A Risk Assessment Method for Preservation of Assisted Rental Housing

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Prepared by
Shimberg Center for Affordable Housing
University of Florida
P.O. Box 115703
Gainesville, Florida 32611-5703

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Anne Ray and Patricia Roset-Zuppa of the Shimberg Center prepared the text for this report, with input from William O'Dell of the Shimberg Center and Marc Smith of the Center for Real Estate at DePaul University. Douglas White developed the Probit model. William O'Dell developed the Shimberg Center's target inventory analysis method, with property data from the Shimberg Center's Assisted Housing Inventory provided by Diep Nguyen.

Meryl Finkel and Ken Lam of Abt Associates, Inc. prepared *HUD Multifamily Portfolio in Florida*, an analysis of the characteristics of "opt-out" and "prepayment" properties that provided critical information for the subsequent analysis in this report. The *HUD Multifamily* report is attached as Appendix 5.

Executive Summary

Nationwide, assisted properties are disappearing from the affordable housing stock as owners convert units to market-rate rentals or condominiums and as aging properties are lost to deterioration and default. Beginning in 2006, the Shimberg Center for Affordable Housing at the University of Florida and the Florida Housing Finance Corporation undertook a project to increase our understanding of the factors that place properties at high risk of loss and the use of data to identify these factors in properties. This project received generous support from the John D. and Catherine T. MacArthur Foundation's *Window of Opportunity: Preserving Affordable Rental Housing* initiative.

As part of this project, the Shimberg Center examined existing methods of assessing risks to the assisted housing stock and undertook the development of risk assessment methods to be applied to Florida properties. This paper summarizes the findings of the Shimberg Center's research and describes the resulting risk assessment method.

Risk Assessment Methods

We found two types of risk assessment methods, with different purposes:

1) Through analysis of *factors*, researchers identify the factors most important in determining whether a project will leave the subsidized housing inventory. The result is a list of market, property and owner characteristics that can be applied to a group of properties to determine which are more at risk of opt-out or default.

2) Through analysis of *properties*, researchers employ a pre-determined set of characteristics to classify individual properties within a larger inventory according to their risk of opt-out or default. Most analyses of properties target developments based on subsidy or affordability expiration dates, ownership type and strength of the market.

Development of a Model Risk Assessment Tool

The Shimberg Center sought to develop an analysis of factors, using historical data about properties in Florida, that would subsequently allow us to develop a tool for analysis of properties in the Center's Assisted Housing Inventory (AHI).

An Abt Associates, Inc. regression analysis of properties subsidized by the U.S. Department of Housing and Urban Development (HUD) in Florida found that owners of

properties with the following characteristics were more likely to opt out of rental assistance contracts: project rent to HUD Fair Market Rent (FMR) ratio below 80 percent; fully funded (all units under rental assistance contracts); older assisted, with funding primarily from the 1960s and 1970s era HUD Section 221(d)(3) and Section 236 programs; smaller, with fewer than 50 units; and low density, with fewer units of three or more bedrooms.

Based on the Abt Associates analysis of factors, we attempted to construct a Probit model using property characteristics to predict the number of opt-outs among AHI properties. While our model came close to predicting the number of properties that actually were opt-outs, it did not correctly predict which individual properties would opt in or out. Based on our experience, we do not believe that constructing a statistical model to predict opt-outs is currently feasible. Limitations include the unavailability of key data elements and the small sample of HUD properties with project-based rental assistance that have already left the inventory.

As an alternative, we developed a target inventory tool that depends on a constellation of factors to identify both opt-out and deterioration risks. We applied the tool to the 2,209 properties with over 250,000 assisted units in the AHI as a test.

Opt-out risk: Opt-out risk refers broadly to the risk of loss due to mortgage prepayment, rental assistance contract opt-out and use restriction expiration. We developed a three-step method to analyze an inventory of properties for their opt-out risk: 1) screen for *eligibility* of opt-out, based on the terms of funding programs; 2) flag for *likelihood* of opt-out based on property, owner and neighborhood characteristics; and 3) sort by *imminence* of potential opt-out based on earliest possible date of prepayment, contract termination or subsidy expiration. We included these factors as indicators of higher likelihood of opt-out: development size under 50 units, family occupancy, for-profit or limited dividend ownership, assisted under older HUD programs or built before 1975, partially funded, with a project rent to FMR ratio under 80 percent, and located in a neighborhood with declining poverty rates. [1]

Deterioration risk: We selected the following factors as indicators of potential deterioration or default: family occupancy, construction before 1987, with tenant household incomes of 15 percent or less of area median income, and poor physical condition as signified by

[1] Note that our use of partially funded projects as an indicator of opt-out risk runs counter to Abt Associates' finding in its regression analysis of factors for Florida properties, wherein *fully* funded developments were found to be at higher risk. However, it is consistent with Abt Associates' descriptive cross-tabulation analysis of a larger group of Florida properties.

HUD REAC scores below 60. As data were available only for properties with at least one layer of HUD funding for the latter two variables, the analysis was largely restricted to these properties. In particular, most properties subsidized by the USDA Rural Development program (RD) could not be analyzed using these variables. Because deterioration can happen to any project and at any time during the life of a project, the deterioration/default risk assessment method does not include screening for eligibility or sorting for imminence of loss to the inventory.

In applying the risk assessment methods to the inventory of Florida properties, we found 137 properties with 7,017 assisted units at heightened risk of opt-out by 2020. Forty-two properties with 3,856 assisted units demonstrated heightened deterioration risk, of which 11 properties with 627 assisted units also appeared on the opt-out risk list.

Conclusion

Quantifying the risk to a set of properties is one step in setting preservation priorities. A further, far more subjective step is to prioritize at-risk properties by their value to the affordable housing stock. Given limited preservation resources, what affordable housing is most feasible and desirable to preserve? Potential characteristics signaling higher-value properties might include rent and income restrictions targeted at very low- and extremely low-income tenants; projects with deep subsidies; location in neighborhoods that are mixed-income, rising in home prices and rents, or convenient to transportation and jobs; target populations corresponding to identified community housing needs; special needs housing; and ownership by a non-profit or other entity with a mission to provide affordable housing. The Shimberg Center envisions the next task in preservation data collection as providing the data that can help preservation-minded parties make these value decisions.

1. Introduction

Assisted housing—privately owned multifamily housing receiving federal, state, or local subsidies in exchange for serving low-income tenants—is at risk. Nationwide, assisted properties are disappearing from the affordable housing stock as affordability restrictions expire and rehabilitation needs mount. The National Housing Trust (2004) found a net loss of 300,000 units subsidized by the US Department of Housing and Urban Development (HUD) as a result of prepayment of subsidized mortgages and opt-out of rental assistance contracts during 1995 to 2003. Many properties subsidized by USDA Rural Development (RD), the Low Income Housing Tax Credit, and state and local programs may also be at risk.

At the same time, the need for affordable rental housing continues to rise. In 2005, 25 percent of renter households nationally spent more than half their income on housing, up from 19 percent in 1995 (Joint Center for Housing Studies 2007). In Florida, nearly two out of three low-income renter households pay more than 40 percent of their income for rent. In just four years (2001-2005), Florida added more than 80,000 low-income households paying this proportion of income or more for rent. Most of these new households are families with children, and most are headed by someone who is working full time (Shimberg Center 2007).

The risk of loss of assisted housing comes from two directions. First, owners of properties in strong local housing markets may convert units to market-rate rentals or condominiums. Owners' opportunities to "opt out" from the assisted housing stock come at several points (Recapitalization Advisors 2002):

- Mortgage prepayment eligibility date: Several HUD and RD loan programs allow certain owners to prepay mortgages prior to maturity.
- Mortgage maturity or expiration of use restrictions: When the loan obligations are met or the period of use restrictions ends, all affordability restrictions are lifted if no other agreements are in place to keep the development affordable for a longer term.
- Expiration of rental assistance: Each rental assistance contract has a limited timeframe. Upon expiration of the contract, an owner has the choice to opt out of the contract.

The end of tenant rent assistance, income and rent restrictions, or both can lead to the displacement of low-income tenants and the long-term loss of subsidized units from the assisted housing stock.

Second, properties can be lost to deterioration and default, especially in distressed neighborhoods. Many properties built during the 1960s through 1980s are struggling with physical deterioration and deferred capital improvements but have no or limited capital reserves (Khadduri and Wilkins 2007; Wilkins 2002). Unlike with opt-outs, deterioration does not necessarily lead to a clearly defined moment when the property leaves the assisted housing stock. Nevertheless, deterioration can lead to several outcomes that either actually or effectively prevent the property from continuing to provide affordable housing to low-income tenants:

- The property continues to operate, but with tenants living in dangerous or unhealthy conditions;
- The government funder considers poor property conditions to constitute mortgage default, forecloses on the property and sells it without affordability restrictions or with less stringent restrictions;
- HUD or RD cancels or refuses to renew rent subsidy contracts because of poor conditions;
- The property is shut down due to local code violations;
- The owner goes bankrupt or out of business because the property does not generate sufficient cash flow to meet business expenses.

Preservation of assisted housing has been hindered by a limited knowledge about the subsidized housing stock and a lack of understanding of the motivations of property owners. In recent years, however, organizations concerned about the loss of assisted housing have begun to build inventories of assisted housing properties in their areas. These inventories typically take the shape of a database of property-level information such as addresses, numbers of units, subsidy programs involved, and key opt-out and prepayment dates.

Organizations use the inventories to flag individual properties most at risk of loss and, by aggregating property-level information, to understand the threat to the affordable housing stock of a particular geographic area. However, understanding risks based on an inventory is not simple or straightforward. As expressed by Florida's Affordable Housing Study Commission (2005, 24), "There are no widely available standardized risk analysis tools to assist states and local governments in identifying and examining properties that may be facing expiration and/or opt-out situations so that preservation strategies can be built around the specific needs of each property."

Beginning in 2006, the Shimberg Center for Affordable Housing at the University of Florida and the Florida Housing Finance Corporation undertook a project to increase our understanding of the factors that place properties at high risk of loss to the affordable housing stock and the use of data to identify these factors in properties. This project received generous support from the John D. and Catherine T. MacArthur Foundation's *Window of Opportunity: Preserving Affordable Rental Housing* initiative. Additional research and information developed as part of this project can be found at http://preservation.shimberg.ufl.edu. Appendix 4 is an executive summary of a report developed earlier in the project to explore the development of a national infrastructure of preservation-related data.

The Shimberg Center maintains the Assisted Housing Inventory (AHI), a database of Florida properties receiving federal, state, and local subsidies. As part of this project, the Shimberg Center undertook the development of risk assessment methods that will enable the AHI to provide information about the risk to Florida's assisted housing stock and that can be used by others around the country to analyze preservation needs. To develop this set of tools, the Shimberg Center reviewed risk assessment methods developed by others and used statistical analysis to test the importance of various factors as predictors of opt-outs based on Florida's historical experience. This paper summarizes the findings of our research and describes the resulting risk assessment methods.

2. Risk Assessment Methods

A number of consultants, government agencies, advocacy organizations and university research centers have undertaken projects in recent years to assess the risk to the assisted housing stock. These risk assessment efforts fall into two categories, with separate but related purposes: analysis of *factors* and analysis of *properties*.

1. Analysis of factors: In this form of analysis, researchers use quantitative methods to identify the factors most important in determining whether a project will leave the subsidized housing inventory. The result of an analysis of factors is a list of characteristics that can then be applied to a group of properties to determine which are more at risk of opt-outs or default.

The most prominent example is Abt Associates' report for HUD, *Multifamily Properties: Opting In, Opting Out and Remaining Affordable* (Finkel et al. 2006). From a larger list of general property, owner, financing, location, tenant, and physical and financial characteristics of HUD's multifamily properties, the *Opting In, Opting Out* study used regression analysis of past opt-in/opt-out decisions to isolate these characteristics as increasing the likelihood that owners would opt out of rental assistance contracts:

- Low project rent-to-FMR ratio;
- For-profit or limited dividend corporation ownership;
- With 100 percent of units receiving rental assistance;
- Small (fewer than 50 units);
- Family occupancy type;
- Composed of units with three bedrooms or less;
- Subsidized under older HUD programs;
- Located in low-poverty Census tracts;
- Located in central cities or non-metropolitan locations; and
- Located in the East North Central, West North Central, West South Central, Mountain, or Pacific Census Divisions.

2. Analysis of properties: This form of analysis employs a pre-determined set of characteristics to classify individual properties within a larger set according to their risk of opt-out or default. The resulting product might be a list of properties determined to be at higher risk, or it might be a risk rating assigned to each property in the inventory. The purposes of analysis of

properties include informing policy makers about the extent of the potential loss of affordable housing units, building a case for preservation legislation and funding, flagging individual at-risk properties, and prioritizing the allocation of preservation resources.

Most analyses of properties target or rate properties based on a small number of key risk indicators: subsidy or affordability expiration dates, ownership type and strength of the market:

- *Subsidy or affordability expiration dates:* Expiration dates include dates of eligibility for prepayment of a subsidized mortgage, dates of mortgage maturity, rental assistance contract expiration dates, and use restriction expiration dates. If an expiration date is imminent, the risk of loss to the affordable housing stock is higher, because a property owner will soon have the option to terminate affordability. When a property has multiple funding layers, the expiration date of the most restrictive program is generally applied in the analysis.

  Many target inventories define a timeframe for analysis in order to focus on the properties at highest risk of loss. For example, the Community Economic Development Assistance Corporation (CEDAC) in Massachusetts lists all properties with federally or state subsidized or insured mortgages and properties with HUD rental assistance that are at risk of leaving the stock by 2010 due to prepayment, full mortgage repayment or contract terminations (CEDAC 2008).
- *Ownership type:* Most analyses of properties include the assumption that for-profit owners, with a mission to maximize financial returns, are more likely to terminate rent and income restrictions than non-profits, whose mission calls for them to serve low-income tenants. For example, California Housing Partnership Corporation's risk rating system classifies properties with for-profit owners and ability to convert to market rate in 5-10 years as "medium risk," but classifies properties with non-profit owners and the same opt-out timeframe as "low risk" (CHPC 2006).
- *Strength of the market*: Conversion risk is considered higher for properties in tight rental markets (Recapitalization Advisors, Inc. 2002). If a property is located in a distressed area with high poverty, the risk of deterioration and default is generally higher. Analyses of properties use a variety of standards to measure the strength of the surrounding market, depending on what data are available: the ratio of project rents to overall market rents (Finkel et al. 2006; Southern California Association of Governments 2000); neighborhood

characteristics such as area vacancy rate, poverty rate and median income; and area home price appreciation (Recapitalization Advisors, Inc. 2002).

The choice of characteristics for analyses of properties has been based largely on the experience of preservation experts and their understanding of subsidy programs and owners' motivations. For example, preservation experts understand that non-profits are less likely to opt out of affordability restrictions because of their mission, and that indicators of market strength give clues to for-profit owners' incentives to escape rent restrictions. Recently completed analyses of factors such as the *Opting In, Opting Out* report can improve the selection of variables by adding a quantitatively based analysis of past owner and property behavior to the on-the-ground experience of preservation experts. Appendix 2 provides fuller descriptions of both types of analyses, including numerous examples and a discussion of data sources.

3. Development of a Model Risk Assessment Tool

The effort to build a risk assessment tool for Florida's assisted housing stock incorporates both types of risk assessment activities: analysis of factors and analysis of properties. Following research into risk assessment methods, the Shimberg Center sought to develop an analysis of factors, using historical data about properties in Florida, that would allow us to develop a tool for analysis of properties in the Center's Assisted Housing Inventory (AHI) going forward. The AHI is a database of Florida properties receiving federal, state, and local subsidies.

3.1 Step One: Analysis of Factors

The Shimberg Center contracted with Abt Associates to recreate its *Opting In, Opting Out* analysis of factors using data for Florida properties only (Finkel et al. 2008). The results of the regression analysis were similar, but not identical, to the national *Opting In, Opting Out* analysis. Abt Associates found these factors to have a statistically significant effect on owners' decisions to opt out of HUD rental assistance contracts in Florida:

- Project rent to Fair Market Rent ratio: Projects with rents less than 80 percent of the Fair Market Rent—that is, those with more potential to fetch higher rents in a strong surrounding market—were more likely to opt out.
- Fully funded: Projects with 100 percent of units under rental assistance contracts were more likely to opt out. Abt Associates suggested that owners of fully funded projects are more likely to opt out because they would have the opportunity to raise rents on more units to market levels.
- Older assisted: Projects funded under HUD programs from the 1960s and earlier 1970s, primarily the Section 221(d)(3) and Section 236 mortgage programs, were more likely to opt out than projects from the later Project-Based Section 8 programs of the mid-1970s to mid-1980s. Because of restrictions on rents built into the older HUD programs, the older projects are more likely to have below market-rate rents.
- Size: Projects with fewer than 50 units were more likely to opt out. This may be because smaller projects are more marketable to higher-income tenants. It can also be easier to achieve full occupancy and thereby to optimize revenues if the project is smaller.

- Density: Projects with fewer units of three or more bedrooms were more likely to opt out. Abt suggested that larger units are harder to market to "higher income singles and couples who could afford market rate units." (Finkel et al 2008, 15)

Unlike in the national Abt study, tenant population (family vs. elderly), ownership type (non-profit vs. for-profit), location (central city, suburban, or non-metropolitan), and the poverty rate of the surrounding Census tract did not show statistically significant correlations with opt-out decisions.

3.2 Step Two: Testing Feasibility of Predictive Model for Analysis of Properties

After examining the available analyses of factors and numerous examples of analysis of properties, we attempted to build a statistical model predictive of opt-outs. Our intent was then to apply this model to each property in the AHI to create a list of Florida properties that would be predicted to opt out of subsidies in the future.

Using data from the AHI, we examined 406 properties in Florida that had either opted out of HUD rental assistance contracts (36 properties) or renewed rental assistance contracts despite at least one opportunity to opt out (370 properties). As with the Abt Associates regression analysis, we limited our analysis to the decision whether to renew or opt out of a rental assistance contract, rather than also including decisions to prepay a subsidized mortgage or deterioration and default risks. We constructed a Probit model intended to predict the number of properties in the inventory whose owners would opt out of subsidy programs based on characteristics of the properties and their surrounding neighborhoods. See Appendix 3 for a full description of the Probit model.

The most promising model found that three characteristics helped predict the number of opt-out properties:

- With fewer than 100 percent of units receiving rental assistance (an opposite finding to the Abt regression analysis; see note 4 below);
- Fewer units;
- Located in block groups with greater declines in the percentage of population living below the poverty line from 1990-2000.

However, while this model came close to predicting the number of properties that would opt out in the AHI, calling for 24 opt-outs when 36 actually occurred, it did not do well in

predicting which individual properties would opt in or out. Therefore, we do not believe that the model is useful as a risk assessment method.

Based on our experience, we do not believe that constructing a statistical model with Florida data to predict opt-outs is feasible at this point, although such a model might be possible if more data were available. In particular, we were unable to obtain data from HUD on project rents of opt-out properties, preventing the model from incorporating the project rent to Fair Market Rent ratio that figured prominently in the Abt Associates analyses of factors both in Florida and nationally. Similarly, RD did not provide data either on terminated subsidies or on project rents. Without more public access to data, new models cannot be constructed, and successful models cannot be widely replicated.

In addition, a number of factors enter into owners' decisions that are intangible or unquantifiable, such as owners' personal and financial circumstances (Recapitalization Advisors, Inc. 2002). Other characteristics are more tangible but infeasible to collect on properties on a widespread basis, such as exit tax considerations for owners contemplating sale to a preservation entity (Achtenberg 2002, 40).

A third, fortunate circumstance limited our ability to develop a model: the small sample size of properties that have opted out of HUD rental assistance contracts in Florida. With only 36 opt-out properties, we were unable to identify enough factors that they had in common that also distinguished them from the larger pool of opt-in properties. Again, with more data from HUD on the characteristics of opt-out properties and with data from RD on subsidized properties that have left its inventory, statistical modeling may become more feasible.

With these limitations impeding the creation of a statistical model to predict opt-outs, we turned to the target inventory approach; that is, flagging properties as at risk of conversion to market-rate housing or of deterioration and default based on a constellation of characteristics for which data can be found. The risk assessment process presented below is based on extensive research into the results of analyses of factors and the best practices from analyses of properties from around the country.

3.3 Step Three: Developing Target Inventory Tool

The purpose of this tool is to target properties at both types of risk, opt-out and deterioration, and merge them into an at-risk list. Opt-out risk refers broadly to the risk of loss due to mortgage prepayment, rental assistance contract opt-out and use restriction expiration.

Opt-out Risk Analysis Process

We developed a three-step method to analyze an inventory of properties for their risk of opt-out: 1) screen for *eligibility*, 2) flag for *likelihood*, and 3) sort by *imminence*.

1. Screen for eligibility of opt-out. The first step in creating a list of at-risk properties is to filter out those that cannot be converted to market-rate through prepayment, contract termination, or subsidy expiration, or that are not eligible to do so for a predetermined period of time (e.g. 10 years). First, some properties were funded under one or more programs that do not allow for opt-outs or prepayment. For example, properties receiving subsidies from the HUD Section 202 program after 1990 received grants rather than loans, so prepayment is not possible. Second, and more difficult to determine, a property may have long-term use restrictions placed upon it beyond the statutory requirements of the funding program. For instance, starting in projects funded in the early 1990s, recipients of Low Income Housing Tax Credits from Florida Housing must agree to an affordability period of 50 years, well beyond the 15-year period originally required by federal law. Where these restrictions are placed upon projects as part of an individual negotiation between the funder and the owner, they are very difficult to track for an entire inventory. However, when these restrictions exist as a matter of policy for a particular funding source and program, as in the Florida Housing tax credit example, they can be tracked for properties if the funding program information is in the database.

2. Flag for likelihood of opt-out. Properties can be flagged, ranked or clustered by the presence of factors that have been shown to make opt-outs more likely. The Shimberg Center identified the factors in Table 1 on the following page based on review of quantitative analyses of factors. The factors are limited to those that are already in the AHI or can be derived from existing AHI and Census data.

Table 1. Variables Indicating Opt-Out Risk, Shimberg Method

Variable	Direction Signaling Risk	Properties with Data For Variable in AHI	Analyses of Factors Supporting Inclusion
Development Size	< 50 units	All	Abt US and Florida regression analyses, Shimberg Probit model
Population Served	Family	All	Abt US regression analysis
Ownership Type	For-Profit/Limited Dividend/Other; i.e., not Non-Profit	All	Abt US regression analysis
Older/Newer Assisted or Year Built	Older subsidies or properties	Older/Newer Assisted for HUD properties; Year Built for Non-HUD properties[2]	Abt US and Florida regression analyses for Older/ Newer Assisted; Abt Florida cross-tab[3] for Year Built
Fully Funded?	No[4]	All properties	Shimberg Probit model, Abt Florida cross-tab
Project Rent to Fair Market Rent ratio	<80%	Properties with HUD rental assistance contracts and Florida Housing Finance Corporation properties[5]	Abt US and Florida regression analyses
Neighborhood poverty rate	Low and declining; i.e., Census block group poverty rate declined 1990-2000 and is below average for all assisted properties statewide	All	Abt US regression analysis, Shimberg Probit model

[2] Year built is used for non-HUD properties in lieu of the Older/Newer Assisted distinction, which exists for HUD properties only. Thus, while the AHI does contain year built data for HUD properties, the data are not used here.

[3] The Abt Florida study included tables cross-tabulating property, owner, and tenant characteristics against properties' opt-in/opt-out status. The cross-tabs showed that opt-out properties were disproportionately older.

[4] The extent to which a project is "Fully Funded" refers to the number of units affected by the relevant subsidy program(s) and income and rent restrictions. We define a project as "Fully Funded" if no more than two units are excluded from subsidies and restrictions. Allowing for two unfunded units permits projects with, for example, a manager's unit and unit used as an office to qualify as fully funded. Note that our use of partially funded projects as an opt-out risk indicator runs counter to Abt Associates' finding in its regression analysis for Florida properties, wherein *fully* funded developments were found to be at higher risk. However, it is consistent with Abt Associates' cross-tabulation analysis of a larger group of Florida properties.

[5] Data on actual rents for properties funded by the Florida Housing Finance Corporation (FHFC) are not available, unless these properties also have a HUD rental assistance contract. Therefore, we created a fairly complex proxy for the rent to FMR ratio in FHFC properties. First, we calculated the maximum allowable rent for a two-bedroom unit based on the 2007 income restriction representing the largest number of units in the property, herein referred to as "Derived FHFC Rent." We compared this rent amount to the FMR for a two-bedroom unit. However, this measure will be the same for all properties in the same Metropolitan Statistical Area (MSA), because both FHFC income restrictions and FMRs are set at the MSA level. A property may be located in a weak neighborhood rental market and be at low opt-out risk, even if it is located in a stronger metropolitan market. For this reason, we added a second element showing the strength or weakness of the neighborhood housing market: a comparison of the median gross rent from the 2000 Census in the block group surrounding the property to the 2000 FMR for a two-bedroom apartment. A median gross rent greater than FMR indicates a strong neighborhood housing market, and thus that lower rents may not be caused by an overall weak neighborhood market. Therefore, the full variable indicating opt-out risk for the FHFC properties is 1) Derived FHFC Rent <80% FMR *and* 2) 2000 Median Gross Rent for Census Block Group > 2000 HUD FMR for a two-bedroom unit.

Note that the absence of these factors does not mean a property is completely safe from market-rate conversion, and the presence of these factors does not automatically predict an opt-out. Rather, these factors are red flags that help to prioritize a longer list of properties eligible for conversion.

3. Sort for imminence of opt-out. A list of properties that are at some higher of conversion can be sorted by the date of possible mortgage prepayment, contract termination, or subsidy expiration. This allows those using the target inventory to prioritize properties that will reach the decision point the soonest. Some users may feel that imminence takes precedence over likelihood. That is, the user may choose to focus on properties with fewer risk factors pointing toward an opt-out decision, but on which immediate action would be needed in case the owner did decide to convert to market-rate rents.

Deterioration Risk Analysis Process

Because any property can be at risk of deterioration and default regardless of use restrictions, eligibility and imminence are not relevant to an analysis of deterioration risk. Therefore, rather than the three-step process used for assessing opt-out risk, the deterioration risk analysis process consists of a single step: flagging properties with factors indicating increased likelihood of deterioration or default.

As noted earlier, deterioration risk does not imply the same bright line between a property's presence in or departure from the assisted housing stock as does opt-out risk. In some cases, a property may literally leave the assisted housing inventory because a funding agency forecloses the mortgage and transfers the property, after which the property does not retain subsidies and affordability restrictions.[6] In others, the property continues to operate but in conditions that poorly serve tenants. Thus, properties at deterioration or default risk may benefit from preservation resources to allow them to continue as physically and financially viable affordable housing, just as properties at opt-out risk may benefit from preservation resources to enable them to stay in the assisted inventory.

The Shimberg Center identified factors indicating increased likelihood of deterioration and default based on the descriptive cross-tabulations of property characteristics in Abt

[6] Properties undergoing foreclosure do not necessarily lose their affordability. The "Schumer Amendment" of 2006 makes it more likely that HUD properties with project-based Section 8 will retain rental assistance subsidies even after the properties have been foreclosed on and transferred to a new owner (NHT 2005).

Associates' Florida report (Finkel et al. 2008). See Appendix 5 for the full report. The following general variables both correlated with a foreclosure or HUD enforcement action against a property and were available via the AHI:

Table 2. Variables Indicating Deterioration and Default Risk, Shimberg Method

Variable	Direction Signaling Risk	Properties with Data for Variable in AHI	Corresponding Finding in Abt Florida Cross-Tabs
Population Served	Family	All	Family properties make up 52% of all HUD properties but 95% of properties in foreclosure/enforcement.
Year Built	Pre-1987	All	Pre-1985 buildings make up 62% of all HUD properties but 84% of foreclosure/enforcement properties.
Tenant Household Income	Lowest; i.e., 0-15% of HUD Area Median Family Income	HUD Properties Only	Households in foreclosure/enforcement properties had an average income of 8.9% of AMI, compared to 26.8% of AMI for households in all properties.
Physical Condition	Poor; i.e., REAC score <60	HUD Properties Only	40% of properties with low REAC physical condition scores were in foreclosure/enforcement, compared to 20% of those with higher scores.

The AHI contains data regarding the latter two variables only for properties with HUD assistance, either alone or in combination with funding from another government agency. The source of data for tenant household income is HUD's *Picture of Subsidized Households* from 2000, which provides tenant characteristics for individual HUD properties. The source of data on the physical condition of properties is scores from physical inspections conducted by HUD's Real Estate Assessment Center (REAC), also available only for HUD properties. In effect, this limits our ability to assess properties' deterioration risk to those with HUD funding, either alone or in combination with other funding sources. In particular, it excludes most Rural Development-funded properties, as only five percent of RD properties in Florida also have funding from HUD.

3.4 Application of Risk Analysis Tool

To apply this tool, we performed the three-step opt-out analysis and single-step deterioration/default analysis on the 2,209 properties funded by HUD, RD, Florida Housing Finance Corporation, and local housing authorities in the AHI database. These properties provide over 250,000 units of assisted housing in Florida.

Opt-Out Analysis

Step 1: Screen for Eligibility. We screened out any properties whose affordability restrictions, to the extent they can be determined through the AHI, cannot end until after 2020. This left 1,012 properties with 81,162 units.

The AHI includes data for the expiration dates of HUD rental assistance contracts, the maturity date for HUD mortgages, a Restrictive Use Period expiration date for RD properties, and the date of expiration of affordability restrictions associated with Florida Housing Finance Corporation or local housing authority programs. Where multiple funding sources are in place, we created an "Overall Expiration of Governing Program" date field using a business rule that combines considerations of the later dates of eligibility and the funding programs with more affordability restrictions.[7] Therefore, any properties with dates in this field through December 31, 2020 were included in the next step of the analysis. This yielded 586 properties. We also included any properties where the end date was unknown, adding another 426 properties.

We also examined HUD mortgage maturity dates to determine whether any properties with post-2020 maturity dates might be eligible for mortgage prepayment before that date, and thus should also be included in the next step of the analysis. We incorporated the assumption that HUD 221(d)(3) and HUD 236 mortgages held by for-profit owners would be eligible for prepayment 20 years before their expiration date. However, in the few cases in the AHI where for-profit owners held these mortgages, the properties had other subsidies whose expiration dates were later than the mortgage maturity date. Therefore, whether prepayment or mortgage maturity occurred, the property would not leave the inventory at that time.

Note that this method determines the amount of time during which a property will remain a part of the assisted housing inventory in some way. It does not always ensure that the properties will retain their most restrictive subsidies and income limits during that entire period.

[7] Using this business rule, programs with rent and income restrictions are given priority over those with income restrictions only. The rule does not incorporate a comparison of the stringency of rent or income restrictions.

For example, a Low Income Housing Tax Credit project could have a rental assistance contract that expires before the end of the tax credit-related restrictions. The property would continue the tax credit restrictions on incomes and rents if the rental assistance contract is not renewed, but the deep rental subsidies that make the units affordable to the lowest income tenants would no longer be available.

Step 2: Flag for Likelihood. We assigned one of three scores for each of the seven opt-out risk variables to the 1,012 properties: 0 indicating the risk factor was not present, 1 indicating the risk factor was present, or a null value indicating lack of data for that variable. Each property was then assigned an opt-out risk score as the sum of the individual factor scores. While property scores of 0 to 7 were possible, in practice no property scored higher than 5. We set scores of 4-5 as indicating heightened risk. Because the project rent to FMR risk factor figured so prominently in the *Opting In, Opting Out* analysis, we also assigned a score of 5 to any HUD property with a rent to FMR ratio less than 80 percent and for-profit/limited dividend ownership, even if no other risk factors were present. In addition, Florida Housing Finance Corporation projects with a Derived FHFC Rent to FMR ratio less than 80 percent, 2000 Median Gross Rent for Block Group greater than 2000 two-bedroom FMR, and for-profit ownership received two points for this variable. Other FHFC properties meeting the Derived Rent to FMR condition but not one or both of the other conditions received no points for this variable (see note 5 above).

In total, this yielded 137 developments at risk before the end of 2020 in Florida, with 7,017 assisted rental units. Table 3 below shows the properties and units by each risk score. Rows in bold indicate properties considered as heightened opt-out risks.

Table 3. Florida Assisted Housing Properties by Opt-Out Risk Score

Opt-out Score	Properties	Assisted Units
0	35	3,533
1	168	15,930
2	357	33,059
3	315	21,623
4	**89**	**3,259**
5	**48**	**3,758**
Total	1,012	81,162

Step 3: Sort for Imminence. With the at-risk list in place, we then sorted for the Overall Expiration of Governing Program field to show the imminence of potential loss to the inventory.[8] Table 4 below shows the number of properties with a risk score of 4 or 5 by year of expiration of subsidies.

Table 4. Properties by Expiration Year of Subsidies

Expiration Date	Properties	Assisted Units
2007	19	1,606
2008	15	726
2009	21	1,180
2010	11	914
2011	11	369
2012	3	94
2014	1	160
2015	1	48
2016	2	214
2017	1	80
2019	1	10
2020	1	64
Date not available	50	1,552
Total	137	7,017

As Table 4 demonstrates, most of the at-risk properties for which end dates are known will be eligible to depart the inventory in the next five years. In large part, this is due to expiration of HUD rental assistance contracts, many of which are now renewed on a year-to-year basis. While this does not mean that all or most of the owners will terminate the contracts, it does introduce the eligibility to terminate subsidies.

Deterioration and Default Analysis

We assigned a 0, 1, or null (blank) score for each of the four deterioration/default risk variables for the 2,209 properties in the AHI. Each property was then assigned a deterioration/default risk score on a scale of 0-4 consisting of the sum of the individual factor scores. Properties with scores of 3 or 4 were considered to be at heightened risk. In total, this

[8] See Step 1 above for a description of the Overall Expiration of Governing Program field. If there had been properties with potential mortgage prepayment risk before the expiration of other subsidies, the date of prepayment would have been used rather than mortgage maturity date.

yielded 42 properties with 3,856 assisted units. Table 5 below shows the deterioration/default risk scores for the properties in the AHI, with higher risk scores indicated in bold.

Table 5. Florida Assisted Housing Properties by Deterioration Risk Score

Deterioration Risk Score	Properties	Units
0	439	28,325
1	1,328	182,868
2	400	35,027
3	**38**	**3,575**
4	**4**	**281**
Total	2,209	250,076

Of the properties scoring 3 or 4, 11 properties with 627 assisted units also appeared on the list of properties at heightened opt-out risk.

Because data for two of the four variables were available for HUD properties only, all of these properties had HUD funding. Eight of the 42 also had received funding from the Florida Housing Finance Corporation. Again, note that this leads to the exclusion of RD-funded properties from the list of at-risk properties, unless they also have a layer of HUD funding. It is likely that RD properties would be added to the list if data were available.

Summary of Shimberg Risk Assessment Method

Opt-Out Risk

1. Remove properties that are not eligible to end affordability restrictions before the end of 2020.
2. Assign each remaining property one point for each of the following characteristics:
   - Development size <50 units
   - Family tenant population
   - Ownership type other than Non-Profit (i.e. For Profit/Limited Dividend/Other)
   - If HUD-funded, assisted under older HUD program (Section 221(d)(3) or Section 236) OR if not HUD-funded, built before 1975
   - Not fully funded; i.e., total units minus assisted units >2
   - HUD Rent to FMR ratio <80%;
   - Located in Census block group with decline in percentage of households below poverty level 1990-2000 AND 2000 household poverty rate below median for all properties in inventory (18% for AHI)

Sum points for possible score of 0-7.

3. Assign a score of "5" to any HUD-funded property with HUD Rent to FMR ratio < 80% and ownership type For Profit/Limited Dividend/Other.

4. Add two points for all FHFC –funded properties with a FHFC Derived Rent to FMR ratio < 80% AND 2000 Median Block Group Rent > 2000 two-bedroom FMR AND ownership type For Profit.

5. Properties with a score of 4 or greater are considered to be at heightened opt-out risk.

6. Sort at-risk properties by potential year of opt-out/expiration of affordability restrictions.

Deterioration/Default Risk

1. Assign each property one point for each of the following characteristics:
   - Family tenant population
   - Year built <=1987
   - Tenant household income = 0-15% of HAMFI
   - REAC score <60

Sum points for possible score of 0-4.

2. Properties with a score of 3 or greater are considered to be at heightened deterioration and default risk.

4. Limitations of Risk Assessment

The Shimberg risk assessment method and other analyses of properties have several limitations. First, the variables chosen for the target inventory are based on analyses of factors revealing the past behavior of owners. However, this may not be predictive of the behavior of owners who have not opted out to date. Opt-outs often occur in "waves" when a group of properties meet their first potential opt-out dates. In particular, most HUD rental assistance contracts, which form the basis for both the Abt Associates and Shimberg Probit analyses, have passed their first possible termination date. Properties that have stayed in the inventory may be at lower risk even if they share characteristics with properties that have previously opted out, as demonstrated by the owners' past decisions not to terminate subsidies.

Second, problems with data availability limited our ability to build a comprehensive target inventory. Because more data were available on tenant characteristics and rents for HUD properties, it was easier to create opt-out and deterioration/default scores and imminence dates for HUD properties than for those funded by other agencies. Additional data on incomes, actual tenant rents, and subsidy expiration dates would permit the inventory to target projects from different funders on a more equal basis.

Third, no risk assessment method and database can incorporate all of the variables that enter into an owner's opt-in/opt-out decision or a property's potential for deterioration. Owners' personal and financial considerations such as exit tax implications of a property transfer, retirement plans, or a reluctance to continue under agencies' compliance requirements cannot be a part of a database of property-level information, but all can affect whether a property remains in the affordable housing stock (Achtenberg 2002; Recapitalization Advisors, Inc. 2002). Some for-profit owners may have a personal motivation to serve low-income tenants even at reduced financial returns; some non-profits may wish to end their participation in complex housing subsidies programs. Older properties may be well maintained and adequately capitalized. Therefore, the risk assessment serves as a guidepost rather than a definitive list. A property's presence in a target inventory does not mean that it will necessarily leave the affordable inventory, and its absence from the list does not ensure that it is completely safe from loss to the inventory.

5. Conclusion

The Shimberg Center plans to apply the risk assessment to the Assisted Housing Inventory to create more detailed pictures of the risk to the assisted housing stock in Florida counties. As a second step, we also will create a Web application that will enable users to combine the risk factors to create customized risk profiles for their choice of geographic areas in the state. For users interested in opt-outs, the tool will screen the properties for eligibility of opt-out to the extent program information in the database allows; give users the choice of geographic areas and "likelihood" factors to flag; and sort the resulting property list by potential opt-out date. Users may also search all properties for factors indicating potential deterioration and default.

The Shimberg Center also plans to continue to refine the risk assessment method through additional data. We will seek data on incomes and rents, particularly in properties funded by Rural Development and others outside the HUD inventory, to allow the model to be applied more widely and consistently. We also will seek more historical data for HUD and RD properties that have left the assisted housing stock to provide a more nuanced picture of the factors distinguishing opt-in and opt-out properties. Finally, we will develop more information and indicators about the strength of the local rental housing market in areas surrounding assisted housing developments.

Quantifying the risk to a set of properties is one step in setting preservation priorities. A further, far more subjective step is to prioritize properties by their *value* to the affordable housing stock. Given limited preservation resources, what affordable housing is most feasible and desirable to preserve? The Shimberg Center envisions the next task in preservation data collection as providing the data that can help preservation-minded parties make these decisions.

As with risk assessment, defining a data collection procedure for assessing value requires finding data elements that are both useful and feasible to collect on a widespread basis. Potential data elements signaling higher value properties might include:

- Rent and income restrictions targeted at very low- and extremely low-income tenants
- Projects with deep subsidies such as project-based rental assistance
- Good physical and financial condition
- Location outside of Census tracts of concentrated poverty

- Location in areas showing gentrification; that is, increases in surrounding rents and home values
- Location in areas that would reduce other costs to tenants, such as near transportation and job centers
- Serving a target population or income level with a demonstrated local demand for affordable rental housing
- Serving vulnerable or special needs tenants
- Owned by a non-profit or other entity with a mission to provide affordable housing to low-income tenants.

Many of these factors concerning market strength, in fact, are the same ones that signal risk of market-rate conversion. Not surprisingly, the housing that is most desirable to the overall market is also what can provide the most desirable options for low-income tenants.

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Appendix 1. Federal Housing Programs

This appendix describes the federal housing programs that are most commonly tracked for preservation purposes and the extent to which properties funded by these programs are flagged as at risk using the methods described in this report.

HUD Interest Rate Subsidy Programs: Section 221(d)(3) BMIR and Section 236

The Section 221(d)(3) Below Market Interest Rate (BMIR) program was enacted under the National Housing Act in 1961 to provide government funding to privately owned rental housing in exchange for restrictions on rents and tenant incomes. This program was replaced by the Section 236 program under the Housing Act of 1968.

Both programs enabled non-profit and for-profit developers to obtain subsidized construction loans at below-market interest rates. The loans also were insured by the Federal Housing Administration to lower the risk to lenders. The premise of these housing programs was to reduce a property's debt service, thereby making it financially feasible for the properties to offer affordable rents for an extensive time period. Mortgages carried a 40-year term with a concomitant 40-year use restriction reserving units for households at or below 80 percent of the area median income. Under the programs, for-profit owners can prepay the mortgage any time after 20 years and subsequently end affordability restrictions; most non-profit owners do not have this option (Pedone 1991). Property owners also received tax benefits via mortgage interest deductions and accelerated depreciation, although the programs imposed a limited dividend restriction on cash flow distributions (Achtenberg 2002).

Although these programs ended in the mid-1970s, the Millennial Housing Commission reported that more than 600,000 Section 221(d)(3) and Section 236 units were still in operation in 2002 (Millennial Housing Commission 2002). HUD reports that about 90 percent of the tenants in properties with a HUD subsidy (excluding project-based Section 8) have an income of less than 50 percent of the area median income (HUD 2006).

In Florida, 69 properties with 9,604 units are still in operation, according to the Assisted Housing Inventory (AHI). Of these, 16 properties with 1,519 assisted units were flagged as at heightened opt-out risk before the end of 2020 in the Shimberg Center risk analysis. An additional three properties with 248 assisted units were flagged for deterioration/default risk, and

three properties with 236 assisted units scored high for both opt-out and deterioration/default risk.

HUD Section 8 Project-Based Rental Assistance

In 1974, HUD's Section 8 program replaced Section 236. Section 8 encompassed several rental assistance initiatives, including project-based rental assistance for new construction and substantial rehabilitation and rent supplements for earlier Section 221(d)(3) and Section 236 properties (Kochera, Redfoot and Citro 2001).

Section 8 initially restricted a household's rent to 25 percent of gross income. The restriction was later increased to 30 percent. The property owner received a subsidy to cover the gap between collected rent and Fair Market Rent for the area. The term of the project-based rental assistance ranged from five to forty years, depending on the type of subprogram (National Low Income Housing Coalition 2007; HUD 1999). At the end of the term, a property owner could either opt out of the rental assistance contract or, in most cases, renew it. In recent years, the renewal terms have been substantially shorter—one to five years—and are now subject to annual appropriations by Congress. The majority of owners with a one-year contract term do renew the rental assistance annually. Nevertheless, the affordability of these properties faces a dual risk each year: owners' option to end the contracts and the government's ability to cut funding to the program.

More than 1.3 million units throughout the country continue to receive HUD project-based rental assistance, including many units in properties built under Section 221(d)(3) BMIR and 236 (HUD 2008). According to HUD, more than 90 percent of tenants in Section 8 properties have an income below 50 percent of the area median (HUD 2006).

In Florida, 629 properties with 49,296 assisted units receive HUD rental assistance. Nearly half of the properties flagged as at heightened opt-out risk and with expiration dates by the end of 2020 have HUD rental assistance contracts; sixty properties with 4,298 assisted units were in this category. Moreover, all of the 42 properties at heightened deterioration/default risk receive HUD rental subsidies.

After a substantial increase in the supply of affordable rental housing units during the previous two decades, the Section 8 New Construction and Substantial Rehabilitation program was repealed in 1983.

Low-Income Housing Tax Credit Program

The Low-Income Housing Tax Credit (LIHTC) program was created under the Tax Reform Act of 1986. Under the LIHTC program, private investors receive federal tax credits in return for investment in affordable housing properties. These tax credits provide a dollar-for-dollar reduction in federal tax liability over ten years. In exchange, the private investors supply equity capital to developers, or "sponsors," of rental housing developments targeting households with incomes at or below 50 or 60 percent of the area median (McClure and Grube 2007). State governments are primarily responsible for allocating the credits to developers.

Originally, the LIHTC program required 15 years of affordability restrictions. In 1989, due to concerns about the loss of affordable housing, the requirement was extended to 30 years (Collignon 1999). Many states impose longer periods. Florida, for example, requires a 50-year affordability period. Despite the longer affordability period, however, investors can decide to exit the project after 15 years when the compliance period expires and their tax benefits have been exhausted. The sponsor can buy out the investors, or the property can be sold to a preserving entity that will keep it affordable for the duration of the extended use period. If no buyer can be found that will operate the property under the restrictions of the tax credit program, the owners may convert the property to market-rate housing or sell it on the open market without affordability restrictions. To prevent this potential loss, many state housing finance agencies now give priority in their tax credit allocation to owners who waive their right to convert the property to market-rate housing if no preservation-minded buyer can be found (Melendez, Schwartz and de Montrichard 2007).

Nationwide, almost two million tax credit units have been built since the program's inception in 1986 (Melendez, Schwartz and de Montrichard 2007). In Florida, 904 properties with 145,103 assisted units have been funded under the tax credit program, according to the AHI. Of these generally newer projects, three properties with 253 assisted units were flagged for heightened opt-out risk and had subsidy expiration dates before the end of 2020. Three additional properties with 348 assisted units were flagged for deterioration/default risk, and one property with 92 assisted units scored high for both opt-out risk and deterioration/default risk.

USDA Rural Development Rental Programs

The U.S. Department of Agriculture Rural Development's (RD) Section 515 program has been the major program for construction of affordable multifamily rental housing in rural areas.

Created in 1962, Section 515 provides direct loans to developers at a 1 percent interest rate. Loans currently have 30-year terms and an amortization period of 50 years (LISC 2005). Eligible tenants include very low-, low- and moderate-income households, with priority given to families living in substandard housing. More than 94 percent of current residents have incomes at or below 50 percent of the area median income, and more than half are elderly or persons with disabilities (NLIHC 2007). Tenants can receive rental assistance limiting their rent payments to 30 percent of their gross household income under the USDA Section 521 Rental Assistance program established in 1978 (LISC 2005).

Section 515 loans made after December 15, 1989 are not eligible for prepayment during the term of the mortgage. A property owner with a loan made prior to this date can apply for prepayment. RD offers incentives to keep the units affordable for the next 20 years. An owner can reject the incentives and prepay the mortgage if he commits to keeping the units affordable for ten years and then offers the property for sale to a non-profit or public entity, or if RD determines that the community offers a sufficient supply of alternative housing and that prepayment does not negatively impact minority households. If these conditions do not apply, the owner must offer the property for sale to a non-profit or public agency for 180 days. The owner can prepay without restrictions if no offer is received or an offer does not materialize (Housing Assistance Council 2006).

Since the inception of the program, more than half a million affordable rental units have been constructed under Section 515 (LISC 2005). Section 515 production peaked during the mid-1970s to mid-1980s and dropped significantly when Congress cut back funding in the mid-1990s. New construction of rural rental units has now almost ceased.

In Florida, 420 Section 515 properties with 145,103 assisted units are in operation, according to the AHI. Of these, 58 properties with 2,077 units were flagged for opt-out risk and had subsidy expiration dates by the end of 2020. No RD properties had elevated deterioration/default risk scores due to limitations in the method that require a layer of HUD subsidy in order to score a 3 or 4. However, other studies have found that deterioration is a concern for older Section 515 properties located in weak rental markets or whose owners that lack the resources to prepay the mortgage (ICF Team 2004; Schwartz 2006). These properties are in need of capital investment in order to continue to provide affordable housing.

Appendix 2. Compendium of Risk Assessment Methods

This appendix provides an overview of risk assessment methods in use around the country to identify properties at high risk of loss to the affordable housing stock. It includes discussions of analyses of factors, used to identify the factors most important in determining whether a project will leave housing subsidy programs, and analyses of properties, used to classify individual properties within a larger inventory according to their risk of opt-out or deterioration and default.

Analysis of Factors Method #1: Cross Tabulations

General Description

Through cross tabulation, researchers can describe the characteristics of properties that have opted out of the assisted housing stock compared with those that have remained subsidized. Finkel et al. (2006) of Abt Associates, Inc. used this method in a national study prepared on behalf of HUD, *Multifamily Properties: Opting In, Opting Out and Remaining Affordable*.

Abt Associates researchers prepared descriptive cross tabulations to examine HUD-assisted developments according to property, owner, financing, location, tenant, and physical and financial operating characteristics. The cross-tabulations were used in their own right to pinpoint property risk factors as well as to identify explanatory variables for a further regression analysis of risk factors.

Methodology and Risk Indicators

Abt Associates researchers created a master file of 22,471 HUD-subsidized properties throughout the country. They divided the properties into four categories according to their current funding status: opt-ins, opt-outs/prepays, foreclosure/enforcement, and all other. Next, the researchers classified the properties or households within the properties according to these variables:

- *Property*: Development size in units, unit size in bedrooms, target population, building type, HUD program type, average percentage of assisted units, project rent to Fair Market Rent ratio, and building age.
- *Owner*: Ownership type and management review score.
- *Financing*: Primary form of financing and Housing Finance Agency-related properties.

- *Location*: Census division, metropolitan location, and neighborhood characteristics (e.g., median income, poverty rate, vacancy rate).
- *Tenant*: Length of residence, household size, percent minority-headed, percent household heads with disabilities, percent elderly-headed households, percent households with children, and household income as a percentage of area median income.
- *Physical and financial operating*: REAC physical inspection score, REAC financial performance score, financial ratios (e.g., expense to income ratio, debt service coverage), surplus cash level, reserve, vacancy rate, and operating expenses.

For each of these six categories of characteristics, the researchers created a table with four columns representing the four types of funding status. Depending on the variable, the researchers calculated the number of properties, percentage of properties, mean, or median for each of the four categories; see example below.

Table A2.1. Example of Cross Tabulations for Tenant Characteristics in HUD Properties

Average Tenant Characteristics	Opt-ins	Opt-outs/ Prepays	Foreclosure/ Enforcement	All Other	Total
Number of properties	11,126	1,715	2,385	7,245	22,471
Percent of properties	49.5%	7.6%	10.6%	32.2%	100%
Length of residence (years)	6.0	5.3	5.7	5.8	5.9
Household size	1.7	2.1	2.2	1.5	1.7
Percent minority-headed	42.1%	50.6%	72.7%	35.8%	42.4%
Percent household heads with disabilities	18.5%	12.5%	13.6%	29.9%	21.6%
Percent elderly-headed households	48.5%	27.9%	19.3%	47.5%	45.0%
Percent households with children	25.0%	42.8%	48.6%	16.8%	24.9%
Household income as a percentage of area median income (AMI)	27.7%	27.9%	23.8%	28.9%	27.8%

Source: Finkel et al. 2006

In this way, the researchers could determine whether properties with a particular characteristic fell disproportionately into any of the four categories. Their analysis indicated that a property is more likely to fall in the opt-out category if it is older, if it is occupied by families, if the owner is a non-profit entity, or if the project rents are substantially below the HUD Fair Market Rent.

Data Sources

Since the study was commissioned by HUD, Finkel et al. had access to HUD datasets that are not ordinarily available, in addition to publicly accessible data sets. Data sources included the following:

- HUD Office of Housing's (FHA) Real Estate Management System (REMS) Data. This contained property-and contract-level information.
- HUD FHA's Multifamily DataMart (MPRD) files. These files included mortgage and contract data for active properties.
- HUD FHA's Multifamily Insurance System (MFIS) or F-47 data. Mortgage financing data were reported in this dataset.
- HUD Real Estate Assessment Center (REAC) Data. This was the source for physical condition and financial operating characteristics.
- Tenant Rental Assistance Certification System (TRACS). This system contained data on tenant characteristics.
- PIH Information Center (PIC) data. These data were used to retrieve information on rents.
- 1990 and 2000 Census of Population and Housing data. Neighborhood characteristics were based on Census data.
- FHA's List of Opt-out Properties (Opt-out List). This list reported the properties that completed the opt-out process.

Output Format and Updates

The results of the cross tabulations were aggregated at the national level and presented by property type and characteristic for the entire national sample of 22,471 properties. Abt Associates performed the study under contract with HUD as a one-time analysis.

Analysis of Factors Method #2: Regression Analysis

General Description

Regression analysis is another method that can identify the factors that explain owners' decisions to stay in or opt out of housing subsidy programs. In the analysis, the property owner's decision is the dependent variable; property characteristics are the independent or explanatory variables. Regression analysis allows researchers to isolate each characteristic's impact on owner decisions.

We identified two studies that used regression analysis to analyze owner decisions. As part of the *Opting In, Opting Out* report, Finkel et al. (2006) constructed a multivariate logistic regression model to analyze the decision to opt in or opt out of a HUD project-based rental assistance contract based on property characteristics. Melendez, Schwartz and de Montrichard (2007) conducted a survey of owners and developers of properties built under the Low-Income Housing Tax Credit program during 1987 to 1989. They developed an ordered logit model to explain owners' intent after expiration of the 15-year compliance period based on property characteristics, ownership structure and affordability restrictions.

Methodology and Risk Indicators

The *Opting In, Opting Out* multivariate regression analysis only incorporated the decision to renew or opt out of a HUD Section 8 project-based rental assistance contract. It excluded the decision about prepayment of a HUD subsidized mortgage. Finkel et al. (2006, 16) explained that "by narrowing the focus in this way, we avoided having to account for two different decisions (opting out of project-based Section 8 and mortgage prepayment) with the same model." The owner's decision was the dependent variable that took a value of 0 (opt-in) or 1 (opt-out). The explanatory variables in the model were derived from the cross tabulations (see description above) and are listed in Table A2.2. The sample contained a total of 8,992 properties with non-missing values for all variables, of which 763 properties (8.5 percent) were opt-outs.

Table A2.2. Regression Model Variables Used in Finkel et al. (2006)

Variable	Variable Specification	Expected Direction of Impact
Development size in units	Less than 50 units (reference category) 50-99 units 100-199 units 200+ units	**Unknown.** On one hand, conversion to market rate may involve fixed costs; since larger projects have lower per-unit costs, this may increase their likelihood of opting out. On the other hand, large projects tend to be associated with other physical features that are less attractive to unassisted tenants.
Density	Percent of 3-bedroom-plus units	**Negative.** It may be harder to market projects with large units to unassisted tenants because these units may not be physically suitable for higher income singles and couples who could afford market rate units.

Variable	Variable Specification	Expected Direction of Impact
Family occupancy type	Family = 1 Elderly/disabled = 0	**Positive.** Elderly projects face competition from amenity-rich private market projects. Also, the income distribution among elderly and disabled households may not support many market rate units. In other words, family projects are more likely to opt out.
Building type	Detached or semi-detached = 1 Other = 0	**Positive.** Detached and semi-detached projects tend to be associated with other amenities and physical characteristics that are attractive to unassisted tenants.
Older Assisted HUD program types	Older assisted = 1 Newer assisted = 0	**Positive.** The older projects often have rents that are below market rate.
Ratio of rent-to-FMR	Rent-to-FMR ratio < 80% 80% < rent-to-FMR ratio < 100% 100% < rent-to-FMR ratio < 120% (reference category) 120% < rent-to-FMR ratio < 130% 130% < rent-to-FMR ratio < 140% 140% < rent-to-FMR ratio < 160% Rent-to-FMR ratio > 160%	**Negative** for projects with rents above local FMR. Projects with rents that are low relative to the FMR may be able to raise rents with little effect on vacancy rates. In other words, as rent-to-FMR ratio increases, we expect the property owner to be less motivated to opt out.
Ownership type	Nonprofit = 1 For-profit or limited dividend = 0	**Negative.** Nonprofits are less likely to opt out. By definition, for-profit owners are motivated to increase revenues.
Not federally financed mortgage	Not federally financed = 1 Other = 0	**Negative**. This value is a proxy for projects financed by state Housing Finance Agencies (HFAs). HFAs may impose prepayment and/or opt-out restrictions.
Neighborhood poverty rate	Percent of persons in the surrounding census tract with incomes below poverty threshold in year 2000	**Negative**. Research has shown that tracts with high poverty rates typically have features that make them undesirable places to live and hence are less able to command high rents.
100-percent assisted	Projects with 100-percent units receiving HUD assistance =1 Other = 0	**Positive**. A project with a high percentage of unassisted tenants risks high turnover upon conversion to private market status because these tenants will not have enhanced vouchers and may not be able or willing to afford the higher rents. A high percentage of assisted tenants implies more opportunity for the owner to raise rents to market levels.
Metropolitan location	Suburb (reference category) Central city Non-metropolitan	**Negative** for central city. We expect owners in central cities to be less likely to opt out because markets may be unable to support unassisted housing. **Positive** for suburb. Suburban areas tend to have higher income renters to absorb market rate housing.

Variable	Variable Specification	Expected Direction of Impact
Census division	New England Mid Atlantic East North Central West North Central South Atlantic (reference category) East South Central West South Central Mountain Pacific	**Positive** for high rent regions such as New England, Mid-Atlantic, and Pacific.

Source: Finkel et al. 2006

The regression model analyzed the relationship between each explanatory variable and an owner's decision, keeping all other variables constant. The results were presented in odds ratio format. A property characteristic with an odds ratio estimate larger than 1.0 had a positive impact on the decision to opt-out; an odds ratio estimate smaller than 1.0 implies that the characteristic reduced the likelihood of opt-out.

The regression analysis found that most of these variables were statistically significant in the predicted directions. The analysis found that "the key explanatory variable yielded by the multivariate analyses appears to be the rent-to-FMR ratio: the lower the rent-to-FMR ratio, the higher the likelihood of opting out" (Finkel et al. 2006, 33). When the project rent is relatively low compared to the Fair Market Rent, the owner has a greater opportunity to improve rent revenues by opting out and converting to market rate housing. Ownership was another key variable, with non-profit owners significantly less likely to opt out compared to other owners. Other property characteristics found to increase the likelihood of opt out: with rental assistance for 100 percent of units, family-occupied, fewer than 50 units, unit mix with 3 or less bedrooms, assisted through older HUD programs, located in a low-poverty rate census tract, and in a central city or non-metropolitan locations.

For the ordered logit model, researchers Melendez, Schwartz and de Montrichard conducted a telephone survey of owners of 164 tax credit properties placed in service between 1987 and 1989 in metropolitan areas throughout the country. The level of risk of losing affordability was the dependent variable and was ranked on a scale of 1 to 6, with a score of 1 indicating the owners' high interest in continuing to own the property and to maintain affordability after the expiration of the 15-year use restriction (Melendez, Schwartz and de Montrichard 2007, 13).

Levels 1-3 indicate that affordability could be continued:

- Level 1: The owner said that maintaining the property's affordability was very important.
- Level 2: The owner said continued affordability was only somewhat or not too important.
- Level 3: The owner intended to sell the property to an entity that will maintain affordability.

Levels 4-6 indicated that affordability may be lost:

- Level 4: The owner planned to sell the property and was not interested in keeping it affordable, or was undecided about what to do with the property.
- Level 5: The owner planned to convert the property to market-rate occupancy, or the property had already been sold and was at risk of converting to market rate.
- Level 6: The property already had been sold without any affordability guarantees.

The explanatory variables collected through the survey included property characteristics, location, type of sponsor and ownership structure, additional affordability restrictions, occupancy rate, replacement reserves and rehabilitation needs. The model analyzed the relationship between the risk level and each explanatory variable, keeping all other variables constant. It found that a property had a lower risk of losing affordability if it had a non-profit sponsor, if additional affordability restrictions were in place beyond the year 15, or if the property had extensive rehabilitation needs. Contrary to the expectations of the researchers, location in a high rent housing market was not found to be a factor by itself in an owner's decision to convert.

Data Sources

Finkel et al. were able to achieve a relatively large sample size and conduct the regression analysis through access to numerous HUD internal data sources with detailed property-level information for both the lost and remaining housing stock. Many of these data elements, especially for the lost units, are not publicly available. The data sources used for the regression analysis were the same as those outlined above for the cross-tabulations.

Melendez, Schwartz and deMontrichard relied on data from the HUD Low-Income Housing Tax Credit Database and a telephone survey of owners and developers to collect detailed data on the owners' intent and property characteristics. The researchers also interviewed with tax credit syndicators about acquisition, financing and rehabilitation of tax credit properties.

Output Format and Updates

The regression analysis was performed for the national sample. The results were presented in a table of coefficient estimates. The study was carried out under contract with HUD as a one-time analysis.

The results of the logit model and a descriptive analysis of the tax credit properties were reported in the study and presented in tables. The study was recently released (2007) and does not make any reference to plans for updating the analysis.

Analysis of Properties Method #1: Target Inventory

General Description

The target inventory approach uses a property-level database to identify assisted housing properties at highest risk of loss, as measured by the affordability expiration dates and a small number of other risk indicators. This method is most common form of analysis of properties because it is relatively straightforward and because the data variables are easiest to obtain.

Governments and preservation advocates develop target inventories for several purposes: to inform policy makers about the extent of the potential loss of affordable housing units, as the basis for advocacy for preservation legislation and funding, to flag individual at-risk properties for potential preservation, and to prioritize the allocation of preservation resources. The specific purpose is tied to the mission of the organization. For example, the Governor's Task Force for Housing Preservation in Wisconsin built an inventory of multifamily properties funded by HUD, RD and the Wisconsin Housing and Economic Development Authority with the mission "to identify and preserve those affordable rental housing units at greatest risk of loss where the tenant's residency is most threatened in order to maintain a positive impact on the stability of Wisconsin's residents and the continued sustained growth of Wisconsin's economy and to make recommendations on how to best preserve those units" (Governor's Task Force for Housing Preservation 2004, 3).

Target inventories may consist of properties involving a particular funder, funding program or owner. For example, the Housing Development Center (2006) in Portland, Oregon completed a risk assessment of Oregon's Low-Income Housing Tax Credit properties that were reaching year 15 between 2006 and 2011. More commonly, a target inventory is created for assisted properties in a particular geographic area with multiple possible funding sources; for

example, the inventory might include all properties in a single state or metropolitan area with federal assistance (HUD-insured mortgages, HUD rental assistance contracts, and Rural Development loans).

Methodology and Risk Indicators

Most target inventories flag properties as at risk based on some combination of three indicators: subsidy or affordability expiration dates, for-profit versus non-profit ownership type, and a variable indicating the strength of the surrounding rental housing market.

First, expiration dates indicate the imminence of a decision to terminate or continue affordability. Relevant dates include the date of eligibility for mortgage prepayment, mortgage maturity date, rental assistance contract expiration date, and use restriction expiration date. If an expiration date is imminent, the risk of loss to the affordable housing stock is higher, because a property owner will soon have the option to terminate affordability. When a property has multiple funding layers, the expiration date of the longest lasting or most restrictive program may be applied. Many target inventories define a timeframe for analysis in order to focus on the properties at highest risk of loss. For example, the National Housing Trust (2006) reported on Section 8 contracts due to expire by the end of fiscal year 2011.

Some inventories use only the expiration dates to identify the properties at highest risk of loss. This is the approach taken by the Community Economic Development Assistance Corporation (CEDAC). CEDAC (2008) lists all properties in Massachusetts with federal or state subsidized or insured mortgages and properties with HUD rental assistance that are at risk of leaving the stock by 2010 due to prepayment, full mortgage repayment or contract terminations. The City of Los Angeles (2002) also applied this method when analyzing at-risk housing for its Housing Element. It assessed the potential loss of federal, state and locally assisted housing between 2000 and 2010 according to the expiration year of affordability restrictions.

Second, presumed differences in mission between for-profit and non-profit owners can drive decisions about terminating affordability restrictions. For-profit owners have a strong focus on the financial bottom line and aim for maximization of returns (Wallace 1995; Pedone 1991). A for-profit is more likely to exit the funding program and sell the property or convert to market-rate housing if it makes financial sense to do so. The mandate of a non-profit owner is generally to serve lower income families in the community. Therefore, the risk of conversion is marginal. A study prepared for HUD found that non-profits were less likely to opt out of a rental assistance

contract compared to for-profits, because "nonprofit owners are often mission-driven to continue to provide affordable housing" (Finkel et al. 2006, ix).

Third, the strength of the local housing market can affect risks to affordable housing properties in two directions. Conversion risk is higher in tight rental markets (Recapitalization Advisors, Inc. 2002). Deterioration and default risks are higher for properties located in distressed areas with high poverty.

Market strength can be measured by several variables:

- Ratio of project rents to market rents. A weak ratio (below 1) is an indication of higher risk of loss, because an owner has greater opportunity to improve rental revenue through conversion (Finkel et al. 2006; Southern California Association of Governments 2000).
- Neighborhood characteristics such as area vacancy rate, poverty rate and median income. If vacancy and poverty rates are relatively low and median income is relatively high or improving, the local market can be considered strong (Finkel et al. 2006; GAO 2004).
- Home price appreciation. The year-over-year change in median home sales price provides another proxy for strength of the market. In a 2002 report for Cook County, Illinois, Recapitalization Advisors, Inc. (2002) categorized a market as "strong" if the median home sales price increased more than 20 percent between 1997 and 2000, "stable" if it increased less than 20 percent, and "weak" if the median priced declined.

Physical condition of the property also is often mentioned as an indicator of conversion or deterioration/default risk (GAO 2004). A property in good physical condition has a higher conversion potential (Achtenberg 2002). A deteriorated property in need of capital improvements due to owners' neglect or lack of capital reserves is at a higher risk of mortgage default. However, most target inventories do not incorporate physical condition as an indicator because of a lack of data. Unless an organization has access to capital needs assessments for individual properties, the only publicly available information that can be used as a proxy for physical condition is the physical inspection score for HUD properties. The HUD Real Estate Assessment Center (REAC) performs inspections and assigns this score, referred to as the REAC score. The scores became available on HUD's website in November 2007.

The age of the property could also be used as a proxy for the physical condition, assuming that older properties have greater capital needs. Variables indicating property age include the year of construction, date of issuance of the certificate of occupancy, or mortgage

origination date. However, the age of the property is no indicator of the physical condition if a structure has undergone rehabilitation.

Data Sources

Data sources for a target inventory depend on the funding programs involved in the properties under study. The following are data sources commonly used to build a target inventory:

- HUD Insured Multifamily Mortgages Database. This dataset is available online and updated quarterly. Some entities, including the Shimberg Center, receive supplemental data from state HUD offices.
- HUD Multifamily Assistance and Section 8 Contracts Database. This dataset is available online and updated about every two months.
- HUD Low-Income Housing Tax Credit Database. This dataset is available online and currently reports on properties placed in service between 1987 and 2005.
- Rural Development. Data on RD loans and rental assistance are not available on the RD website but often can be obtained from state RD offices or the Housing Assistance Council.
- State and local programs. Data on state-funded properties are supplied by housing finance agencies (HFAs). State programs commonly include bonds, HOME and state-level housing trust funds (NLIHC 2006). Some state HFAs provide data on tax credit properties that may be more current than the information available through the HUD LIHTC Database.
  Data on locally funded properties are available from municipal departments and local housing finance authorities, although collecting data on local programs over multiple jurisdictions or an entire state takes a great deal of labor and time.
- Owner data. An entity that owns or manages a portfolio of assisted properties can use its own data to create a target inventory.
- The Census Bureau. The Census provides information about local housing markets and neighborhood characteristics such as home prices, median income, and poverty rates. Market data may also be available from local Realtor associations and property appraisers.

Output Format and Updates

The output of a target inventory takes the form of a list of individual properties or aggregate counts of types of properties at risk. For example, GAO (2004) published a state-by-

state list of HUD properties with maturing mortgages and expiring rental assistance contracts by 2013. GAO also created tables and graphs to report the total number of properties and units by HUD funding program and by the year of mortgage maturity or rental assistance expiration.

The output of the target inventory can also be mapped. LISC (2005) created maps for metropolitan areas that plotted the location of federally assisted properties and identified the type of ownership of each property (non-profit or for-profit) and timeframe of the rental assistance contract expiration (2005-2009 or after 2009). The maps also included median household income categories by census tracts.

While some target inventories are systematically updated on a regular basis (at least annually), others are the result of one-time or episodic efforts.

Analysis of Properties Method #2: Risk Rating

General Description

Several entities have taken the target inventory approach one step further by categorizing each at-risk property by the level of risk of loss. The level of risk is determined by a small set of risk indicators such as subsidy expiration date and ownership type.

For example, the California Housing Partnership Corporation (CHPC) built a state-wide inventory of HUD and RD properties and classified each property as "at risk," "lower risk," or "low risk" based on expiration dates and owner type (California Housing Partnership Corporation 2006).

Methodology and Risk Indicators

The level of risk is determined by a small set of risk indicators, which are the same as those applied in the target inventory method: subsidy or affordability expiration dates, ownership type and an indicators of the strength of the market. Some risk ratings may incorporate additional indicators.

Most risk rating systems classify properties as lower risk, medium risk and higher risk. A property is generally considered at lower risk of loss if the affordability end date is not imminent and if it is owned by a non-profit. A weak local housing market can also be used as an indicator of lower risk.

As an example, the Washington Low Income Housing Network[9] conducted a risk assessment of HUD properties with Section 8 project-based assistance in Washington State. Properties owned by non-profits with a housing mission or properties with use restrictions of 20 years or more were classified as preserved. Properties located in non-tight housing markets were deemed at lower risk. A non-tight housing market was one in which the rental vacancy rate was above six percent. Where vacancy data were not available, substitute variables included percentage change in the median home price over the last year, changes in the number of homes sales and building permits, and the number of households paying more than 35 percent of income on rent. The assessment also classified properties as lower risk if they had undergone a debt restructuring and project rent reduction under HUD's Mark-to-Market program (Farley 2002).

A property is often categorized as medium risk if the subsidy expiration is imminent or coming up in the medium term and if the ownership is for-profit. The California Housing Partnership Corporation (CHPC 2006) considers these two indicators in its risk assessment of HUD and RD properties. According to CHPC, a property is at moderate risk if it can convert to market-rate housing in five to ten years. If it is owned by a non-profit entity, the risk is reduced by one level. Some analyses also add an indicator of market strength, with relatively calm markets signaling medium rather than high risks. For example, the Southern California Association of Governments (SCAG 2000) used the project rent as a percentage of market rent to measure the strength of the market. SCAG assessed the risk of loss of properties with HUD project-based rental assistance and classified properties with these characteristics as moderate risk: HUD rental assistance contract expiration scheduled to occur within five years, for-profit ownership, and project rent of 105-120 percent of the estimated potential market rent in the area.

Characteristics typically leading to a high risk rating include imminent expiration of subsidies, for-profit ownership and location in a strong housing market. For example, the Chicago Rehab Network classifies a property at highest risk if it has a rental assistance contract that is due to expire within the year, if the owner is a for-profit entity, and if the property is located in a booming or gentrifying area (CRN 2003). SCAG (2000) took a similar approach to its analysis of properties in southern California. The report classifies properties as at high risk if

[9] In 2003, the Washington Low Income Housing Network merged with the Washington Low Income Housing Congress and formed the Washington Low Income Housing Alliance.

they have a rental assistance contract that expires within five years, a for-profit owner, and a project rent that is 105 percent or less of the estimated potential rent in the area.

Data Sources

The data sources used to rate the risk level of assisted properties are the same as those used in the target inventory approach.

Output Format and Updates

Similar to the target inventory, the results of the risk rating of properties are either presented in aggregate form or are provided for each development. Risk ratings can be updated according to a regular schedule (at least annually), but are sometimes the result of one-time analysis.

Appendix 3. Probit Model for Predicting Opt-Outs

The Shimberg Center tested a Probit model as a method of predicting the number of properties for which owners would opt out of subsidies. We applied this model to 406 HUD-assisted properties in the Shimberg Center's Assisted Housing Inventory and then compared the results predicted by the model to the actual opt-in/opt-out decisions of owners.

The model is based on three characteristics:

- Size: properties with less than 50 units were assigned size 1, those with 50-99 units were assigned size 2, those with 100-199 units were assigned size 3, and those with 200 or more units were assigned size 4.
- Funded: Properties in which all units or all but one unit were subsidized were assigned a "1" for the funded variable.
- Change in percentage of population below poverty. The "PovDelta" variable below is a continuous variable showing the change in the percentage of population living below poverty for the block group in which the property is situated from 1990 to 2000, based on U.S. Census data.

The model is represented as follows:

$$\Pr ob(J_i = 1) = \Phi(\alpha + \beta_1 Size + \beta_2 Funded + \beta_3 PovDelta)$$

where J_i=1 if the unit opts out.

The results of the model are given below:

Explanatory Variable	Coefficient Estimate	Standard Error	P-value	Marginal Effect
Intercept	0.7746**	0.3902	0.0471	NA
Size	-0.2361**	0.1144	0.0390	From 1 to 2: -0.0023 From 2 to 3: -0.005 From 3 to 4: -0.009
Funded	-1.9764**	0.2617	<.0001	-0.2658
PovDelta	-0.4110*	0.2342	0.0793	-0.0095
Dependent Variable: Binary=1 if property opts out				
Log-Likelihood: -89.77				
Observations: 406				
** indicates significant at the 0.05 level				
* indicates significant at the 0.10 level				

As shown above, all of the explanatory variables have negative coefficients and are significant at the 10 percent level. These results are not surprising. First, the "fully funded" variable has the largest marginal effect. As expected, this variable has a negative sign; that is, owners of fully funded developments are less likely to opt out than owners of partially funded developments. We expected this negative sign for three reasons: 1) if all units are receiving assistance, the property owner must find more tenants who can afford unsubsidized rents after an opt-out, 2) buildings that are only partially subsidized show more signs of being able to attract tenants who can pay market-rate rents, and 3) owners of partially subsidized properties may decide that the paperwork involved in complying with program requirements is not worth the subsidies received for just a portion of the units. Second, we expected the number of opt-outs to decrease as the properties increased in size, for a related reason. If the owner of a larger property opts out of subsidies, the property requires a larger number of tenants who can pay market-rate rents to fill vacancies. Also, it is much more costly to convert a property with a large number of units, especially if it has substantial rehabilitation needs. Third, as expected, increasing poverty in the block group would make it unlikely that the property owner could receive higher rents by opting out.

This model predicted 24 opt-out properties from the sample of 406 properties; in actuality, 36 of the 406 properties were opt-outs. However, while the model did a good job of estimating the *number* of opt-outs, it predicted *which* properties would be opt-outs poorly. Of the 24 properties predicted as opt-outs, only 11 were actually opt-outs; moreover, 25 properties not flagged by the model were in fact opt-outs. Therefore, while this model may help to describe the magnitude of the opt-out problem over a wide geographic area, we do not feel it provides an adequate basis for a fine-grained analysis of at-risk properties.

Appendix 4. Affordable Housing Preservation: Building a National Data Infrastructure, Executive Summary

Introduction

The Shimberg Center for Affordable Housing at the University of Florida and the Florida Housing Finance Corporation, with support from the John D. and Catherine T. MacArthur Foundation's *Window of Opportunity: Preserving Affordable Rental Housing* program, have launched an initiative to improve data collection and analysis related to the preservation of assisted rental housing.

As a first step, the Shimberg Center conducted research into the current state of preservation-related data collection throughout the country. Through surveys of 67 housing-related organizations and in-depth interviews with 18 preservation experts, we examined what data are being collected and by whom; the data elements that those involved in preservation feel *should* be collected; the gaps between the ideal data set and actual data collection; and how these gaps could be bridged.

I. Survey Results: The Current State of Data Collection

Survey respondents were asked to rate the usefulness of 35 preservation-related variables for which they might collect property-level data. The list included variables related to properties' affordability period, unit characteristics, tenant characteristics, financing and property performance, owner and management characteristics, and market and neighborhood characteristics. Respondents also were asked which of these variables they include in their databases.

While respondents gave high ratings to a wide variety of variables, those that provide direct clues to affordability restrictions were particularly highly valued. Examples included the presence of project-based rental subsidies, the period of affordability, and end dates for rent subsidies.

Five variables were rated highly by most respondents but were actually included in less than half of databases: 1) Date of eligibility for opt-out or mortgage prepayment, 2) Notice of opt-out or termination provided to tenants or funder, 3) Average rent in surrounding market, 4) Extent of capital needs, and 5) Owners with an interest in selling properties. Most frequently, survey respondents cited the lack of availability of data from their sources when explaining why they did not collect a variable they deemed important.

About half of data collectors indicated that their databases were open to the public. Most of the other data collectors restrict access to select organizational employees or members, with a few providing access to all agency employees or to select external groups.

II. Data Organization: Extensive vs. Intensive Data Collection

When asked how agencies use data to facilitate preservation, interviewees identified two types of data collection efforts: extensive and intensive. *Extensive* collection of basic data on a whole portfolio helps agencies narrow down a list of subsidized properties to those most likely to be lost to the affordable housing inventory, usually by identifying those with imminent opt-out or subsidy expiration dates. Funders, developers, and advocates perform extensive data collection in order to identify target properties for preservation, set subsidy allocation priorities, and characterize the scope of preservation needs in a local area or state.

Intensive data collection and analysis on an individual property enables agencies to determine the complete set of factors that might affect the potential for market-rate conversion or loss through deterioration. This requires collection of detailed information, including loan documents and state and local land use restrictions on the property, previous refinancing and any associated preservation-related restrictions, and the property's capital needs and financial condition. Intensive data collection helps public agencies to allocate appropriate levels of subsidy, preservation-focused developers to acquire at-risk properties, and tenants and their advocates to determine whether legal restrictions prevent properties from removal from the affordable housing inventory.

III. Building a National Preservation Data Infrastructure

A *national preservation data infrastructure* would consist of the collection by multiple organizations of a standard set of variables on assisted properties for the purpose of understanding preservation needs. We recommend that the national preservation data infrastructure be based on a standard set of variables used in extensive data collection.

Specifically, we recommend that data collectors create a national infrastructure by collecting these standard data elements for all assisted housing properties:

- For-profit versus non-profit ownership
- Unit mix
- Types and years of funding

- Presence or absence of rent subsidies
- Key dates, including mortgage maturity dates, expiration of Land Use Restriction Agreements or Extended Use Agreements, rent subsidy contract expiration, and dates of eligibility for mortgage prepayment or opt-out
- Whether the owner has submitted a notice of opt-out or termination to tenants or funders
- Number of assisted units
- Demographic served
- Property rents
- Average rents in the surrounding area
- Summary measure of capital needs.

By mapping the extent to which data collectors in each state include these items in their databases, we determined that a strong base of preservation-related information exists upon which to build a standard data collection effort. Half of the states have most data elements in place, and most agencies collect data on both federally-funded and state-funded properties. . In some cases, entities collect data expressly to support preservation. In many others, agencies collect data on properties for other purposes such as compliance monitoring; while these data are not currently used to facilitate preservation, they could be.

IV. Recommendations and Areas for Further Discussion

In addition to our recommendations for uniform collection of data elements, we offer the following suggestions based on survey responses and interviewees' suggestions.

- Develop standard, feasible methods to collect data elements that are highly rated but less frequently collected: average market rents, opt-out and termination notices submitted, extent of capital needs, opt-out and prepayment eligibility dates, and owners' interest in selling properties.
- Make HUD data available on a more systematic basis to all data collectors.
- Make comprehensive data on RD-funded properties available to the public.
- Where possible, provide public, on-line access to property documents to facilitate intensive data collection.
- Develop consensus on the content and procedures for the national data infrastructure. Interested parties will need to agree on the list of uniform data elements, methods by which data collectors will integrate information collected from multiple sources, the extent to which

data gathered will be available and accessible to the public, and the composition of the network of organizations that will carry out the creation of the infrastructure.

Appendix 5. HUD Multifamily Portfolio in Florida

See attached.

Abt Associates Inc.

From Insight to Impact
– worldwide

HUD Multifamily Portfolio in Florida

February 28, 2008

Prepared for
University of Florida

Prepared by
Meryl Finkel
Ken Lam

Abt Associates Inc.
55 Wheeler Street
Cambridge, MA 02138

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Introduction[1]

The U.S. Department of Housing and Urban Development's (HUD's) assisted project-based multifamily properties are privately owned properties representing a significant component of federally assisted housing for low-income families. This is in contrast to the public housing stock, which is publicly owned and operated. The HUD-assisted project-based multifamily housing stock includes more than 22,000 properties with more than 1.5 million units, including 621 properties with 53,429 units in Florida. They were developed under programs that were created in the 1960s and 1970s to supplement the public housing program, as part of a policy change that aimed to promote more privately owned development of affordable housing.

The HUD-assisted project-based multifamily properties generally fall into two distinct groups. The first group includes properties that were funded under the "older" mortgage subsidy programs—the Federal Housing Administration (FHA) Section 221(d)(3) Below Market Interest Rate (BMIR) program and the Section 236 program. The older programs provided mortgage interest subsidies, which lowered interest rates on mortgages from prevailing market rates to a subsidized level of 1 percent or 3 percent. The property developer/landlord passed this subsidy on to low-income households in the form of reduced rents. A number of these properties also have Section 8 Loan Management Set-Aside (LMSA) rental assistance subsidy contracts that provide a deeper rent subsidy to residents who could not afford rents under the older programs, and to prevent failing properties from defaulting. A few properties developed under these programs received an older form of rental subsidy through the Rent Supplement (RS) or Rental Assistance Payment (RAP) programs. These programs were active in the late 1960s and early 1970s, with roughly 700,000 units developed nationwide during this period.

The "newer" HUD-multifamily assisted inventory generally refers to properties developed under the project-based Section 8 New Construction/Substantial Rehabilitation and Moderate Rehabilitation programs. The subsidy for these properties is based on the difference between what the tenant can afford (paying 30 percent of income for rent) and the agreed-upon rent of the project. The project-based Section 8 guarantees a steady cash flow for the property and provides a deeper subsidy than the mortgage interest subsidy provided in the older programs.

This inventory was built from 1974 to 1983, at which point funding for development of new properties ceased. Approximately 800,000 units were developed during this period nationwide, including about 200,000 units that were developed under the Section 202 housing program for elderly and disabled residents.

A variety of incentives and financial assistance were provided to private developers of multifamily housing in exchange for an agreement to rent the housing to low- and moderate-income households. Among the incentives provided was a provision that allowed them either to prepay a subsidized mortgage (under the older mortgage subsidy programs) after 20 years, or simply not renew a Section 8 contract when the initial subsidy contracts expired (termed "opting out" in this study). In either case, these incentives permitted owners to leave the assisted stock by converting their properties to another use and no longer required them to rent to low-income residents. Even with a variety of

[1] This document was adapted from *Multifamily Properties: Opting In, Opting Out & Remaining Affordable* submitted by Econometrica Inc. and Abt Associates Inc., to HUD January 2006.

incentives and policy prescriptions available for maintaining low-income housing, many owners of both older and newer subsidized housing have chosen to prepay their mortgages and/or opt-out of their expiring Section 8 contracts, converting properties to alternative uses.

In this document, we examine the characteristics of "opt-out" and "prepayment" properties in Florida and to compare them with properties in the state that have remained in the HUD programs and properties that have faced foreclosure or have been referred to the enforcement center. Details on the four categories of properties are presented below.

(1) "Opt-in" refers to properties whose owners chose to renew an expiring project-based Section 8 contract since 1998. When a given contract expires, the owner must make an active decision whether to renew or not. Those owners whose properties were financed with a Section 236 or Section 221(d) (3) BMIR mortgage and who are eligible to prepay do not face such an explicit, time-limited choice.

(2) The "Opt-outs/Prepays" category comprises properties whose owners have chosen not to renew their project-based Section 8 rental assistance contracts. Prepayments are properties with a subsidized mortgage (Section 236 or Section 221(d) (3) BMIR) whose owners chose to prepay their mortgage and end their low-income use restriction. Sometimes this decision was made when a Section 8 contract expired. The vast majority of opt-outs/prepays have happened since 1998.

(3) The "Foreclosure/Enforcement" category includes properties that, as of the end of 2007, faced foreclosure or other payment or compliance challenges. "Foreclosure" refers to a property whose owner is unable to make timely mortgage or debt service payments. Upon conclusion of foreclosure, the creditor takes possession and can dispose of the property in accordance with the law and particular circumstances surrounding a specific property. "Enforcement" properties are those that have been referred to HUD's Enforcement Center for having some form of physical or financial difficulties and requiring remedial action. We have grouped Foreclosure and Enforcement properties together since they reflect properties that are troubled.

(4) "All other" describes properties that do not belong in categories 1 through 3. This group primarily consists of properties whose owners either opted in before 1998 or have not yet reached an opt-out decision. The "all other" category comprises properties whose owners have not prepaid and do not have Section 8 contracts, those that have Section 8 contracts that have not yet expired, those reflecting pre-1998 opt-ins, and a few other miscellaneous, idiosyncratic properties.

The study relies on available administrative data from various HUD multifamily data systems and other secondary sources such as the 2000 census (data sources described in the Appendix).

Findings

This section presents a series of descriptive tables comparing several important characteristics of properties that have opted out/prepaid with those that opted in, as well as those that have undergone foreclosure or enforcement action, and properties that did not have an opt-in/opt-out choice to make during the study period. Properties were examined along six dimensions according to the following characteristics:

- Property
- Owner
- Financing
- Location
- Tenant, and
- Physical and financial operating.

The unit of analysis is the property. Property-level descriptions allow a focus on outcomes by ownership entity. Small properties have as much weight as large properties. Decisions by owners in the Section 202 and 515 programs, with small unit counts per mortgage, have greater influence in this approach. (Alternatively, we could have focused on units as the unit of analysis, by weighted each property observation by the number of units in the property).

Property Characteristics

Table 1 shows the following key findings:

- The ratio of rents in opt-out/prepayment properties relative to their market rents (as reflected by HUD's FMR) generally tend to be lower than for opt-in properties, reflecting the potential economic advantage of the opt-out/prepayment decision for those properties.[2]
- Older Assisted properties are significantly more likely than Newer Assisted properties either to opt out (that is, in some terms to be financially successful) or to be troubled (that is, to be in foreclosure/enforcement).
- Properties designated for the elderly/disabled represent 45 percent of the opt-in properties, but only 17.4 percent of opt-out/prepays and 5.0 percent of the foreclosure/enforcement categories. Conversely, 95.0 percent of the properties in foreclosure/enforcement are family-occupied properties and 82.6 percent of opt-outs/prepays are family-occupied (compared with 55.1 percent of the opt-ins).

[2] The prevalence of above-FMR rents on opt-ins, despite Mark-to-Market legislation, likely represents three factors: properties exempt from Mark-to-Market, properties that had site-specific market rent determinations that were higher than FMR, and "exception rent" properties that were restructured at above-market rents in the Mark-to-Market program.

Other findings from Table 1 include:

- Properties not having an opt-in/opt-out choice to make during the study period were the smallest among the four groups of properties with an average of 80 units, followed by opt in properties which had 106 units on average. Properties that opted out and those in foreclosure or referred to the enforcement center were similar sized, averaging about 120 units.
- Opt-in properties and properties that did not have an opt-in/opt-out choice to make during the study period were more likely to include zero- and one-bedroom units, consistent with an elderly/disabled tenancy.
- Foreclosure properties were more likely to include two- and three-bedroom units, and nearly all were designated as family properties.
- Consistent with their family designation, nearly three fourths of the foreclosure properties were garden/walk up building types. In contrast, opt-in properties and properties that did not have an opt-in/opt-out choice to make during the study period were more likely to include high rise buildings, consistent with an elderly/disabled tenancy.
- Nearly half of the opt-outs (46.8 percent) had LMSA contracts, and nearly one third (31.9 percent) did not have any Section 8 contracts, but only subsidized mortgages prepaid by the owner.[3,4]
- More than half (57.5 percent) of the foreclosure/enforcement properties were Older Assisted properties with no rental assistance.
- Buildings constructed before 1975 were prevalent in the opt-out/prepay and foreclosure/enforcement categories.

[3] These properties benefited from mortgage subsidy but had a relatively higher income tenancy, since they selected tenants who could afford rents without income-based subsidy. Income limits at entrance for residents, depending on program, were 80 or 95 percent of median income; residents could remain if incomes increased.

[4] LMSA assistance was usually provided to properties with financial difficulties. The properties could have been assisted or unassisted, and the percentage of LMSA could vary from a few units to 100 percent of the property. The addition of subsidy allowed properties to reduce turnover and market to potential residents who otherwise could not afford the rent. Previously unassisted properties that became partially assisted continued to operate in a market rate environment and would find opting out an easier task if market conditions improved.

Table 1. Property Characteristics

Property Characteristics	Opt-ins	Opt-outs/ Prepays	Foreclosure/ Enforcement	All Other	Total
Number of properties	307	47	40	227	621
Percent of properties	49.4%	7.6%	6.4%	36.6%	100%
Development Size					
Less than 50 units	19.2%	21.3%	20.7%	36.4%	25.8%
50–99 units	32.6%	14.9%	17.2%	27.1%	28.5%
100–199 units	37.8%	51.1%	51.7%	28.9%	36.2%
200 or more units	10.4%	12.8%	10.3%	7.6%	9.5%
Average number of units	106	121	123	80	98
Unit Size					
0–bedroom units	6.4%	2.0%	4.3%	19.7%	10.9%
1–bedroom units	44.6%	30.9%	19.9%	50.8%	44.7%
2–bedroom units	30.6%	48.5%	47.6%	20.6%	29.1%
3–bedroom units	16.7%	16.8%	26.4%	7.8%	13.9%
4+–bedroom units	1.7%	1.8%	1.7%	1.1%	1.5%
Average number of bedrooms	1.66	1.87	2.03	1.30	1.56
Occupancy Type					
Elderly/disabled	45.0%	17.4%	5.0%	65.6%	47.9%
Family	55.1%	82.6%	95.0%	34.4%	52.1%
Building Type					
Row house	12.1%	7.7%	3.7%	2.2%	7.7%
Townhouse	0.3%	0.0%	3.7%	0.9%	0.7%
Semi-detached	10.4%	7.7%	0.0%	7.6%	8.7%
Garden/walkup	30.3%	56.4%	74.1%	33.6%	35.2%
Mid-rise	0.7%	0.0%	0.0%	0.5%	0.5%
Mixed/group	14.0%	23.1%	11.1%	13.5%	14.3%
Mixed High-rise	32.3%	5.1%	7.4%	41.7%	32.9%
HUD Program Type					
Newer assisted	53.8%	19.2%	7.5%	70.0%	54.1%
Older assisted	46.3%	80.9%	92.5%	30.0%	45.9%
Detailed HUD Program Type					
Sec. 8 NC/SR	21.5%	14.9%	5.0%	29.1%	22.7%
Sec. 202	20.2%	4.3%	2.5%	40.1%	25.1%
Sec. 8/LMSA	42.4%	46.8%	30.0%	11.9%	30.8%
Sec. 8/515	7.5%	0.0%	0.0%	0.0%	3.7%
Sec. 8/HFDA	4.6%	0.0%	0.0%	0.9%	2.6%
Sec. 8/Preservation	1.3%	0.0%	0.0%	0.4%	0.8%
Sec. 8/PD	1.3%	2.1%	5.0%	5.7%	3.2%
Sec. 8/Mod. Rehab.	0.3%	0.0%	0.0%	0.4%	0.3%
Rent Supp/RAP	1.0%	0.0%	0.0%	2.2%	1.3%
No Rental Subsidy	0.0%	31.9%	57.5%	9.3%	9.5%
Average Percentage of Assisted Units	92.3%	78.5%	84.2%	94.2%	91.6%
Over 160% FMR	3.3%	0.0%	0.0%	8.3%	4.8%

Table 1. Property Characteristics *(Continued)*

Property Characteristics	Opt-ins	Opt-outs/ Prepays	Foreclosure/ Enforcement	All Other	Total
Categories of Rent-to-FMR ratio					
Below 80% FMR	21.8%	64.5%	70.6%	14.2%	22.9%
Between 80% & 100%	34.2%	22.6%	17.7%	41.0%	35.5%
Between 101% & 120%	25.7%	12.9%	0.0%	16.6%	20.9%
Between 121% & 130%	6.5%	0.0%	11.8%	7.8%	6.8%
Between 131% & 140%	4.6%	0.0%	0.0%	5.4%	4.5%
Between 141% & 160%	3.9%	0.0%	0.0%	6.8%	4.6%
Building Age Categories					
Before 1975	41.4%	62.8%	59.1%	21.0%	35.9%
1975 – 1979	9.8%	14.0%	13.6%	8.5%	9.7%
1980 – 1985	46.9%	23.3%	22.7%	32.1%	38.8%
After 1985	2.0%	0.0%	4.6%	38.4%	15.6%

Note: The categories are largely all inclusive so columns add to 100 percent. Each cell shows the percentage of subjects who share the combination of traits. In this report, missing values are omitted from totals. Thus, percentages of records with non-missing values are displayed. Only extant records are included in the analysis.

Owner Characteristics

Table 2 presents the distribution of the properties by ownership type and management performance assessment ranking. HUD field office staff rank properties based on the overall management performance of each project. These comparisons of owners' relative performance in managing their properties to comply with HUD standards reveal certain factors underlying their decisionmaking, as summarized below. The assessment ranking comprises four categories: superior, satisfactory, below average, and unsatisfactory. Both ownership and management ranking information are available for only a percentage of properties as shown in Tables 2 and 3. While incomplete, the data provide a sample that is large enough for us to draw valid inferences. Results for Table 2 are summarized as follows:

- Non-profit owners have a higher proportion of representation among properties not having an opt-in/opt-out choice to make during the study period relative to their percentage of the total group of properties. Conversely, for-profit owners have a higher proportion of representation in three other property categories relative to their percentage of the total group of properties.
- Most properties that had data received a management review score of "satisfactory" or better.
- The distribution of management review scores was similar for opt-in properties and for properties not having an opt-in/opt-out choice to make during the study period.
- Surprisingly, opt-out/prepay properties had the lowest management review scores of the four categories of properties. Perhaps this is because some owners who chose to opt out may have done so because of disagreements with HUD housing management staff or may have been delaying management or property improvements until after they left the program. Conversely, owners choosing to stay in the program may attempt to keep their properties in compliance with HUD rules.[5]

[5] Renewals with below average or unsatisfactory ratings may be explained by commitments to rehabilitation, management, or ownership changes. In recent years the Mark-to-Market program has restructured mortgages on a significant number of troubled properties, providing for rehabilitation and significant additions such as air conditioning, which offers owners with negative management reviews an opportunity to correct underlying property problems.

Table 2. Owner Characteristics

Owner Characteristics	Opt-ins	Opt-outs/ Prepays	Foreclosure/ Enforcement	All Other	Total
Number of properties	307	47	40	227	621
Percent of properties	49.4%	7.6%	6.4%	36.6%	100%
Ownership Type					
Nonprofit	42.5%	31.8%	37.5%	60.4%	48.6%
For-profit	57.5%	63.6%	62.5%	30.9%	47.9%
Other	0.0%	4.6%	0.0%	8.7%	3.5%
Total	100%	100%	100%	100%	100%
Missing data	0.3%	53.2%	60.0%	8.8%	11.3%
Management Review Score					
Average score	1.94	2.35	2.27	1.93	1.96
Superior (score = 1)	21.1%	8.7%	0.0%	22.2%	20.4%
Satisfactory (score = 2)	67.7%	60.9%	81.8%	67.6%	67.7%
Below average (score = 3)	6.0%	17.4%	9.1%	3.8%	5.8%
Unsatisfactory (score = 4)	4.6%	13.0%	9.1%	6.0%	5.6%
Not available	0.7%	0.0%	0.0%	0.5%	0.6%
Total	100%	100%	100%	100.00%	100%
Missing data	7.2%	51.1%	72.5%	18.5%	18.8%

Financing Characteristics

Table 3 displays the type of financing for the properties. It shows the following:

- FHA-insured properties make up the bulk of opt-ins (62.9 percent), opt-outs/prepays (87.2 percent), and foreclosure/enforcement (95.0 percent) properties, but only 27.8 percent of properties not having an opt-in/opt-out choice to make during the study period.
- A large portion (78.8 percent) of FHA-insured properties have required an opt-out/prepay or opt-in choice, reflecting the maximum 20-year Section 8 contracts for New Construction/Substantial Rehabilitation and the maximum 15-year contracts for Loan Management Set-aside and conversions.
- Virtually all of the USDA's 515 program owners have had to make a decision regarding opt out, and a very large proportion have decided to opt in.[6]
- Fewer 202/811 properties (46.5 percent) have been in a choice situation, but they nonetheless make up a sizeable fraction of the opt-in category (24.8 percent).

Table 3. Financing Type

Financing Characteristics	Opt-ins	Opt-outs/ Prepays	Foreclosure/ Enforcement	All Other	Total
Number of properties	307	47	40	227	621
Percent of properties	49.4%	7.6%	6.4%	36.6%	100%
Primary Form of Financing					
FHA Insured	62.9%	87.2%	95.0%	27.8%	54.0%
Section 202/811	24.8%	6.4%	2.5%	40.1%	27.5%
Section 515	7.5%	0.0%	0.0%	0.0%	3.7%
All Other	4.9%	6.4%	2.5%	32.2%	14.8%
Total	100%	100%	100%	100%	100%

[6] This may have to do with restrictive prepayment conditions, currently a subject of litigation with USDA.

Location Characteristics

Table 4 displays geographic, economic, and racial/ethnic characteristics of the census tracts of properties based on 2000 Census tract data:

- Opt-outs/prepays are most likely to be located in suburban locations and least likely to be in non-metropolitan locations than all other categories of properties.
- Opt-in properties are least likely among the four categories of properties to be located in suburban areas, and most likely to be located in non-metropolitan locations.
- Opt-out/prepay properties, not surprisingly, are located in neighborhoods with relatively higher median incomes, higher median rents, and lower poverty rates than opt-ins, or than the study sample as a whole.
- Opt-in and opt out properties are in areas with higher proportions of non-minority residents compared with other properties, whereas foreclosure/enforcement properties are in areas with a higher minority population.

Table 4. Location Characteristics

Financing Characteristics	Opt-ins	Opt-outs/ Prepays	Foreclosure/ Enforcement	All Other	Total
Number of properties	307	47	40	227	621
Percent of properties	49.4%	7.6%	6.4%	36.6%	100%
Metropolitan Location					
Suburb	34.9%	55.6%	52.9%	39.2%	39.2%
Metropolitan/central city	56.9%	42.2%	41.2%	55.7%	54.4%
Non-metropolitan	8.2%	2.2%	5.9%	5.2%	6.5%
Total	100%	100%	100%	100%	100%
Census Tract Characteristics					
Median income	$25,880	$31,308	$26,653	$25,225	$26,104
Median rent	$466	$544	$513	$499	$487
Homeownership rate	48.4%	49.3%	49.8%	42.7%	46.4%
Poverty rate	26.1%	23.2%	28.0%	26.6%	26.1%
Vacancy rate	10.6%	11.4%	12.8%	10.1%	10.6%
Racial/ethnic composition					
Asian	1.4%	1.6%	1.1%	1.3%	1.4%
African American	39.7%	35.3%	46.1%	29.6%	36.0%
Native American/Other	5.4%	6.1%	6.8%	7.9%	6.4%
White	53.5%	57.0%	46.0%	61.2%	56.2%
Total	100%	100%	100%	100%	100%
Minority	54.2%	52.8%	64.0%	59.3%	56.6%
Non-Minority	45.8%	47.2%	36.0%	40.7%	43.4%
Total	100%	100%	100%	100%	100%

Tenant Characteristics

Table 5 displays characteristics of tenants in properties using data from HUD's TRACS system. Note that the descriptive categories are not discrete: for example, a household could be headed by someone who is both elderly and disabled, and also have children in residence.

Table 5. Tenant Characteristics

Financing Characteristics	Opt-ins	Opt-outs/ Prepays	Foreclosure/ Enforcement	All Other	Total
Number of properties	307	47	40	227	621
Percent of properties	49.4%	7.6%	6.4%	36.6%	100%
Length of residence (years)	5.7	5.1	3.6	5.5	5.5
Household size	1.7	2.1	3.3	1.7	1.8
Percent minority-headed	56.8%	65.2%	72.6%	60.9%	59.8%
Percent household heads with disabilities	12.3%	11.8%	10.3%	20.3%	15.4%
Percent elderly-headed households	55.0%	29.0%	7.7%	53.0%	50.0%
Percent households with children	27.0%	41.6%	77.6%	22.0%	27.7%
Household income as a percentage of area median income (AMI)	26.8%	19.8%	8.9%	28.6%	26.8%

Source: 1998 and 1995 Tenant Rental Assistance Certification System (TRACS) data.
Notes: Income measures are as of 1995 because of a large number of missing income observations in 1998. All other are as of 1998.

The table shows the following:

- Consistent with other findings (for example, the high percentage of Section 202 properties opting in), elderly headed households are highly represented in opt-in properties.
- Elderly households are the least heavily represented in foreclosure/enforcement properties.
- Households with children are highly most represented in foreclosure/enforcement properties, and least represented in opt-in and "all-other" properties.
- Household income in the property as a percent of area median income (AMI) is similar and highest for opt-in and "all-other" properties, and lowest for foreclosure/enforcement properties.
- Minority-headed households have the highest representation in foreclosure/enforcement properties and the lowest in opt in properties.

Physical and Financial Operating Characteristics

Table 6 displays summary physical and financial scores from the REAC systems and selected financial data and ratios. Expenses are on a per-unit per-month basis. Physical inspection scores reflect as-is condition with negative adjustments for certain health and safety issues. Generally, a score of 60 is minimally acceptable. Properties with scores of 60 and above are divided into groups requiring annual, bi-annual, and every-third-year physical inspections, based on how close the prior inspection score was to one hundred. The REAC financial performance score also is considered to be acceptable at scores of 60 and above.

Table 6. Physical Condition and Financial Operating Characteristics (1998–1999)

Physical and Financial Characteristics	Opt-In	Opt-out/ Prepays	Foreclosure/ Enforcement	All Other	Total
Number of properties	307	47	40	227	621
Percent of properties	49.4%	7.6%	6.4%	36.6%	100%
REAC Physical inspection score (1-100)					
Median	84.0	82.5	81.0	90.0	86.0
1-59	8.1%	12.5%	0.0%	6.9%	7.7%
60-69	10.1%	4.2%	14.3%	6.9%	9.0%
70-89	45.1%	50.0%	50.0%	33.1%	41.9%
90-100	36.7%	33.3%	35.7%	53.1%	41.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
REAC Financial performance score (1-100)					
Median	69.0	72.0	60.5	74.0	70.0
1-59	28.7%	36.8%	40.0%	18.2%	25.8%
60-69	23.6%	5.3%	20.0%	21.0%	21.8%
70-89	40.3%	42.1%	20.0%	44.6%	41.4%
90-100	7.4%	15.8%	20.0%	16.2%	11.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Expense-to-income ratio (median)	0.70	0.85	0.85	0.56	0.66
Debt-service-coverage ratio (median)	1.12	1.13	1.14	1.07	1.11
Quick ratio (median)	0.41	0.42	0.23	0.39	0.40
Surplus cash level (median)	-$54.1	$125.8	-$17.4	-$189.8	-$92.3
Reserve (median)	$1,412.7	$1,589.2	$1,606.1	$1,713.7	$1,580.2
Vacancy rate (median)	1.5%	2.0%	2.5%	0.5%	1.0%
Administrative Expenses (median)	$103.3	$101.8	$101.8	$99.5	$102.5
Utilities Expenses (median)	$52.7	$57.0	$46.4	$50.5	$51.4
Operating & Maintenance Expenses (median)	$125.9	$141.5	$149.2	$111.1	$121.5
Taxes & Insurance Expenses (median)	$60.4	$64.9	$65.0	$44.3	$57.2
Total Operating Expenses (median)	$350.4	$379.8	$372.7	$315.5	$338.4

Source: 1998 and 1999 REAC Financial Assessment Sub-System (FASS) data.
Note: Operating expenses are per-unit-month measures.

Table 6 shows the following:

- Properties in foreclosure/enforcement had the lowest median physical inspection scores, as expected, although not all enforcement is related to physical condition.
- Opt-out/prepay properties had somewhat lower physical scores than those that opted in and those that did not face an opt-in/opt-out choice in the study period. This may reflect the higher incidence of Section 202/811 properties in the latter two categories, since properties serving the elderly and people with disabilities generally have higher scores than family-occupied properties. The elderly and disabled units have fewer residents, so there is less wear in those units.
- All groups had median scores above 60 and all groups had significant percentages of properties with scores below 60.
- The opt-out/prepay category had a higher percentage of properties with scores below 60 (35.5 percent) than did the opt-ins (23.1 percent), almost the same as the foreclosure/enforcement category (36.1 percent).
- More than a third (35.7 percent) of foreclosure/enforcement category properties had very high scores (90–100) for physical inspection and 20 percent had very high financial performance scores.

The table also sets forth six additional indicators of relative financial strength:

- The expense-to-income ratio is a measure of expenses (other than debt service) compared to operating income. Ratios closer to or greater than 1 indicate little or no income available to pay debt. Foreclosure/enforcement and opt-out/prepay properties had the weakest ratios and those not having an opt-in/opt-out choice to make during the study period had the lowest ratios.
- The debt service coverage ratio is a different measure, calculating to what extent debt service could be covered with net income. All groups had adequate debt service coverage ratios (greater than 1), with those not having an opt-in/opt-out choice to make during the study period having the lowest coverage (1.07).
- The quick ratio measures liquidity. It compares cash, cash equivalents, accounts and notes receivable to current liabilities. A quick ratio equal to 1 or above indicates ample liquidity; it implies that the project has more than enough resources to meet its financial liabilities. A higher quick ratio indicates greater financial liquidity. None of the groups showed a strong ratio of liquidity to liabilities, though the opt-ins and opt outs had median ratios that were higher than the other two groups.
- Surplus cash is a HUD-defined term that measures cash on hand against trade payables and any accrued unpaid mortgage payments. Higher ratios indicate stronger financial positions. Opt-out/prepay properties had the strongest surplus cash position and foreclosure/enforcement properties had the weakest.
- Reserve levels. HUD properties are required to maintain a reserve account for replacement and may be required to maintain a residual receipts account. In Older Assisted properties these funds become the owner's at prepayment, so they measure both financial strength and a source that potentially could be used to pay off the mortgage. For

most Newer Assisted properties, residual receipts resulting from Section 8 revert back to HUD. Reserves were highest in the group of properties not having an opt-in/opt-out choice to make during the study period, and lowest among opt-ins.

- Vacancy rates were low in all categories of properties, but lowest among properties that did not have an opt-in/opt-out choice to make during the study period, followed by the opt-ins.

Multivariate Analysis of Opt-out Decision

This section presents our analysis of the owners' opt-out/opt-in decisions using multivariate logistic regression analysis. The model explains the opt-in/opt-out outcome based on an array of project, owner, program, and location variables. It allows us to examine the impact of each variable on the owners' decisions, while holding all other variables constant.

For a logistic regression, causality is sought between a dichotomous dependent variable and a series of explanatory variables. The dependent variable thus takes on a value of 0 or 1. In the present analysis, the outcome variable is coded "1" for opt-out properties and "0" for opt-ins.

To construct the regression model, we chose explanatory variables from the descriptive analysis section that were found to be different between the opt-in and opt-out properties. In Table 7 we present the variables used in the model, and their expected direction of impacts on the probability of opting out.

The results of the regression coefficient estimates, presented in Odds Ratio format, are shown in Table 8. It shows that most of the variables are statistically significant with the expected sign. The correlation bears out the relationship that was suggested by the cross-tabular analysis.

Table 7. Regression Model Variables

Variable	Variable Specification	Expected Direction of Impact
Development size in units	Less than 50 units (reference category) 50-99 units 100-199 units 200+ units	**Unknown.** On one hand, conversion to market rate may involve fixed costs; since larger projects have lower per-unit costs, this may increase their likelihood of opting out. On the other hand, large projects tend to be associated with other physical features that are less attractive to unassisted tenants.
Density	Percent of 3-bedroom-plus units	**Negative.** It may be harder to market projects with large units to unassisted tenants because these units may not be physically suitable for higher income singles and couples who could afford market rate units.
Family occupancy type	Family = 1 Elderly/disabled = 0	**Positive.** Elderly projects face competition from amenity-rich private market projects. Also, the income distribution among elderly and disabled households may not support many market rate units. In other words, family projects are more likely to opt out.

Table 7. Regression Model Variables *(Continued)*

Variable	Variable Specification	Expected Direction of Impact
Building type	Detached or semi-detached = 1 Other = 0	**Positive.** Detached and semi-detached projects tend to be associated with other amenities and physical characteristics that are attractive to unassisted tenants.
Older Assisted HUD program types	Older assisted = 1 Newer assisted = 0	**Positive.** The older projects often have rents that are below market rate.
Ratio of rent-to-FMR	Rent-to-FMR ratio < 80% 80% < rent-to-FMR ratio < 100% 100% < rent-to-FMR ratio < 120% (reference category)	**Negative** for projects with rents above local FMR. Projects with rents that are low relative to the FMR may be able to raise rents with little effect on vacancy rates. In other words, as rent-to-FMR ratio increases, we expect the property owner to be less motivated to opt out.
Ownership type	Nonprofit = 1 For-profit or limited dividend = 0	**Negative.** Nonprofits are less likely to opt out. By definition, for-profit owners are motivated to increase revenues.
Not federally financed mortgage	Not federally financed = 1 Other = 0	**Negative**. This value is a proxy for projects financed by state Housing Finance Agencies (HFAs). HFAs may impose prepayment and/or opt-out restrictions.
Neighborhood poverty rate	Percent of persons in the surrounding census tract with incomes below poverty threshold in year 2000	**Negative**. Research has shown that tracts with high poverty rates typically have features that make them undesirable places to live and hence are less able to command high rents.
100-percent assisted	Projects with 100-percent units receiving HUD assistance =1 Other = 0	**Positive**. A project with a high percentage of unassisted tenants risks high turnover upon conversion to private market status because these tenants will not have enhanced vouchers and may not be able or willing to afford the higher rents. A high percentage of assisted tenants implies more opportunity for the owner to raise rents to market levels.
Metropolitan location	Suburb (reference category) Central city Non-metropolitan	**Negative** for central city. We expect owners in central cities to be less likely to opt out because markets may be unable to support unassisted housing. **Positive** for suburb. Suburban areas tend to have higher income renters to absorb market rate housing.

In Table 8, the variables with odds ratio estimates larger than 1.0 imply that a positive impact on the owners' opt-out decision, while variables with odds ratio estimates less than 1.0 imply that the presence of these factors decreases the likelihood of opting out. For example, the odds ratio for the family occupancy type variable is 2.73. This means that the odds of opting out for a family-occupied property are more than 2 times of those for an elderly/disabled property with comparable property and location characteristics.[7]

The key explanatory variable in Table 8 is the rent-to-FMR ratio. It explains the largest share of variations in the probability of opting out, suggesting that a property's pre-opt-out rent relative to the local market rent is the most important determinant of the owner's opt-out decision, controlling for all other characteristics. When the Section 8 rent is significantly below the market level (proxy by FMR), owners realize that a conversion to market rate units can increase the rental revenues (and therefore profits) with little effect on vacancy rates. The regression model indicates that, compared to properties with rent level between 100 and 120 percent of local FMR, properties with below-market rents (that is, rent-to-FMR ratio less than 100 percent) are 1.08 to 6 times more likely to opt out in terms of odds.[8]

Table 8. Coefficient Estimates of Opt-out Logistic Regression Model

Explanatory Variable	Odds Ratio	T-statistic
Development size		
Less than 50 units (reference category)		
50-99 units	0.28 ***	-2.16
100-199 units	0.07 ***	-2.98
200 or more units	0.18 ***	-1.69
Density		
Percent 3-bedroom-plus units in development	0.03 ***	-2.70
Occupancy type		
Family occupancy type	2.73	1.28
Elderly/disabled (reference category)		
Building type		
Detached or semi-detached building type	1.80	0.68
Ownership type		
Nonprofit sponsor type	0.47	-0.94
Program characteristics		
Older Assisted Section 8	7.41 ***	2.85
100% of project units are receiving HUD assistance	7.71 ***	2.69
Not federally financed (proxy for HFA deals)	1.69	0.54
Neighborhood characteristic		
Census tract poverty rate	0.98	-0.81

[7] In statistics, the odds of an event are defined as the probability of the event, divided by one minus the probability of the event.

[8] To capture any nonlinear relationship between the rent-to-FMR ratio and the likelihood of opting out, the rent-to-FMR ratio is specified in the model as a series of indicator (0/1) variables. The variable for rent-to-FMR ratio greater than 100 percent is not used in the regression model. Properties with such characteristics serve as the reference category. This means that when interpreting the odds ratio estimates associated with the set of rent-to-FMR variables, they should be compared to the reference category.

Table 8. Coefficient Estimates of Opt-out Logistic Regression Model *(Continued)*

Explanatory Variable	Odds Ratio	T-statistic
Rent-to-FMR ratio		
Rent-to-FMR ratio < 80%	6.85 ***	2.57
80% < rent-to-FMR ratio < 100%	1.08	0.09
100% < rent-to-FMR ratio (reference category)		
Metropolitan location		
Central city	0.47	-1.31
Non-metropolitan	0.57	-0.43
Suburb (reference category)		
Other Regression Model Information	**Value**	
Opt-out = 1; opt-in = 0		
Total number of properties	354	
Number of opt-out properties	46	
Log-likelihood	-60.55	
Pseudo R-square	0.33	

Notes:
*** indicates significance at the 0.01 level;
** indicates significance at the 0.05 level;
* indicates significance at the 0.10 level.

All else being equal, properties that are 100-percent assisted have a higher likelihood of opting out compared with properties where only a few units are assisted. This may be because properties that are 100-percent assisted can receive the maximum rent increase after the conversion to market rate. The regression model indicates that the odds of such properties opting out are more than 7 times the odds for other projects. It differs somewhat, however, from the cross-tabulation findings presented in the previous section, which show that on average, opt-out properties have a smaller percentage of assisted units compared to the other categories of properties. This difference may be due to the fact that the regression includes only opt-in and opt-out Section 8 properties, while the descriptive tables include a much larger group of properties. In addition, other confounding influences, such as the rent-to-FMR ratio and ownership type, may influence the cross-tabulation results.

Other results presented in Table 8 yield the following findings:

- Development size matters. In general, owners of larger developments are less likely to opt out of the Section 8 program than owners of comparable developments with fewer than 50 units. The magnitude of the impact, however, does not increase monotonically with property size.
- Density of the development, as measured by the proportion of 3+ bedroom units, also matters a great deal. Holding other variables constant, properties with a high concentration of large units are less likely to opt out.

- Older Assisted properties tend to be more likely to opt out, probably because their budget-based rents have been held below the market level for many years. Their odds of opting out are 7.4 times those of the Newer Assisted projects.
- Regression estimates for occupancy type, building type, ownership type and neighborhood poverty rate variables have the expected impact (direction) but they are not statistically significant. This indicates that, after controlling for other influences, these factors appear to have no impact on the owners' opt-out decision. It implies that state agency rules appear to be unimportant relative to other determinants in the model.

Appendix A
Glossary of Key Terms

For purposes of this study, we use the following terms to describe the status of a property:

Active Section 8—a property with a Section 8 contract that has not yet reached its expiration date and is subject to rent and income use restrictions.

Active 236 or BMIR—a property assisted under the older mortgage interest subsidy programs (Section 236 and Section 221(d) (3) BMIR) that has not yet prepaid and is subject to rent and income use restrictions.

Enforcement Center—HUD's Enforcement Center works cooperatively with HUD's program offices to ensure compliance with business agreements and regulations. The Enforcement Center receives referrals of distressed multifamily properties. Properties may be referred due to unsatisfactory physical inspection conditions or for financial discrepancies.

Fair Market Rents (FMRs)—FMRs are estimates of gross rent that include the costs of rent and utilities, except telephone. HUD sets FMRs to ensure that a sufficient supply of rental housing is available to participants. FMRs must be both high enough to permit a selection of units and neighborhoods and low enough to serve as many families as possible. In most places HUD sets the FMR at the 40th percentile of local gross rents, although in some places the FMR is set at the 50th percentile.

Foreclosure—a property that is either failing (in foreclosure) or has the possibility of failing (referred to the Departmental Enforcement Center).

Mixed Active Property—a property assisted by both a Section 8 contract and a subsidized 236 or BMIR mortgage; for purposes of this study, it can also mean a property that has opted out of its Section 8 but has not yet prepaid its subsidized mortgage, or a property that has prepaid its subsidized mortgage but not yet opted out of its Section 8 contract.

Opt-in—a property whose owner chooses to renew an expiring project-based Section 8 contract, thereby extending the rent and income restrictions (or "use restrictions").

Opt-out—a property whose owner chooses not to renew an expiring Section 8 contract and decides to opt out of the Section 8 program.

Prepayment—a property that leaves the HUD-assisted stock through prepayment of a mortgage subsidized either under the FHA Section 236 or Section 221(d) (3) BMIR program. Once the mortgage is prepaid and assuming no ongoing Section 8 subsidies, the associated project-based federal rent and income restrictions are terminated and the owner is free to choose how to use the property.

Appendix B
Data Sources

The universe of properties we examined included "opt-out" and "prepayment" properties as well as properties that have remained in the HUD programs ("opt-in"). We sought information on the physical and financial characteristics, owner characteristics, and neighborhood characteristics of these properties, as well as on the residents in these properties. These data were obtained from a variety of HUD sources as well as the U.S. Census Bureau. Those sources included:

HUD Office of Housing's (FHA) Real Estate Management System (REMS) Data. The primary database we used for describing physical, financial, and owner characteristics of properties was REMS. This database contains a wealth of property- and contract-level information for the entire portfolio of multifamily properties managed by FHA. It includes variables on Section 8 contract status, contract expiration date, development size, unit mix (that is, number of one-bedroom units, two-bedroom units, and so forth), occupancy type (family, elderly/disabled), HUD assistance program type (section of the Housing Act), and the location of the property.

HUD FHA's Multifamily DataMart (MPRD) files. We used two extracts of FHA's multifamily MPRD files, a current (2004) extract and a prior-year (1998)[9] extract, to define the universe of study properties. The MPRD database contains information on properties that are active and currently receiving HUD subsidies. A key advantage of the MPRD database is that it pulls raw data at the mortgage and contract levels from REMS and F-47 and organizes them into project-level variables. However, it does not include any information on properties with a terminated mortgage/assistance contract, so we had to rely on REMS for this information.

HUD FHA's Multifamily Insurance System (MFIS) or F-47 data. We used FHA's F-47 data to support defining the universe of properties (essentially the Section 236 and BMIR properties) as well as to examine the types of FHA mortgage financing used in the study properties. The F-47 data system is used to track the origination, payment status, and termination of FHA-insured mortgages. It also includes financing information such as loan terms, Section of the Housing Act (SOA), monthly debt service amount, and unpaid principal balance.

HUD Real Estate Assessment Center (REAC) Data. We used REAC data to compare the physical condition and financial operating characteristics of the study properties. Since 1998, REAC has been collecting very specific financial and physical information on the entire HUD rental stock. Property owners are required to submit Annual Financial Statements (AFS) electronically to REAC. Currently, these annual snapshots on the financial performance of the assisted stock are available from 1998 to 2003.[10] REAC has also devised a composite score that measures the overall financial health of each property's operation. HUD uses AFS data to determine whether a property is financially troubled or at risk of becoming financially troubled.

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9 The 1998 extract was available from previous work.

10 Between 1993 and 1998, AFS were submitted in hard copy and entered into an electronic database by a HUD contractor. However, these data are not in the REAC database.

A physical inspection is performed annually on each property to identify neglected properties in need of repair and to ensure that timely maintenance is performed on all properties. REAC inspectors summarize the inspection result for each property into a numerical score ranging from 0 to 100. A property with an inspection score below 60 is considered sub-standard. Currently, physical inspection data are available for 1998 to 2003.

Tenant Rental Assistance Certification System (TRACS). We used TRACS data to examine tenant characteristics of households affected by the opt-in/opt-out choices of owners. TRACS is FHA's system for income certification of households participating in the project-based rental assistance programs. A household-level administrative database, TRACS provides a snapshot of the assisted households at the end of each fiscal year. In addition to household income, assets, and public assistance status, TRACS contains an array of household demographics relevant to this study.

PIH Information Center (PIC) data. For the affordability analysis, we used a 2005 extract of PIC to link a group of voucher households to properties that either opted out of the Section 8 program or prepaid their insured mortgage. We then used information from PIC on gross rents paid to the owners to assess whether they were renting above or below the FMR. PIC is the TRACS equivalent for households participating in HUD's Public Housing and Housing Choice Voucher programs. Administered by local public housing agencies (PHAs) and HUD's Office of Public and Indian Housing (PIH), it contains many of the same data elements that are collected in TRACS and REMS. Electronic records are entered into the system and updated periodically by local PHAs.

2000 Census of Population and Housing data. We used Census Bureau tract-level data to compare neighborhood characteristics of opt-in/opt-out properties. We examined characteristics such as geographic region, median rent level, vacancy rates, median household income, race/ethnicity, and poverty rate.

FHA's List of Opt-out Properties (Opt-out List). To determine which properties were affected by opt-out choices, we used a list maintained by FHA's Office of Program Systems Management of HUD Section 8 properties that have completed the opt-out process since 1992. Records in the list are identified by the reporting fiscal year Section 8 contract number and REMS project number, and they can be easily linked to the REMS data. We used an initial list that was dated November 2004.

As noted above, the main source of data for much of the quantitative research was REMS. Given how contract renewal information is handled in the REMS system, however, it is difficult to identify properties that have opted in at contract expiration for a particular fiscal year. The REMS system immediately overwrites the prior contract expiration date for a project when the Section 8 renewal is approved. Therefore, with a single extract of the REMS data, if the expiration date is in the future it is impossible to determine whether the owner had the opportunity to opt out and, instead, chose to renew and opt in.

Our solution was to use two MPRD extracts made at different times. We used extracts from 1998 and 2004 to identify the universe of Section 8 properties. The MPRD extracts allowed us to track changes in a property's status between 1998 and 2004, the period during which most opt-outs have occurred. To identify the universe of properties financed by Section 236 or Section 221(d) (3) BMIR mortgages, we used the F-47 Multifamily Mortgages Database. We merged the F-47 sets with the MPRD extracts by REMS project identification number and by FHA case number to create the universe of analysis properties. (See Section 2.3 for further discussion of this universe.)

The Opt-out List maintained by FHA's Office of Program Systems Management identified the group of Section 8 opt-out properties for the study. Using the two MPRD extracts, the F-47 file, and factoring in properties on the Opt-out List, we could identify all the properties that have opted out or prepaid since 1998, as well as identify those properties that fell into foreclosure or were referred to the Enforcement Center between 1998 and 2004.

The data on Opt-outs were updated based on information provided by the Shimberg Center for Affordable Housing. This includes an Excel file supplied by Steve Martin at HUD that identifies all Florida opt-out projects through fiscal year 2007. Researchers at the Shimberg Center added three contract opt-outs to that list. They occurred since December 31, 2006 according to information supplied by HUD Jacksonville field office. The Shimberg Center also provided us with a list of Section 221(d)(3) BMIR and Section 236 properties that have prepaid their mortgages.

Based on this information, we concluded that 3 properties have moved from the opt-in classification to the opt-out category since 2006. In addition, 4 properties have moved from the foreclosure/enforcement classification to the opt-out category.

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Corporate Offices

Cambridge, Massachusetts
55 Wheeler Street
Cambridge, MA 02138-1168
617.492.7100

www.abtassociates.com

Bethesda, Maryland
Bethesda One
4800 Montgomery Lane
Suite 600
Bethesda, MD 20814-3460
301.913.0500

Bethesda Two
4550 Montgomery Avenue
Suite 800 North
Bethesda, MD 20814-3343
301.634.1700

Chicago, Illinois
640 North LaSalle Street
Suite 400
Chicago, IL 60610-3781
312.867.4000

Hadley, Massachusetts
Mass Venture Center
100 Venture Way
Suite 100
Hadley, MA 01035-9462
413.586.8635

Lexington, Massachusetts
181 Spring Street
Lexington, MA 02421-8030
781.372.6500

Durham, North Carolina
4620 Creekstone Drive
Maplewood Building
Suite 190
Durham, NC 27703-8062
919.294.7700

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