation of multifamily properties as well as a series of in-depth discussions with key market players to provide further details and insights into the market. Her Ph.D. in Economics is from Harvard University and her MBA is from Tel-Aviv University.

Ed Hudson is presently the manager of the NAHB Research Center's Builder and Consumer Practices Surveys, which develop building product usage data covering new home construction and the repair and remodeling industries. Prior to assuming his current responsibilities, Mr. Hudson supported building technology transfer programs (Advanced Housing Technology Program and PATH) and assisted building product manufacturers and industry associations in developing marketing and distribution strategies for new products for new homes, light commercial buildings, and remodeling. Mr. Hudson earned his MBA from George Mason University in 1994.

David Listokin, Ph.D., has been a professor of urban planning at the Rutgers University Center for Urban Policy Research since 1971. His areas of specialization include development impact assessment, land use, and housing. He has done extensive research and writing on historic preservation for the National Parks Service, the Twentieth Century Fund, the New York Landmarks Conservancy, the National Trust for Historic Preservation, and the World Monuments Fund. Dr. Listokin teaches graduate historic preservation classes at Rutgers and Harvard Universities. He has an M.C.R.P. and Ph.D. in urban planning from Rutgers University.

Alvaro Martin-Guerrero is a research analyst at the Joint Center for Housing Studies. He is currently working on the Remodeling Futures Program, a major study of the home remodeling industry. His activities within the program include statistical analysis and modeling of housing micro data. He has worked on several projects using AHS and HMDA data, as well as with consumer surveys of home improvement financing. Mr. Martin-Guerrero has a law degree by Universidad Autonoma in Madrid (Spain) and has finished all coursework for his MPPA at the University of Missouri St. Louis.

Mark H. Obrinsky, Ph.D., is Vice President of Research and Chief Economist for the National Multi Housing Council. His academic experience includes seven years teaching Economics at the University of Delaware and Bradley University and his work on housing, mortgage finance, and economic theory has appeared in leading professional and industry publications. Dr. Obrinsky holds a Bachelor of Arts degree (with Honors) in Mathematics from the University of Wisconsin and an M.A. and Ph.D. in Economics from the University of Pennsylvania.

Barry A. Rappaport is Special Assistant for Construction Statistics Programs at the U.S. Census Bureau and is responsible for research and development projects. Mr. Rappaport has worked in the Bureau's construction statistics area for many years, and has at one time or another directed the housing starts, sales and completions surveys, the value of construction put in place surveys, and the census of construction industries. He received a B.A. degree in economics from the University of Maryland.

Julia Reade is a research analyst at the Joint Center for Housing Studies at Harvard University where she studies home improvement activities for the Remodeling Futures Project. Her research has focused on estimating remodeling levels in metropolitan areas and investigating local area influences on home improvement. Ms. Reade received a National Science Foundation Graduate Fellowship for masters and doctoral studies in Sociology and Demography at the University of North Carolina. She received her B.A. in Geography from Dartmouth College.

Nicolas P. Retsinas was appointed Director of Harvard University's Joint Center for Housing Studies in 1998. He is also a Lecturer in Housing Studies at the Harvard Design School and the Kennedy School of Government. Prior to his Harvard appointment, Mr. Retsinas served as Assistant Secretary for Housing-Federal Housing Commissioner at HUD. He received his master's degree in city planning from Harvard University and his AB in economics from New York University.

Forum Participants

Gopal Ahluwalia, National Association of Home Builders
Bill Apgar, Joint Center for Housing Studies, Harvard University
Bill Asdal, Asdal Builders / National Association of Home Builders
Kermit Baker, Joint Center for Housing Studies, Harvard University
Peter Beard, Fannie Mae Foundation
Liza Bowles, NAHB Research Center
Mark Calabria, U.S. Senate Committee on Banking
Michael Carliner, National Association of Home Builders
Michael Choitner, ebuild / Hanley-Wood
Marcie Cohen, AFL-CIO Housing Investment Trust
Michael Collins, Neighborhood Reinvestment Corporation
Therese F. Crahan, National Association of Home Builders
Bob Czechowicz, Masco Corporation
Aimee Darrow, U.S. Department of Housing and Urban Development
Paul Deffenbaugh, Remodelers Guild
Steven Ehrlich, U.S. Department of Housing and Urban Development
David Engel, U.S. Department of Housing and Urban Development
Meryl Finkel, Abt Associates
JoAllen Gause, Urban Land Institute
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