U.S. Department of Housing and Urban Development
Office of Policy Development and Research

Alternative Operating Subsidy Systems for the Public Housing Program

THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, D.C. 20410

To the Congress of the United States

I am pleased to transmit to you the Department's report on alternative subsidy systems for the Public Housing Program.

This report was prepared pursuant to the requirement in the Housing and Community Development Amendments of 1981 in P.L. 97-35 which require HUD to:

> "review the administration of the operating subsidy program under section 9 of the United States Housing Act of 1937, including an examination of alternative methods for distributing operating subsidies which provide incentives for efficient management, full rent collection, and improved maintenance of projects developed under the United States Housing Act of 1937."

You should be aware that this report is focused on the long-range alternatives for the subsidy funding system rather than on the immediate decisions which must be made for fiscal year 1983. As a result, the report does not evaluate such issues as energy savings from modernization, the assumed rate of inflation for 1983, or expected dollar levels of contributions to operating subsidies from state and local governments. Also, the cost analysis in the report is in 1980 dollars and assumes for analytical purposes that HUD has fully implemented a regulation to charge tenants 30% of adjusted income for rent. Thus, the report will be of greater value for evaluating post 1983 subsidy alternatives than for use in the current budget discussions.

The report presents four major alternatives and examines many variations of specific features of funding systems but does not come to a conclusion as to which system is preferable. The Department is continuing research on the implementation of possible systems and will be making a proposal to improve the funding system in the weeks ahead.

I hope this report will be useful to you in considering issues related to operating subsidies in the Public Housing Program.

Very sincerely yours,

Samuel R. Pierce, Jr.

ALTERNATIVE OPERATING SUBSIDY SYSTEMS FOR THE PUBLIC HOUSING PROGRAM

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EXECUTIVE SUMMARY

INTRODUCTION

The Performance Funding System (PFS) is the basis for determining the level of operating subsidies for those units in the Public Housing Program that do not cover all of their operating costs through rents charged to tenants. Subsidies are allocated to Public Housing Authorities (PHAs) on the basis of a formula that relates legitimate or acceptable operating expenditures to each PHA's characteristics, including the basic configuration of its units, regional cost variations and local rates of inflation.

As of the early 1980s the operating subsidy system is in crisis. A steady growth in subsidy amounts, fueled by inflation in costs and lag in tenant-paid rents behind the general inflation rate, has produced growing reluctance to pay the total bill estimated by the PFS. PHAs have expressed dissatisfaction with the system and an evaluation has asserted that the system unfairly penalizes some types of PHAs. In 1981, Congress wrote into the HUD authorization act a requirement that HUD analyze and report on alternatives to the PFS by March of 1982.

As the report was being prepared there were additional signs that carrying on with the PFS in its current form is not plausible. Dissatisfaction with the inefficient management that clearly exists in some parts of the Public Housing Program, plus the constraints of the Federal budget, have led HUD to alter parts of the PFS in planning the allocations of operating subsidies in 1982 and 1983. In line with the reduction in inflation, the estimate of inflation used by the system to establish the level of fixed reimbursements for non-utilities operating costs has been reduced. It is likely that utilities costs, which have previously been reimbursed largely on the basis of actual expenditures, will now be funded on the basis of a fixed prediction and that the assumptions about the level of utilities consumption will be reduced also.

This report does not analyze the current alterations to the PFS that have been necessary pending more fundamental decisions about the future of the operating subsidy system. Rather, it attempts to describe a range of alternatives to the PFS and, in the course of analyzing those alternatives, clarify the issues that must be resolved as a new subsidy system is designed.

KEY ISSUES RAISED BY ALTERNATIVE FUNDING SYSTEMS

This report does not begin with a set of assumptions about the goals of a Public Housing funding system or the premises on which it should be based. Rather, it offers some basic choices among systems that reflect different premises and priorities. Here we attempt to distill some of the issues that the reader will find embedded in the various chapters of the report describing alternative subsidy systems (Chapters 4-10) and methods for altering the cost or the control of the program that are outside any particular funding system (Chapters 2, 3 and 11).

1. Degree of Change from the Current Size and Shape of the Program

A key issue is how radical a change in the Public Housing Program one desires or is willing to contemplate as an outcome of the funding system. The Performance Funding System was designed to control the growth in subsidies and limit payments for inefficient operations, but at the same time to maintain the "standing stock" of public housing projects. Furthermore, the very nature of the current subsidy system is that a low-income household, however poor, can live in public housing at an affordable rent based on a percent of income.

All the funding systems analyzed in this report assume that the continued operation of extremely inefficient projects should be discouraged. It does not make sense to preserve every last project in the "standing stock." However, a further question is whether it is desirable, or at least acceptable, for a substantial portion of the public housing stock to be removed from the housing inventory or to no longer serve low-income households. This is a key issue

for the choice of a funding system since the combination of design features in some systems will mean large reductions in funding levels for some PHAs. Beyond a certain point lower funding levels (whatever their basis) will necessitate the disposition of high cost and/or low revenue-producing projects. In extreme cases, the basic cost structure of an entire PHA may be so far above the funding level produced by a new system that the PHA can no longer own and manage any projects for low income tenants.

An alternative means of providing for the housing needs of the poor is available. The Section 8 Existing Program in current or modified form can offer low income households the same or, sometimes, better quality housing than public housing. On the other hand, shutting down major portions of the public housing stock in some cities would cause difficulties despite the availability of an alternative program for displaced households. Clearly this is a case in which differences of degree become differences in kind.

A related question is the balance of responsibility between the Federal Government and local governments in making sure the housing needs of the poor are taken care of. To the extent that localities are willing to offset part of a drop in Federal subisides for particular PHAs and to integrate public housing into a local housing strategy, lower Federal funding levels would have less radical implications. Chapter II of this report examines Federal and local roles in the Public Housing Program.

2. Basis of Determining Acceptable Costs

A fundamental choice raised by this report is between funding systems based on past and current cost patterns within the Public Housing Program and funding systems that relate the acceptable costs of public housing to external standards or proxies such as private market rents. It must be noted that

both of these bases for determining acceptable costs fall short of an ideal basis, which would be an actual measurement of the costs of providing a specified level of housing services. The problem with achieving such a theoretically desirable basis for a public housing funding system is that performance standards for public housing would take years to develop and it is questionable whether policy makers could agree on any particular set of standards. The standards would have to be extremely detailed, given the complexity of housing as a consumption item. They would have to include numerous components of "housing services", such as response time for maintainance calls and amount of playground equipment per ten children. They would have to take into account differences in operating conditions, such as weather, types of tenants, project design and building materials. For example, exterior painting every two years might be an acceptable standard for some projects but not for others. Given its inevitable complexity, a standards-based funding system would be subject to manipulation both by PHAs and by those at HUD responsible for interpreting the standards and estimating the costs of achieving them for PHAs under particular circumstances. For these reasons, HUD has never developed operating performance standards and we do not advocate attempting to implement such a system.

We are left, then, with two types of proxies for acceptable costs of public housing, neither of which relates to a fixed standard of services to be provided. The Performance Funding System, despite its name, was not based on performance standards, but accepted as legitimate whatever expenditures were being made as of 1975 by PHAs judged to be "high-performing", regardless of the resulting service levels. Similarly, a measure of private market rents, such as Fair Market Rents, reflects the level of housing services provided at a particular point in the rent distribution, not a predetermined level judged "right" for public housing.

The choice between historical public housing costs and private market rents as the basis for determining the acceptable costs of public housing

is related to the issue of the degree of acceptable change to the program, since private rents may result in substantially lower funding for some PHAs. This is not necessarily the case: public housing subsidies derived from private market data can be higher than current subsidies, while a system based on current cost patterns can provide for severe drops in funding. Nonetheless, in an environment in which substantially higher aggregate subsidies than those provided in recent years are unlikely, changing the basis of the system is likely to produce significant losses in funds for some PHAs.

Thus, basing a funding system on current cost patterns is the "conservative" choice, in that it is less likely to lead to radical changes in the shape of the Public Housing Program. Subsidy levels are tailored to the needs of each PHA in the sense that the PHA was able to operate with roughly that amount of money in the past.

On the other hand, it is difficult to assess the legitimacy of costs that have only past expenditure patterns as their basis. The PFS attempted to handle this problem by relating acceptable costs to PHA characteristics through a cost equation based only on the costs of PHAs believed to be well managed. However, the definition of well managed or "high-performing" PHAs not only did not establish standards for levels of service, but also did not include explicit measures of cost efficiency, such as staffing levels.

Looking for data on which to base costs outside the Public Housing Program itself, the most logical choice would seem to be the operating costs of private market housing. It turns out, however, that no set of private cost data exists that is comprehensive enough to form the basis for a subsidy allocation system for a nationwide housing program. Data collected by the Institute of Real Estate Managers (IREM) is not stable from year to year,

cannot be identified with particular localities to a sufficient degree, and reflects operating expenses of apartments that differ a great deal from public housing in the characteristics of both the buildings and the tenants. Data collected by HUD on the operating costs of FHA-insured multifamily projects (the "OLMS" data system) reflect the operating costs permitted by various HUD programs and, therefore, do not really show what operating costs would be without public intervention. Nonetheless, the magnitude of the difference between operating costs reflected in IREM and OLMS data and operating costs of public housing lends credibility to the assertion that some PHAs are inefficient and over-funded by the current operating subsidy system. (See Chapter 10 of this report for more discussion of private operating cost data).

Given the weaknesses of private operating cost data, the main opportunity for relating public housing costs to private market housing lies with private market rents. The Annual Housing Survey provides detailed data on private rents, which is combined with Census data and data from the housing component of the Consumer Price Index to produce an estimate of how rents vary by location. These estimates, known as Fair Market Rents (FMRs), are used to set allowable subsidy levels in the Section 8 Existing Housing Program and a similar series will be used to determine subsidies by family size and location in the Modified Section 8 Existing or voucher program. 1/

1/ To avoid confusion with Section 8 New Construction FMRs, which are determined on a different basis, and to distinguish the functions of FMRs under the old and new Section 8 Existing Programs, they will be called "payment standards" in the future. However, since most readers of this report know them as FMRs, we will continue to use that term.

FMRs are quite well localized and reflect the rents of the entire rental housing stock. Thus, they are a good basis for measuring the variation in the cost of supplying housing from area to area. In the short term, however, market rents also reflect geographical differences in the demand for housing. More importantly, like IREM or OLMS data, they are not a measure of the cost of operating the particular type of housing owned by the PHA in a local area. For example, private rental housing may be newer than public housing on average, and it probably does not include many large multifamily units occupied by families with children, as public housing often does. 2/ What FMRs do represent vis-a-vis the Public Housing Program is the alternative cost of providing private market housing units to households now living in public housing. The logic of using FMRs as a proxy or standard is that the Government should not pay more for public housing than it would pay for the Section 8 Existing or voucher program. Thus, the willingness to contemplate radical change is in some sense inherent in funding systems based on FMRs. Such systems refuse to pay high costs for public housing projects even if those costs are inherent in the nature of the public housing stock (its design or location, for example) rather than the result of poor management.

2/ The examples in the text suggest public housing will have higher operating costs than private housing. However, some differences we would expect to find between "typical" public and "typical" private market housing should make public housing cheaper to run: e.g., durable materials, multi-unit heating plants.

3. Types of Costs Covered by the Formula-Based System

Another basic choice posed by the funding systems described in this report is whether to combine funding for operating public housing and funding for capital improvements to the public housing stock. Under the current system a separate "modernization" program (now called the Comprehensive Improvements Assistance Program or CIAP) provides for both replacements and improvements needed as public housing structures age, and rehabilitation of projects that have fallen into deteriorated conditions as a result of past neglect. Some of the funding systems examined in this report provide for formula-based funding for replacements and improvements after a transition period during which rehabilitation of deteriorated projects takes place. Following the transition, a single subsidy allocation to the PHA could be used for whatever combination of day-to-day operations, maintenance and repair and capital improvements the PHA chose.

The primary advantage of combined funding for operations and modernization is that it creates incentives for public housing managers to plan their repair and replacement strategies in a cost-effective manner. This would both minimize the overall need for funding and permit more improvement to the public housing stock within a particular amount of funds. In the long run, funding levels for modernization would be more controllable in a system that provided funds on a formula basis rather than on the basis of the condition of individual projects, regardless of whether that condition resulted from inevitable wear and tear or mismanagement.

On the other hand, putting capital improvement funding for public housing on a formula basis would remove a Federal tool for intervening in the program to keep particular projects operating in acceptable condition. It can be argued that ultimate Federal responsibility for the projects means that continued direct control over the use of modernization funds is necessary. In addition, a discretionary modernization program enables the Federal Government to direct funding toward capital improvements likely to have the most immediate pay-off in reducing operating subsidies. For example, while improvements to unit lay-out or recreational space should improve a project's future rent-generating potential, energy conservation improvements are likely to produce subsidy savings more quickly.

4. A Simple or a Complex Funding System?

A final basic choice that must guide policy-makers in sorting through the numerous options and sub-options contained in the report is the degree to which the subsidy system should be kept simple or should be tailored to reflect closely the actual situations of PHAs or to offset negative incentives that may be created by a streamlined system. The complexity for which the PFS is oftened criticized stems from an attempt to create a subsidy level that accurately reflects the costs of each individual PHA. In particular, the "Delta" adjustment, which requires re-estimation of a cost equation for each PHA each year, is an attempt to take into consideration real year-to-year changes in PHAs' operating circumstances. (See Chapter 4 for more discussion of "Delta"). Utilities reimbursements are another area of complexity. Spending for utilities is in large part directly passed through to the Federal Government in order to protect PHAs against two notoriously uncontrollable phenomena: energy prices and the weather. This creates both complicated bookkeeping and uncertainty in budget predictions. (See Chapter 6 for more discussion of utilities).

On the other hand, the lack of management incentives for which the current funding system is often criticized results from the "simple" nature of public funding. PHAs are reimbursed for the difference between allowable operating costs and rental revenue. Therefore, they have few incentives to increase the rent-generating potential of their projects, to seek higher income tenants, or to charge as much rent as possible to current tenants. But the creation of such incentives implies either adding to the complexity of the funding formula or making fundamental changes in the potential use of the public housing stock and the method for providing housing assistance to the poor. (See chapters 6, 9 and 11).

In general, the more complex the rules of a funding system, the more subject it is to manipulation to meet the diverse objectives of the various users of the system: the PHAs, HUD, OMB, the Congress. On the other hand, the price of simplicity is "unfairrness", in that unavoidable expenditures will not be funded in some cases and over-funding will occur in others. "Delta" and the utilities reimbursement system have already been cited as examples of areas in which this trade-off occurs. The inflation factor for estimating year to year changes in non-utilities operating expenses in another. The more localized the inflation factor the more it reflects real changes in costs for particular PHAs. On the other hand, separate inflation factors for each geographic area are more complex to calculate and administer than a single national factor.

BASIC TYPES OF SYSTEMS

The report includes five chapters (Chapters 4-9) that examine alternative funding sytems. Within each chapter there are often further options or components of systems that could be put together in different ways. In addition, Chapter 11 examines two additional systems which were put forward by the National Association of Housing and Redevelopment Officials and the President's Housing Commission while this report was in prepartion and which would tie the funding system to increased local control of public housing.

In this summary, rather than following closely the format of the report, we present four composite systems that represent basic alternatives. In particular, each system handles somewhat differently the problem of ensuring that the Federal Government is not subsidizing inefficent operations of public housing authorities. For other ways of putting together components of funding systems and for tables showing the cost implications of each system and its effect on funding levels for different types of PHAs, the reader is referred to the chapters of the report.

1. A Cost-Based System with Discretionary Reductions to AELs

This system takes as its starting point the current cost patterns in the Public Housing Program and, therefore, is called a cost-based system. However, the cost-equation which is the basis for allowable expenditures for operating costs other than utilities costs (the Allowable Expense Levels or AELs) is somewhat improved by the addition to the variables already in the equation of one of the allocation formulas used in the Community Development Block Grant Program ("Formula B"). This modification to the formula is used to make small adjustments to the AELs of some PHAs in order to compensate for the failure of the original PFS cost-equation to reflect the difficult operating conditions faced by some large, urban PHAs. At the same time, the "Delta" ajdustment to AELs to reflect changes in operating circumstances is simplified. Instead of an adjustment to its AEL based on a new application of the cost equation each year, each PHA has an additional 1/2 of 1 percent added to its AEL, reflecting only the effect on operating costs of continued aging of the housing projects. These two changes simplify the system and address the criticism that the PFS reduced funding levels for some types of PHAs more than others without sufficient justification.

The Federal Government would avoid paying for the extra costs caused by the inefficiency of some PHAs through case by case downward adjustments to AELs. These discretionary reductions to AELs would be based on detailed HUD review of the budgets of PHAs thought likely to be inefficient. Budget review might

be triggered by the cost formula itself, with PHAs with AELs farthest from the formula-predicted amount but still within the allowable range selected for review. A review might occur on the basis of area office recommendations or comparisons of costs with a private market proxy. PHAs required to adjust to lower AELs would draw up plans showing how they could change their operations to bring their costs to the lower level. On the basis of these plans, transition funding might be provided. (For more detail on "Formula B" adjustments, simplified "Delta" and discretionary AEL adjustments, see Chapter 4).

Other features of this revised cost-based system would include adjustments for errors in predicting inflation (see Chapter 5) and improved management incentives in the areas of rent charges, income certification and project-based cost accounting (see Chapter 6).

The change to reimbursing PHAs after the fact for differences between actual and predicted inflation would relieve some of the pressure on the inflation prediction process, which can be manipulated to provide higher or lower funding levels, given the uncertainty of the inflation-predicting art. However, retrospective changes to AELs (both as the basis for future AELs and as actual funding amounts) would add further to the complexity of the budgeting and administration of the system. The improved management incentives can, similarly, be faulted for adding to the problems of explaining, administering, and predicting funding needs for the subsidy system.

In contrast, the change to "Delta" simplifies the system at the cost of some inaccuracy. For example, since the average bedroom size of the PHA would no longer be part of the "Delta" adjustments, a PHA that added a large, family project could be penalized because its new operating conditions are not adequately considered in the cost formula.

Making downward adjustments to AELs depend on budget reviews would relieve the burden placed on a cost equation to be perfect when clearly it cannot be. The disadvantage to the approach is, however, that it is staff-intensive and, therefore, only a few PHAs could be reviewed in any one year.

The precise cost implications of this system are difficult to determine because of the very nature of discretionary reductions to AELs. They can be large or small and can apply to PHAs in one or another area of the country and with large or small numbers of units. However, one guesses that discretionary reductions would apply mainly to large and "extra-large" PHAs in the Northeast and Central regions since these PHAs have the highest costs. The discretionary adjustments would probably at least offset the very small increases brought about by the "Formula B" adjustments to AELs. (This would be the net, program-wide effect; not necessarily the effect for a particular PHA). The change in "Delta" would have no program-wide effect on costs. The effect on costs of adjusting for errors in predicting inflation would depend on the direction and size of the errors, but past experience suggests that it would be very small. Finally, the improved management incentives would have no short-term program-wide effect on costs. Over time, they could result in some savings, but the amount is difficult to predict.

2. A Cost-Based System with a New Range Test

In this system, the cost equation used as the basis for AELs would be improved more thoroughly and then relied on for a more stringent test of whether a PHA's current costs are excessive. The system would rely mainly on this new "range test" to identify costs that reflect inefficient operations and to prevent the Government from paying for them.

Under the curent operating subsidy system, the cost level permitted a PHA is not set at exactly the average cost per unit month produced for that PHA by the cost equation. Rather, when the PFS was begun in 1975 each PHA was permitted to have an AEL up to $10.31 above the Formula Expense Level (FEL) produced by the equation. PHAs with costs above the range test had their AEL established at their FEL plus $10.31. Those 1975 AELs, adjusted for inflation and the annual "Delta" amount, have been the non-utilities component of cost levels on which subsidies have been based ever since.

Extensive analysis during this study has enabled us to conclude that we can produce a better cost equation than the original PFS cost equation and that it can be done on the basis of readily assembled data. The new cost equation will pursue further the direction started by adding Formula B, as discussed above in the context of another cost-based funding approach. Additional variables reflecting factors affecting the operating costs of PHAs, such as PHA size, demographic characteristics of tenants, and type of structure, will be used. Once the cost equation has been improved, we will assess how stingent a new range test can be and still provide for the inevitable errors in the predictions of any conceivable cost equation. The original $10.31 range test was quite generous. Its intent was to exclude only 5 percent of all PHAs receiving operating subsidies. A range test that excludes 15 or 20 percent of all PHAs may be reasonable.

Under this system, HUD would still be permitted to reduce AELs on the basis of a budget review of particular PHAs, but this would not be the main vehicle for preventing reimbursements for costs that reflect inefficiency.

In other respects, this system would be the same as the cost-based system previously discussed. Simplication of "Delta", adjustments for errors in predicting inflation and extra management incentives would all be part of this system.

The new range test would more than offset any increases in funding that would otherwise occur as a result of an improved formula and would lead to a reduction in average subsidies. Analysis to produce the new cost equation and range test is under way now and rough estimates of the possible effect will be available soon.

It must be noted that, even with reductions in AELs resulting from a new range test, the Federal Government could still face the problem of how to allocate a total amount of operating subsidy below the amount needed to fund the operating subsidy system. There are limits to what is reasonable for a new, more stingent range test. It is presented here as an improvement to the current system in

eliminating over-funding. While it is compatible with budget stingency, beyond a certain point the overall requirements of the Federal budget (and the limitations on rent increases to tenants) 1/ could create a "short-fall" that would need to be allocated through some other means.

3. A Constrained Fair Market Rent System

This system bases payments to PHAs on a private rent index that represents the costs of supplying private market rental housing to the households now living in public housing. The payment to the PHA for each occupied public housing unit is the difference between the FMR for that size unit and (1) the ACC payment by the Federal Government for debt previously incurred for the capital costs of that unit and (2) tenant-paid rent based on rules for rent charges in the Public Housing and Modified Section 8 Existing programs. The payment is used by the PHA, along with rental income, to cover the costs of operating public housing and making on-going replacements and improvements necessary as the public housing stock continues to age.

The FMR system is "constrained" in that PHAs are limited in the degree to which they can gain in funding as a result of the change from the PFS to the new system. If a PHA's total resources (including rental income) would grow by more than 20 percent compared with total resources available under the PFS plus an additional amount representing funding needed for replacements and improvements, then the PHA's subsidy is limited to 120 percent of its former PFS subsidy. This "ceiling" subsidy would be adjusted each year to take account of changes in tenant paid rents and increases in FMRs. (This system is discussed in Chapter 8 of the report).

1/ See Chapter 2 for a discussion of raising tenant rents.

The constrained FMR system relies on a funding amount that represents the potential alternative use of Federal funds to prevent the Government from paying for public housing costs that represent inefficiency. In a sense, it is a hybrid system, since it relies on PFS determined cost levels at the time the new system is implemented to determine whether the full amount of subsidy based on the FMR should be paid. It assumes that PFS-based subsidy levels may have been too low for some PHAs, but if they were it was only by a modest amount.

FMRs represent the typical cost of private market rental housing. However, they can be set at different levels in the distribution of private market rents, depending on what policy-makers think is necessary to enable households to find actual housing units of acceptable quality and available for rent. This report examines the constrained FMR system and other funding systems based on FMRs at three FMR levels. The first is the FMRs used for the Section 8 Existing Program through 1981 and set at the 50th percentile (or median) rent in each housing market of units that have recently changed tenants and would pass the program's housing quality standards. The second is the 40th percentile rent of the same group of units and is the FMR level established by HUD for the Section 8 Existing Program in 1982. The third FMR level is the 40th percentile rent of all standard quality units except newly built units, regardless of how long the current tenant has occupied the unit. This FMR level will be used for the Modified Section 8 Existing Program proposed by the Administration for 1983. For the geographical areas in which public housing is located, 40th percentile "movers" rents are on average 11 percent below 50th percentile movers' rents. Fortieth percentile rents of all but newly built units are about 16 percent below the "old" FMRs.

As noted above, changing the basis of a funding system from current pubic housing cost patterns to a rent series external to public housing can result in sharp drops in subsidy for some PHAs. A FMR-based system, therefore, has potentially radical implications for the Public Housing Program in some localities. The degree of change, however, is very sensitive to which FMR

level is used. At 50th percentile movers' FMRs only a few PHAs would lose more than 10 percent of their total funding, including rental revenue and taking into account the fact that replacements must be paid for out of the FMR-based funding amount. At 40th percentile rents of all but new units, in contrast, many PHAs would lose between 10 and 30 percent of their total resources and some would lose more.

These differences are reflected in the national cost implications of the constrained FMR system at different FMR levels. At 50th percentile movers' rents, the constrained FMR system would cost about the same as the PFS, including a fairly modest assumption about the future cost of a separate modernization program. 1/ At 40th percentile rents for all but new units, the constrained FMR system would cost only two-thirds as much as the PFS plus modernization funding.

A system based on FMRs has different implications for PHAs in different parts of the country. Because of the relationship between private market rent levels and current public housing costs, PHAs losing funds under the constrained FMR system (or any other private rent-based system) would be concentrated in the Northeast. Some PHAs in the South and Central regions would also be adversely affected, while PHAs in the West would either gain or remain at approximately their PFS levels. (Without the "constraint" on FMR-based funding, many PHAs, especially those in the West, would gain substantial amounts of funds). The three different FMR Levels have some effect on the distribution of PHAs losing funds, as well as on the size of the average loss for each PHA. The 40th percentile movers' FMRs are relatively more disadvantageous to the Northeast than the 50th percentile movers' FMRs and the 40th

1/ Based on 1969-1981 levels of funding for modernization; funding levels in the current CIAP Program are higher, but are not intended to continue indefinitely since they are designed as a one-time "catch-up" to offset past neglect of modernization needs.

percentile rents for all but newly built units push the distribution of losses in funding even more toward the Northeast. In contrast to geographical location, the size of a PHA would have litle effect on whether it would lose substantial amounts of funding under the FMR-based system.

The nature of a transition to an FMR-based system would have a large effect in determining the outcome of the new subsidy system for the Public Housing Program. A sudden change to a system providing lower funding for some PHAs could cause the removal from the program of numerous projects or even entire PHAs. Given a transition period with a phase-down in funding levels, some of these projects and PHAs could succeed in providing housing at a cost to the Government no higher than a program based on private rental housing. Modernization funding, to enable some projects to take care of deferred replacement needs and prepare for a system that would ultimately fund only future replacements, would be a logical part of a transition. Such a strategy of "catch-up" modernization is already reflected in funding levels for the CIAP Program in the 1981-1983 period. Faced with a transition to a system providing substantially lower total funds for some PHAs, those PHAs would presumably concentrate their transition modernization efforts on "savable" projects while planning for the removal from the program of projects with inherently high costs. The advantages of a generous transition to a FMR system would have to be balanced against its dollar costs and the inevitable complexities of hold-harmless provisions.

Another approach to making the introduction of a FMR-based funding system less radical in its implications for particular PHAs would be to continue funding modernization as an entirely separate program. PHAs would then use their FMR-based subsidies to cover operating costs only. A constrained FMR system covering operating costs only would cost about 7 percent more than the current PFS at 40th percentile movers' FMRs and 20 percent less than the PFS at 40th percentile rents of all but new units. This approach would be less radical than a FMR system covering both operating costs and replacement needs, because a discretionary modernization program could be used in effect as a system of appeals to subsidies based on FMRs.

The Federal Government would have greater ability to sustain the operations of particular PHAs, if, for example it was felt that the comparison between PHA costs and private rents did not adequately reflect the relative advantages of using public housing or the private stock in a locality. To some extent the modernization program has served as an indirect appeals system for the PFS, as modernization funds have been directed toward PHAs perceived to have needs not fully accounted for by the PFS cost equation. (Modernization funding is examined in Chapter 7. Tables illustrating a constrained FMR system that covers operating costs only are presented at the end of Chapter 8. Chapter 11 examines a version of such a system that uses the lower of the PFS-based subsidy or the FMR-based subsidy for each PHA - the President's Housing Commission proposal).

4. Housing Vouchers for Public Housing Tenants

This system makes no subsidy payment directly to PHAs, but, rather, provides Modified Section 8 Existing certificates or vouchers to tenants currently living in public housing projects. Each tenant household can use its subsidy either to remain in public housing or to move to a private market unit. The PHA, for its part, can charge rents in the same way as a private landlord, varying rents by project and unit characteristics, with only the restriction that rent schedules cannot discriminate against subsidized tenants. From the rental revenue collected, the PHA must pay operating costs, provide for capital improvements, and reimburse the Federal Government for debt service payments for the past development and modernization costs of the project. (This system is described and examined in Chapter 9).

The voucher system for public housing system prevents the Federal Government from paying for the inefficient operations of PHAs by creating direct competition between public and private housing. If a subsidized family can find a cheaper unit of equal value or a better unit at the same rent, it will eventually move out of public housing. Similarly, unsubsidized households will not move into public housing unless it is a "good deal" compared with private rental units.

The implications of tenant-based housing vouchers as a public housing funding system are more radical than the implications of an FMR-based system in which the subsidy is paid to the PHA. In the first place, the same PHAs would lose the same amounts of funding as under an FMR system, even assuming the PHA could "capture" the full amount of the subsidies paid to tenants (in other words, use the FMR schedules to set rents). However, because of the need to compete with private housing, the PHA may have to set lower rents than the FMR schedules. Even if the FMRs would be sufficient to cover costs, the rents that can actually be charged may not cover costs and the units may be removed fom the housing stock. The opposite sort of case may also occur. PHAs with very good projects may be able to cover costs by charging rents above the FMRs. In such cases, subsidized households may have very high rents as a proportion of income or may move elsewhere as the income targeting of the former public housing projects changes.

The heart of the voucher system is the integration of public housing into the general stock of rental housing. A change in the fundamental nature of the program is presumed; some projects will disappear entirely and others will be occupied predominately by unsubsidized tenants. Low income tenants will use their subsidies to rent units whenever they find them in the market.

While this system implies yet more radical change than the constrained FMR system, it does not cost less. The voucher system creates competition between public and private housing only if the voucher can really be used to rent private housing. Therefore, the amount of the voucher subsidy cannot be constained or limited by reference to the PHA's former PFS subsidy. The result is that the voucher system costs 35 percent more than the constrained FMR system at 50th percentile movers' FMRs, 26 percent move at 40th percentile movers' FMRs and 22 percent move at the 40th percentile rents of all but new units. (The difference in cost between a constained FMR system and a voucher system is smaller at a lower FMR level, since at a lower FMR level fewer PHAs would have FMR-based subsidies more than 20 percent above PFS levels. Thus the "constraint" is less effective at lower FMR levels.)

Another difference between the FMR and vouchers systems for funding public housing is that different FMR levels affect the degree of change implied by the introduction of the system in different ways. Under a FMR system a lower FMR schedule means bigger losses in funds for some PHAs and, therefore, more need to dispose of costly projects. Under the voucher system, PHAs can charge the market rent (or rent related to their units' comparative value) regardless of the FMR level. But the higher the FMR, the greater the opportunities for current tenants provided with vouchers to move elsewhere. Thus, higher FMRs may produce greater and more sudden change than lower FMRs under the voucher system.

A separate long-term Federal modernization program is incompatible with the voucher system for funding public housing, since public housing units will be occupied by households at various income levels. However, the use of locally controlled housing rehabilitation funds to keep former public housing projects in the stock of affordable, standard-quality rental housing would not be incompatible with a voucher system. In fact, it would make little sense for public housing projects that had been integrated into the general housing stock not to be eligible for such programs.

The transition issues for the voucher system are similar to the transition issues for the FMR system. The possibility of maintaining a larger amount of the current public housing stock in service at modest additional cost must be balanced against immediate needs for budget stingency and the complexity of transition provisions.

EXPLANATION OF TABLE SHOWING IMPLICATIONS OF ALTERNATIVE FUNDING SYSTEMS COMPARED WITH PFS

- The cost levels shown in the table for all systems, including the current PFS, are considerably different from the Administration's 1983 budget proposals because of assumptions made for analytical purposes. However, the assumptions are consistent across all of the comparison cases and thus the estimates of gains and losses under the various systems should be accurate.

- Costs are expressed in 1980 dollars.

- Cost-based funding systems, including the PFS comparison case, use 1980 AELs and actual utilities reimbursements for 1980, but with AELs adjusted as though the new inflation factor (60 percent wages, 40 percent non-wage costs) had been in effect in 1980.

- All systems assume tenants pay 30 percent of adjusted income for rent, as though the changes made possible by 1981 law had been fully phased in as of 1980. An adjustment to 1980 incomes has been made to reflect move-outs of some higher income tenants in response to higher rents.

- FMR-based systems use actual 1980 FMRs for 50th percentile mover's rents. For the other two FMR levels, percent reductions are made to reflect differences from 50th percentile movers' rents in each area. The other FMR levels are the reduced levels proposed for FY 1982 and FY 1983.

- The cost of on-going modernization is based on the historical modernization program, 1969-1981 (i.e., pre-CIAP). For systems that include on-going modernization as part of operating subsidy, $133 million is used as the estimate of major replacements (roofs and heating plants) that would be funded separately.

- Systems that include on-going modernization as part of operating subsidies are compared with the PFS plus an estimate of on-going replacement funding need (15 percent of AEL per unit month). This is the difference between "PFS only" and "PFS + replacements."

- Gains and losses in funding are expressed as percent changes in total funds available (including rental revenue), not as changes in subsidy amounts.

- Size categories of PHAs are:

extra large	6,500 or more units
large	1,250 to 6,499 units
medium	500 to 1,249 units
small	100 to 499 units

PHAs with less than 100 units are not shown

- The NAHRO proposal analyzed is the October 1981 version; the President's Housing Commission proposal is the version of an ultimate operating subsidy limitation proposed by the Commission in February 1982. We have analyzed the limitation as though it were applied on a PHA by PHA basis.

Implications of Alternative Funding Systems Compared with PFS

1980 Current PFS	Revised Cost-Based Funding (no AEL reduction assumed)	Cost-based Funding with Replacement Allowance	Constrained FMR System, 50th percentile movers' rents	Constrained FMR System, 40th percentile movers' rents	Constrained FMR System, 40th percentile all but new units' rents	Vouchers, 50th percentile movers' rents (moveouts not counted)	Vouchers, 40th percentile movers' rents (moveouts not counted)	Vouchers, 40th percentile all but new units' rents (moveouts not counted)
$ 712 million operating subsidies	$ 754 million	$ 875 million	$ 887 million	$766 million	$571 million	$1,246 million	$1,002 million	$724 million
$ 375 million modernization	+ 375 million	+ 133 million	+ 133 million	+ 133 million	+ 133 million	+ 133 million	+ 133 million	+ 133 million
$1,087 million total	$1,129 million	$1,008 million	$1,020 million	$898 million	$704 million	$1379 million	$1,135 million	$857 million

Allocations are compared with:	PFS only	PFS + replacements	PFS + replacements	PFS + replacements	PFS + replacements	PFS + replacements	PFS + replacements	PFS + replacements
Extra-large								
Northeast	0	0	+	–	– –	+	–	– –
South	0	0	+	0	0	+ + +	+ + +	+ + +
Central	+	0	+	0	–	+ + +	+ +	0
West	0	0	0	0	–	+ + +	+ + +	+ +
Large								
Northeast	+	0	–	– –	– –	+	–	– –
South	0	0	–	–	– –	+ + +	+ +	+
Central	0	0	0	0	–	+ + +	+ +	+
West	0	0	0	0	–	+ + +	+ + +	+ + +
Medium								
Northeast	0	0	–	–	– –	+	–	– –
South	0	0	0	0	–	+ +	0	– –
Central	0	0	0	0	–	+ + +	+ +	0
West	0	0	0	0	0	+ + +	+ + +	+ + +
Small								
Northeast	0	0	–	– –	–	– –	– – –	– – –
South	0	0	0	0	0	+ + +	+ + +	+ +
Central	0	0	0	–	–	+ + +	+ +	0
West	0	0	+ +	+ +	+ +	+ + +	+ + +	+ + +

Key: % change in funds available to PHAs (including rental revenue)

– – – loss of 25% or more
– – loss of 10–25%
– loss of 3–10%
0 loss of 3% to gain of 3%
+ gain of 3 to 10%
+ + gain of 10 to 25%
+ + + gain of more than 25%

Implications of Alternative Funding Systems Compared with PFS

Allocations are compared with:	1980 Current PFS $ 712 million operating subsidies $ 375 million modernization $1,087 million total	NAHRO proposal at current PFS level (rent increases not counted) $ 712 million + 375 million $1,087 million	President's Housing Commission, 50th percentile movers' rents $ 677 million + 375 million $1,052 million	President's Housing Commission, 40th percentile movers' rents $ 643 million + 375 million $1,018 million	President's Housing Commission, 40th percentile all but new units' rents $521 million + 375 million $896 million
		PFS only	PFS only	PFS only	PFS only
Extra-large					
Northeast		– –	0	0	– –
South		+ +	0	0	0
Central		+	0	0	–
West		+ + +	0	0	0
Large					
Northeast		– –	–	–	– –
South		+ +	0	–	–
Central		+ +	0	0	–
West		+ + +	0	0	0
Medium					
Northeast		–	–	–	– –
South		+ + +	0	0	0
Central		+	0	0	0
West		+ + +	0	0	0
Small					
Northeast		– –	–	–	– –
South		+ + +	0	–	–
Central		+ +	0	0	0
West		+ + +	0	0	0

Key: % change in funds available to PHAs (including rental revenue)

– – – loss of 25% or more
– – loss of 10–25%
– loss of 3–10%
0 loss of 3% to gain of 3%
+ gain of 3 to 10%
+ + gain of 10 to 25%
+ + + gain of more than 25%

CHAPTER I

PUBLIC HOUSING AND PUBLIC HOUSING FUNDING SYSTEMS

1.0 THE PUBLIC HOUSING PROGRAM

The Public Housing Program has undergone a great deal of change from its origins during the New Deal to today's nationwide program, which houses over 2,700,000 people in over a million units. The program was established by the Housing Act of 1937 (also known as the Wagner-Housing Act), the basic law that still provides the design of the program. The 1937 Act responded to the political pressure of the time to create new jobs through construction work. This meant that public housing was supported by many among the fifteen million Americans who were unemployed in the mid-1930s. This group was especially influential because it was largely made up of articulate middle class citizens, deprived of work by economic conditions, rather than the permanently poor.

The Low Rent Public Housing Program established in 1937 was actually the nation's second housing program. The Public Works Administration ran a housing program beginning in 1933, but the program was declared unconstitutional in Federal district court in 1935. The court held that the Federal Government had no power under the Constitution to clear land and build housing. Because a successful appeal seemed unlikely at the time, the Government never appealed. Instead, a decentralized program under the control of local Public Housing Authorities (PHAs) was created. Such a program presented no constitutional problems since it relied on the residual power retained by State and local Governments.

The Housing Act of 1937 specified that Public Housing would be financed through bonds issued by PHAs but paid for through annual contributions by the Federal Government to the PHA in amounts equal to the interest and principal due on the bonds. Bonds were issued for a forty year period to

pay for project development, enabling the Government to pay for the development costs over a long period of time with a modest impact in immediate budget outlays.

As originally designed, the Federal contribution to the program was limited to the capital expense. Operating expenses were to be paid out of current rents. This rent requirement meant that tenants with no or extremely small incomes were effectively excluded from the program. As Senator Wagner stated, "There are some people who we cannot possibly reach; I mean those who have no means to pay the rent" (Congressional Record, 1937). The families in the projects were typically poor workers with some source of income, families left with low incomes by the Depression or, after the war, returning servicemen just starting to build a career. In the first decades of the program, public housing was perceived by both the PHAs and project occupants as a subsidy to the temporarily poor middle class rather than as a welfare payment, and the distinction was maintained until social changes of the 1950s and 1960s caused major alterations in the character of project occupants. In the immediate post-war period, a suburban housing boom plus the ready availability of Government insured VA and FHA mortgages drew many of the upwardly mobile public housing occupants into the private housing market. At the same time, Public Housing development, which had been suspended during the war years, resumed.

Also during the 1950s, public housing rents were reduced and maximum income limits for admission and continued occupancy in public housing were tightened. Thus middle income families were prohibited from becoming public housing tenants, while the location of many projects built during that period made it likely that they would be occupied by the poor. Many projects reached a socio-economic "tipping point," changing in character from primarily working class to welfare-dependent tenants. These changes are explored in further detail in Chapter 2.

The people left behind in the projects after the demographic shifts of the post-war era were largely the permanently poor. Many of the inhabitants

were the "new immigrants", Blacks from the South who moved into Northern cities but who were unable to leave their poverty behind in their former hometowns. Today, the Public Housing Program has the image of serving primarily AFDC mothers and their families as part of a cycle of permanent welfare dependency, and this image has reduced public support for the program. Although there are many exceptions that caution us not to regard the image as universally accurate, public housing families do in fact disproportionately fall into this category. According to a recent survey of public housing, most households in the program are families headed by someone under 62 (63 percent), female headed (74 percent), minority (62 percent) and receiving welfare (51 percent) (see table 1-1). In addition, 37 percent of the households in the program are elderly - largely single women living in projects especially for the elderly.

The Public Housing Authorities (PHAs) which administer the program in the largest cities have the most units. New York has by far the largest program in the Nation with 147,000 units, and there are ten other cities with over 10,000 units. The largest 30 cities (those with populations of over 400,000) contain 374,000 public housing units or 36 percent of the national program. There are 2,800 PHAs in all, but most of the authorities are small in size. The twenty-two PHAs with over 6,500 units contain 38 percent of the stock, and 112 large PHAs with between 1,250 and 6,499 units have another 26 percent of the total. Thus, 134 "large" and "extra-large" PHAs comprise almost two-thirds of the Public Housing inventory.

The public housing projects largely consist of multifamily garden apartments (32 percent), low-rise walkups (16 percent) or highrise buildings (27 percent). Only 25 percent of the projects consist of single-family detached or townhouse units, although a higher percentage of newly built projects consist of these low density types of development. Because low density developments tend to have small numbers of units, much less than 25 percent of all public housing units are in these projects. Almost two-thirds of public housing projects are in urban locations, while 23 percent are suburban and 13 percent are rural. About 30 percent of public housing projects are in neighborhoods which have a majority of minority residents. (HUD, 1979, pp. 54-56.).

Table 1-1

HOUSEHOLD CHARACTERISTICS IN PUBLIC HOUSING

AVERAGE CHARACTERISTIC	FAMILY	ELDERLY	ALL HOUSEHOLDS
Household Age Type	63%	37%	100%
Age of Head	39	74	52
Male Head	24%	27%	26%
Spouse Present	22%	15%	19%
Average Number of Persons	3.4	1.3	2.6
Average Number of Children	1.9	0.1	1.19
Minority %	75%	39%	62%
Black %	59%	32%	49%
Hispanic %	15%	5%	11%
Family Income (1979)	$5,716	$3,882	$5,033
Receiving Welfare %	59%	38%	51%

SAMPLE: 10,465 Public Housing recipients in 1979 from 133 PHAs
DATA SOURCE: Loux and Sadacca, 1980

Although the Public Housing Program has the image of containing a high proportion of problem-laden projects, a recent program survey estimated that only 7 percent of Public Housing projects are "troubled". Because these projects tend to be larger than the norm, about 15 percent of all public housing units are included in these projects. Although 15 percent of the stock is a relatively small percentage, it still represents a disturbingly large total of 150,000 units. The persistence of problem projects despite a great deal of effort on the part of both the PHAs and the Federal Government is also cause for concern and has provided much of the impetus behind criticism of the Public Housing Program. About 55 percent of the units are untroubled, while the remaining 30 percent are rated "relatively untroubled". The study rated projects as troubled most frequently because of physical problems such as poor design, inadequate heating and plumbing and maintenance problems. Social problems such as vandalism and crime and problems with disruptive tenants were also frequently cited as reasons for rating a project "troubled." Troubled projects disproportionately consist of urban, large scale, old, family projects. However, it is important to note that the large majority of public housing projects are not troubled and even the majority of projects which are urban, large, old, and occupied by families are not troubled (HUD, 1979, pp.2-9).

1.1 PUBLIC HOUSING OPERATING COSTS

Public Housing expenditures can be divided into capital costs, which are supported by the Federal Government through guarantees to make Annual Contributions Contract payments to cover debt service for initial captial costs and costs of modernization; and operating costs, which include maintenance, utilities and management costs. Total operating expenditures are normally described in terms of dollars per unit month (p.u.m.). Operating expenses can be broken down into three major areas: 37 percent utilities, 29 percent general and administrative expenses, and 27 percent maintenance. PHAs also pay 5 percent of their budgets for non-routine and capital expenses, 1.3 percent for tenant services and 0.3 percent for protective

services. However, protective services are a more significant component of the budgets of extra large PHAs, which spend an average of 2.6 percent of their budgets on this item (Mansfield, et al. 1980, pp. 1-46).

In 1980, the average total operating expenses were $157 p.u.m. These expenditures differ considerably for different types of PHAs. Extra large PHAs, for example, spent an average of $203 p.u.m. in 1980, while small PHAs spent $109 p.u.m. 1/ (see table 1-2).

Public Housing operating costs have grown rapidly since 1969, when the first program-wide subsidization of Public Housing operating costs began. In that year, operating expenses averaged $50 p.u.m., including utilities, with expenses ranging from an average of $37 p.u.m. for small PHAs to $58 p.u.m. for extra large PHAs. Thus, average costs have grown by 217 percent between 1969 and 1980. Much of the increase has been due to utilities costs. Exclusive of utilities, PHA expenditures grew 155.9 percent on average. This is only slightly greater than the 148.3 percent increase in the home maintenance and repairs component of the C.P.I. In the same years, average rents grew from $47.29 to $83.43, a growth of only 76%.

Funding PHA Operating Expenditures

Prior to the 1970s, PHAs generally were able to pay for operating expenditures out of rental income and many PHAs were also able to make payments toward their capital costs. The Federal Government had only a limited "special family subsidy", which was paid on behalf of elderly, displaced and very low income or large families. In calendar 1969, operating subsidies averaged only $2.07 p.u.m. Dwelling rent in 1969 averaged $47.28 p.u.m., a deficit of 5 percent below average operating costs of $49.55 p.u.m. in that year. Small PHAs ran an average surplus of 14 percent, while large PHAs ran a deficit of 13 percent.

1/ Extra large PHAs have over 6,500 units, while small PHAs have between 100 and 499 units.

Table 1-2

GROWTH IN PUBLIC HOUSING OPERATING COSTS
Total Operating Expenditures P.U.M. 1969 and 1980

PHA Type	1969	Actual 1980	Percent Growth
Extra-Large PHAs (6,500 + units)	$58.11	$203.34	249.9%
Large PHAs (1,250 -6,499 units)	$49.20	$141.10	186.8%
Medium PHAs (500-1,249 units)	$43.18	$125.70	191.1%
Small PHAs (100-499 units)	$37.27	$109.24	193.1%
All PHAs	$49.55	$157.22	217.3%

SAMPLE: 237 PHAs in 1969, 314 PHAs in 1980

DATA SOURCES: Mansfield, et al., 1980 and PHA analysis sample.

Dramatic changes in the funding source for operating expenditures occurred in 1969, 1970 and 1971, when the Brooke Amendments were passed. Named for Senator Edward Brooke of Massachusetts, the legislation prohibited PHAs from charging more than 25 percent of tenant's adjusted income for rent. Given the combined effect of a substantial decrease in real tenant incomes in the 1950s and 1960s and the decrease in rent payments after the Brooke Amendments were implemented, public housing income from rents declined greatly. Since many PHAs would be unable to pay operating expenses from rent if they were limited in the rent they could charge, the Brooke Amendments authorized a general program of Federal subsidies to pay for the deficits. HUD calculated the subsidy amount by simply making up the shortfall between receipts and expenditures in the first year of implementation of the Brooke Amendment and subsequently adjusted the subsidy by a nationwide inflation factor, applying the subsidy to individual PHAs after budget review by HUD Area Offices.

By the mid-1970s, the amounts of the subsidy had grown considerably. In 1975, the subsidy ranged up to an average of $41.35 p.u.m. for extra-large PHAs. Because of the growth in the subsidy amounts and because of concern that the subsidy system gave no incentive to PHAs for efficient management, both the Office of Management and Budget and the Congress required HUD to establish a new funding system. The new system was developed by HUD on the basis of research at the Urban Institute and was put into effect in 1975. The system was named the Performance Funding System or PFS and, with some exceptions, basically is a system which applies an annual inflation factor to the historical costs of operating public housing at individual PHAs.

By 1980, the operating subsidy had grown to a nationwide average of $73.80 p.u.m., or 47 percent of operating costs. The subsidy levels under the PFS are, when fully funded, a calculation of the difference between the estimated operating costs of a PHA and the projected income from rents and other sources. The subsidy levels have been increasing very rapidly because

operating costs have been growing along with the rapid general inflation while the income from rent has grown more slowly than inflation. According to a recent survey of Public Housing occupants, tenant income has been growing at a low 5.5 percent yearly (Loux and Sadacca, 1980, p.14).

The PFS average subsidy in 1980 ranged from $30.47 p.u.m. in small PHAs up to $111.80 p.u.m. in extra-large PHAs and from 28 percent to 55 percent of operating expenditures in small and extra-large PHAs, respectively. The subsidy averaged $73.80, or 47% of operating costs for all PHAs. Large PHAs are more dependent on subsidy than smaller PHAs because they have higher operating costs but do not have higher tenant incomes.

Average operating subsidy will decline (in real dollars) over the next few years as the result of a major change in the percent of tenant income paid for rent enacted in the Omnibus Budget Reconciliation Act of 1981. Instead of 25 percent of adjusted income serving as an upper limit on rents the PHA can charge, the PHAs will be required to charge 30 percent of incomes. Also, new HUD regulations require PHAs to use Federally-determined adjustments to income instead of the, often more generous, PHA determined adjustments. The effects of these changes will be discussed in detail in Chapter 2 below.

Public Housing Capital Costs

Expenditures for developing and modernizing units in the Public Housing Program are paid for through Annual Contributions Contracts (ACCs) signed by the PHA and the Federal Government. These contracts obligate the Federal Government to make debt service annual contributions on behalf of the PHA and pledge the faith of the United States to this obligation. The debt service annual contributions amortize the amounts borrowed by the PHAs to finance the development or modernization. The high security of the bonds and notes issued, in addition to their tax exempt status, serves to reduce

the interest rates. ACCs are signed for thirty-year periods (previously forty-years) for development costs and for twenty years for replacements and improvements under the modernization program and its new replacement, the Comprehensive Improvement Assistance Program (CIAP).

The iron-clad nature of the ACC obligation has tended to limit debate regarding these payments, but it is important to understand that annual outlays for debt service ACC payments are actually larger than operating subsidies. For the PHAs we are evaluating, debt service annual contributions payments in 1981 are estimated at $990 million (see table 1-3). Debt service payments average $89.11 per unit month and range from an average of $100.60 p.u.m. for medium sized PHAs (500 to 1,249 units) an average of $74.80 p.u.m. for extra-large PHAs. Debt service payments are a reverse of the relationship found in operating subsidy payments, where the largest PHAs obtain the largest subsidies per unit. Eighty percent of the payments in 1980 went for the amortization of development cost, with the remaining 20 percent paying for modernization contracts.

1.2 THE PERFORMANCE FUNDING SYSTEM

The PFS was established in 1975 as a means of determining required subsidy levels for PHA operations. Capital costs are not included in this system, but are separately funded by issuance of PHA obligations which are paid by HUD debt service annual contributions on behalf of PHAs for development and modernization (rehabilitation or capital improvement) costs. The PFS is actually the fourth of a series of subsidy allocation systems for Public Housing. In the early 1960s, HUD paid "special family subsidies" at modest levels for elderly, poor, large, or displaced families. Until 1972, HUD reviewed the budget of each PHA requesting operating subsidies. This was criticized as leading to inequitable treatment of different PHAs and for allowing rapid increases in costs. While HUD was developing the PFS from 1972 to 1975, the Interim Funding System was used to allocate subsidies and to constrain the growth of PHA operating expenditures.

Table 1-3

PAYMENTS FOR PUBLIC HOUSING CAPITAL FINANCING

Annual Contributions Contract Payments in 1981

PHA TYPE	PAYMENT P.U.M.	TOTAL PAYMENTS (millions)
Extra-large	74.80	359.4
Northeast	80.17	217.7
South	77.67	35.2
Central	76.40	93.6
West	70.24	12.9
Large	91.23	286.1
Northeast	89.89	95.5
South	77.35	60.8
Central	104.36	94.5
West	94.19	35.2
Medium	100.60	125.3
Northeast	104.52	50.3
South	102.74	25.6
Central	99.36	42.6
West	84.72	6.8
Small	99.51	219.2
Northeast	133.37	80.6
South	80.33	54.6
Central	91.70	63.7
West	94.17	20.3
Total	89.11	990.0

SAMPLE: PFS Cross Section Analysis Sample, N=314

SOURCE: HUD Office of Finance and Accounting, Annual Contributions System Ledger.

NOTE: Estimates do not include 1004 PHAs under 100 units or PHAs outside PFS subsidy system (e.g., Puerto Rico)

The calculated subsidy amount under PFS is simply the difference between the estimate of operating costs minus an estimate of income from rents and any other sources. The estimate of operating costs in turn is based on the "allowable expense level" (AEL) in the previous year plus an allowance for inflation, a small adjustment for changes in operating conditions, and an estimate of the cost of a fixed level of utilities. Ultimately, AELs depend on spending in the "base year," generally 1975, and that spending level in turn depended on previous levels of spending and on decisions made under the Interim Funding System. Utility expenses are estimated separately under rules that set consumption at the fixed level which occurred during an established three year period. HUD reimburses PHAs for increased costs associated with changes in utility rates and shares in cost increases and savings due to changes in consumption.

Performance of PHAs

The Performance Funding System has as a major premise the idea that the costs of operating housing vary a good deal according to the characteristics of the housing. It is inevitably more costly to provide the same level of housing services in high-cost areas, in certain types of structures such as high-rise elevator buildings rather than garden apartments, and to large families rather than elderly individuals or couples. Setting a reasonable level for operating costs must take these and other variables into account. In the private housing market, these costs vary considerably just as they do for PHAs. For example, according to data from the Institute of Real Estate Management (IREM), average montly operating costs of elevator buildings range from $110 in the Northeast region to $81 in the West Coast, while in the Northeast, low-rise buildings can be operated for an average of $73 per month (IREM, 1980). 1/ Because of these and similar variations, a public housing subsidy formula must allow for substantial differences in operating costs, but it is difficult to accurately provide for variation in costs and set equitable subsidies.

1/ Operating costs are calculated exclusive of real estate taxes. These data are discussed in detail in Chapter 10.

When the PFS was implemented, it was decided to make the determination of cost reasonableness at any given PHA by comparing the PHA's costs with the operating costs at PHAs with similar characteristics that were believed to be performing well. Performance levels were estimated on the basis of questionnaires administered to HUD Area Office staffs and PHA personnel and tenants in a sample of PHAs. In addition, operating information such as vacancy rates, rent delinquency rates and vandalism costs were evaluated. The survey of PHAs taken in 1973 asked residents about their satisfaction with the project and its safety, cleanliness, maintenance and management. Managers were asked to evaluate the condition of dwelling units, resident treatment of units, and the extent of deferred maintenance. PHA personnel were asked about their job satisfaction and their evaluation of other employees and how well the PHA was meeting its objectives. The operating information was put together with data from the questionnaire to summarize PHA performance (Sadacca, et al., 1974).

The assumption behind gathering this performance data was that HUD should pay the necessary operating subsidies for efficiently run PHAs, but that it should not pay for inefficiency. The sample PHAs were divided using the data into high-performing and low-performing groups and operating expenses of these groups were evaluated. Allowable expense levels were limited to a level within a statistical range of the expenses of high performers. When originally evaluated in 1974, operating expenses of high performers were lower than operating expenses of low performers, thus supporting the idea that high-performing PHAs are more efficient. However, when the procedure was repeated in 1978, the estimated costs of the high and low performers were not statistically different, partly because PFS had meanwhile constrained the expenses of more costly PHAs. Also, the second measurement showed instability in the assignment process: many of the high and low performers in 1973 shifted to the opposite group in 1978 to a degree that suggested unreliable measurement of performance or large shifts in performance or both. (Merrill, et al., 1980, pp.10-11).

It should be noted that, despite its name, the Performance Funding System neither prescribes nor measures PHA performance. Even when the system was set up in 1975, the high performing PHAs were evaluated primarily according to judgements expressed in interviews and not in relation to objectively measured performance standards.

Summary of PFS

The estimated operating subsidy under PFS is total allowed expenses minus total predicted income from rents and any other sources. The formula can be expressed as follows:

Subsidy = Total Allowed Expenses - Total Predicted Income

Total Allowed Expenses consist of the Allowable Expense Level (AEL) plus Utilities Expenses plus Audit Costs. The AEL is a predicted amount, updated from year to year using an adjustment for changes in operating conditions (the "delta") and an inflation factor. Utilities expenses are treated as a partial "pass through" of actual incurred expenses while audit costs are entirely passed through to HUD. Predicted income consists primarily of rents, but also includes income from interest-bearing accounts and other sources. Subsidies are expressed in terms of an amount per unit month. The subsidy to a PHA is simply the p.u.m. subsidy amount multiplied by the expected number of unit months available.

Allowable Expense Levels, The Prototype Equation and Formula Expense Levels

When the PFS was implemented a "prototype equation" was developed to relate operating expenses (not including utilities and audits) to PHA operating characteristics. The estimate of operating expenses is called the Formula Expense Level. The prototype equation is updated yearly on the basis of currently available data.

The prototype equation is not used to directly determine the PHA's allowable costs, but was used to determine the original test for whether a PHA's "base-year" expenditures were too high. The prototype equation is also used for the yearly "delta" adjustment.

When the PFS was implemented, most PHAs had their operating costs established at the rate spent in the "base year," generally fiscal 1975. However, some authorities were found to have operating expenditures well above the level predicted by the prototype equation. PHAs with costs which were "out of range" were authorities with costs more than $10.31 p.u.m. above the predicted Formula Expense Level. These authorities had their allowable operating costs frozen at their then current dollar amounts until inflation and other adjustments brought their costs within range of the level predicted by the equation. The range test has never been recalculated, so the original range test of 1975 still serves to constrain costs.

The second use of the prototype equation is to establish a "delta" adjustment for each year. The delta is intended to compensate PHAs for changes in their operating conditions which would be expected to change their costs. However, very few new housing projects are now being added to the program, so the variables change slowly if at all. On average, the delta accounts for only about 0.5 percent of total PHA operating expenses.

The Inflation Factor.

The Formula Expense Level of the PHA was adjusted for inflation until 1981 using an annual survey of local government wages conducted by the U.S. Bureau of Labor Statistics. This adjustment came under criticism because only about 60 percent of PHA operating expenses other than utilities go to wages, and the adjustment was underpredicting the inflation of non-wage expenses. Starting in fiscal 1982, 60 percent of the inflation adjustment

will be based on the state and local wage index and 40 percent on a figure derived from the Implicit Price Deflator of State and Local Government Purchases of Goods and Services. The inflation adjustment will also retrospectively correct allowable expense levels of PHAs.

Utilities.

Because utility consumption is influenced by weather conditions and is only partly under the control of the PHA, HUD does not treat utilities under the prototype formula, but compensates the PHA for average consumption levels as compared with previous years and allows the PHA to pass through utility rate increases. Any overconsumption or underconsumption of utilities is shared 50/50 between the PHA and HUD. This gives the PHA a significant incentive to save utility consumption.

Income, Occupancy and Calculating the Subsidy.

The Allowable Expense Level for a PHA is expressed in terms of an average expenditure per unit month. In order to calculate the subsidy amount under PFS, the PHA must calculate unit months available and an estimate of rental income that will be collected. To estimate the change in rental income from year to year, the PHA is required to project a three percent increase in rental incomes from the end of one year to the average for the next year (in effect, a 6 percent annual increase), and that at least 97 percent of the units will be occupied by rent-paying tenants. The PHA may keep any additional money from higher income growth or high occupancy rates for the year in which the money is obtained. After calculating the total AEL for a PHA, adding utilities reimbursements and subtracting estimated rents, the remainder is the calculated subsidy amount.

In 1981, PHAs did not obtain the full subsidy calculated. In line with funding reductions spread across numerous Federal programs, public housing operation subsidies were limited to 96.5 percent of the full subsidy including utilities reimbursements.

In 1982, funds budgeted for operating subsidies have been reduced from the amount derived on the basis used in the past to estimate needed amounts. The lower amount reflects several types of anticipated savings, including:

- o increases in rental revenue resulting from 1981 legistative changes;
- o declining inflation;
- o reduced energy consumption resulting from capital improvements and conservation measures paralleling those taken by private landlords; and
- o reduced regulatory burden.

1.3 STRENGTHS AND WEAKNESSES OF PFS

When PFS was implemented in 1975, the system was intended to be refined in future years. There are several opportunities for improvement in the system which are now apparent. A major effort to evaluate the system was completed in 1980 (Merrill, et. al, 1980), and, taking the findings of this evaluation together with complaints from PHAs and from government decision makers, there is a substantial list of perceived shortcomings in the system. However, some of the limitations in PFS reflect budget limitations rather than flaws which are inherent in the system itself.

Strengths of PFS

Compared with the systems which preceeded it, PFS constitutes a reasonable improvement. As compared with the budget review system which was used up to 1972, the PFS imposes increased equity in treatment of different PHAs and probably constrains costs more than a budget review system would even though the negotiated budget system included standards of subsidy eligibility. The budget review system allowed a good deal of discretion in individual field offices, while PFS strictly constrains any possibility that area offices could deal with PHAs in an inequitable manner. Because PFS is based on historical PHA costs, the system was implemented with minor disruption of PHA operations. Finally, the PFS contains a well-developed and accurate means of estimating program-wide subsidy needs for budgeting purposes. The accuracy of this budgeting system has been compromised somewhat by the volatility of utilities costs in recent years.

Weaknesses of PFS

Some of the criticisms of the level of funding under PFS reflect problems of funding public programs in an inflationary period which are common to the entire Federal budget. Others are criticisms of the PFS itself. Many of these criticisms are contained in or supported by the 1980 evaluation of the PFS. In the following sections we will summarize several of the major criticisms of the system, starting with two fundamental points about the conceptual basis of PFS and then discussing several revisions that could be made in PFS while retaining the basic logic of the PFS system.

Funding Levels. One of the most controversial issues of Public Housing subsidies is the amount of funding required. There is simply no ideal, objective, external source of data which can be used to validate either the level of Public Housing operating costs and subsidies or the extent of their variation from PHA to PHA. The Public Housing system must use the more limited data that is available on the historic costs of Public Housing or on housing costs in the private market. Problems in both types of data will yield inevitable disagreements about appropriate funding levels. Some PHA officials will always complain about inadequate subsidies, while Government decision makers point to the large subsidy amounts allocated and to the substantial growth in subsidy amounts in recent years. PHA officials have frequently noted that operating expense levels have been tightly constrained for over a decade.

One indicator that subsidies may have been inadequate is the decline in PHA reserve funds over the past decade. A PHA's reserve account receives any year to year surplus from operations and is drawn upon in case of an operating deficit and to provide working capital for minor replacements and improvements. As a rule, a reserve account of 40 percent of the maximum allowable reserve level, which is a half-year's operating costs, is regarded as the lower threshold for financial health level. In 1969, PHA reserves

averaged a healthy 90 percent of the maximum but by 1979 the average reserve level had declined to 35 percent of allowable levels. The largest PHAs are especially likely to run into financial trouble. HUD defines as "financially troubled" PHAs with reserves of less than 20 percent of the maximum allowable levels. Ten of the largest eleven PHAs are currently in this category, every one except Baltimore, and several of the largest PHAs either have zero reserves or are essentially bankrupt. On the other hand, low reserves may in some cases indicate imprudent management. The apparent inefficiency of some PHAs has led some observers to feel that funding levels under the PFS must, if anything, be too high.

Lack of Management Incentives. PFS is often criticized for having only weak incentives for PHAs to increase income from rents and other revenue sources. Under the current regulations, PHAs use a fixed 3 percent increase over year-end rent rolls as an estimate of the next year's income amount, even though actual increases have averaged somewhat higher and varied a great deal among authorities. PHAs are allowed to keep the additional money above the budgeted amount for only the year in which it is obtained, and the total amount of rental and other income actually collected is used as a base of calculations in the next year and thus captured by HUD since it serves to reduce the subsidy amount. If PHAs were allowed to keep a portion of any extra rent collected, they would have a greater incentive to increase these collections. This and other incentives to improve PHA management will be discussed in Chapter 6 of this report.

Base Year. The base year starting point for PFS is of considerable importance because the annual subsidy is largely dependent on the expense level allowed in previous years. Many PHA officials have complained that the expense level of 1974-75 was depressed because of the stringency of the Interim Funding System which operated from 1972-75, and analysis has confirmed that PHA expenditures were not allowed to grow as fast as inflation in municipal wages during this period. However, it cannot be proven that particular types of authorities had budgets which were more depressed than

other authorities. It is generally believed that PHAs whose budgets were especially constricted due to the restrictions of the base year funding levels responded to the situation by deferring maintenance and repairs and allowing the stock to deteriorate. Few PHAs appeared able to deal with tight funding entirely through increasing efficiency. To the extent that base year funding levels were depressed, the situation was inherited rather than caused by PFS.

The Range Test. When base year expense levels were established, a range test was used to determine which PHAs were unusually above or below costs estimated by the prototype equation. PHAs that had such high costs that they were "out of range" had their budgets gradually cut back in real terms so that they were brought into range of the formula-calculated costs. In theory, the procedure was a reasonable one, but in practice the idea was not well-implemented. One important problem was that the prototype equation did not include certain variables that would have identified PHAs with severe operating conditions. Within the logic of the Performance Funding System, allowances should be made for the inevitable costs of a PHA's operating conditions. However, variables such as difficult neighborhood conditions, local crime and vandalism rates and hard to serve tenant families were not included in the prototype equation. Large urban PHAs facing many of these problems were especially likely to be above range. The constraint on the costs of large, urban PHAs was intentional, since the PFS was intended to provide a "cutting edge" against the costs of PHAs which were relatively expensive. When the test was applied, 61 percent of the extra large PHAs were calculated to be above range and none were so low as to be considered below range, while small PHAs were distributed evenly above and below range. In general, the way in which the prototype equation and range test was implemented had adverse impact on the largest PHAs without sufficient justification. In order to correct for this bias, this report contains an analysis of a proxy variable intended to adjust for the difficult operating conditions faced by some PHAs. The variable chosen comes from the Community Development Block Grant formula and is explained in detail in Chapter 4.

Complexity of the Delta. One of the most frequent complaints about PFS is the complexity and appropriateness of the delta adjustment, which is intended to compensate PHAs for changes in their costs due to changes in their operating characteristics. The delta is based on the prototype formula, which uses a mathematical equation which many PHA officials and Government decision makers find difficult to understand and burdensome to calculate. Both the amount of influence (the weight) and the functional form of the variables used in the delta (square roots, logarithms, etc.) change yearly for reasons that have no clear theoretical basis and are not obviously related to what the delta is intended to accomplish. The equation as originally calculated included five variables: average age of the buildings at a PHA, average building height, average number of bedrooms per unit, relative regional costs of operating PHAs, and size of the population area served by the PHA. The last variable appears to be inappropriate for use in the delta, since it has no clear relation to changes in operating costs. The Section 8 Existing Housing FMR applicable to a PHA's area was added to the equation after the PFS was established, but in recent years it has been dropped because it no longer significantly contributes to the equation. Despite the high level of dissatisfaction with the delta, the amount of funds involved is relatively small. Only about one-half of one percent of average PHA funds come from the delta calculation, though the effect is large in cases when PHA characteristics substantially change.

Lack of An Appeals System. At the beginning of the PFS, a formal appeals system was available for use by PHAs whose costs were either below or within range. PHAs could appeal their allowable expense level, and a successful appeal would thus increase funds available for future years as the allowable expense level was inflated. When the system began operations, large and extra large PHAs received 73 percent of the appeals money. The system had the controversial limitation that no PHAs above range could appeal. Thus, it was precisely those PHAs which had their costs most

constrained under PFS that were unable to appeal. During 1977, some funds were available for distribution under a provision for "Costs Beyond Control." Since that time, no appeals system or funds for costs beyond control have been available despite the inherent limitations of a formula-based system.

Insufficient Management Control over Modernization. A significant part, almost one-third, of all funding which has gone to PHAs in the past few years has came from the modernization programs, most recently the Comprehensive Improvement Assistance Program (CIAP) enacted in 1980. CIAP provides modernization funds to a PHA which "undertake[s] a thorough analysis of its particular problems, will design a comprehensive strategy for remedying these problems, and will be held responsible for implementing that strategy which will restore a PHA to an efficient operating level" (House of Representatives, 1980). Although the CIAP program gives a good deal of initiative and responsibility to the PHAs, it still requires an extensive application and HUD review process, in which priorities are essentially determined by HUD. In addition, separate funding of operating costs and modernization removes a PHA's incentive to make cost effective choices between maintenance and repairs funded by operating subsidies and replacements and improvements funded by CIAP.

Finally, modernization funding has been used by many HUD Area Offices and PHAs as a kind of substitute for an appeals system. PHAs responded to the constraints of the PFS by deferring maintenance and repairs. They were then awarded modernization funds to undo the effects of deferred maintenance. This use of modernization funds as a replacement for operating subsidies means that major, durable improvements to the public housing stock have not occurred on a scale implied by the amount of modernization funds allocated.

The Inflation Factor. The PFS operated for several years using an inflation index derived from the average monthly earnings of local government employees. Because these wage levels fell behind other inflation indicators, PHAs found that the true inflation rates they faced were undercompensated. The inflation adjustment is being changed for fiscal 1982 to take this into account.

The other major issue regarding inflation has to do with the fact that the inflation estimate is predicted for the year ahead under PFS. Any under or over prediction of the inflation index compared with the actual observed inflation remains in the allowable expense levels and is never adjusted for actual observed inflation, although utility rates are compensated for if they change. This issue will be discussed in Chapter 5.

1.4 OVERVIEW OF THIS REPORT

Alternative Funding Systems

There has been growing dissatisfaction with the PFS because of the weaknesses just enumerated and because of a general perception that the funding system has not encouraged solutions to the physical and management problems that plague a portion of the public housing stock.

The Omnibus Budget Reconciliation Act of 1981 included a requirement that the Secretary of HUD report to Congress by March 1, 1982, on "alternative

methods for distributing operating subsidies which provide incentives for efficient management, full rent collection and improved maintenance of projects..." Secretary Pierce added to this mandate a requirement that the alternative subsidy systems analyzed in the report be designed, and their costs analyzed, in sufficient detail that they could be considered for inclusion in the 1984 legislative/budgetary proposals or, if no legislative changes are required, in plans for allocating operating subsidies in 1983.

Meanwhile, far reaching reviews of housing assistance policy both within HUD and by the President's Commission on Housing have resulted in a redirection of policy towards reliance on the existing stock of housing units in the private market as the basic means for providing housing units to low income households. The October 1981 Interim Report of the President's Commission recommended as the goal of Federal policy for the Public Housing Program the elimination of the distinction between public and private housing through the issuance of housing vouchers to current public housing tenants. These households would be free to use their vouchers to move out of public housing, and public housing projects would compete with private rental units for both subsidized and unsubsidized tenants. Rental revenue thus generated would substitute for operating subsidies.

Given these instructions from Congress and the Secretary, and this policy environment, the subsidy systems analyzed in this report were chosen and developed on the basis of the following criteria:

- Each alternative had to respond to a perceived deficiency of the current system.

- Each alternative had to be capable of being designed and implemented on the basis of existing or readily available data, rather than requiring a several year developmental effort.

Because the lack of an externally validated funding level is the most fundamental problem in the financial management of the Public Housing Program, we sought evidence on which to base funding levels outside the Public Housing Program itself. An obvious candidate is costs of operating private market housing. However, as will be seen (Chapter 10), no set of data on private operating costs exists that is sufficiently reliable or which has size and data elements that make it possible to use it as a benchmark for public housing operating costs. We, therefore, modified our original plans to design an alternative to the PFS based on the operating costs of private rental housing. We have, however, reported the gross comparisons that can be made between public housing costs and costs of data on two particular groups of rental housing units: private apartments managed by members of the Institute for Real Estate Management (IREM) and FHA insured multifamily rental housing, for which data on operating costs are available from HUD's OLMS Information System.

Private market rents do not directly reflect the costs of operating private rental housing. However, they do provide a rough proxy for private costs of providing housing and, perhaps more important, they represent the costs to the Federal Government of using an alternative method of assisting low-income households. We have, therefore, analyzed two systems that rely on estimates of the typical rent of a standard quality private market unit (already familiar to many as the Section 8 Existing Fair Market Rent) as an estimate of the reasonable cost of housing people in public housing units in a particular geographical area. The "FMR system" uses private market rents as the estimate of amounts to be paid to PHAs to cover the difference between the costs of providing housing and the rents collected from tenants, while the "Housing Voucher System" provides vouchers based on private market rents to public housing tenants. In addition to providing externally-derived funding levels, these systems respond to another fundamental criticism of the PFS as well, in that they provide for combined funding of operating costs and capital reserves for the replacement needs of the public housing stock.

Not everyone will agree that the problems of the current system for funding public housing are fundamental. It can be argued that operating expenditures in the actual Public Housing Program represent the only information we have on the level of funds necessary to operate that particular form of housing and/or that cost savings from eliminating inefficient practices or projects can be realized within a system that uses those levels as a starting point. Therefore, we have designed other alternative systems that address the shortcomings of the PFS within its basic logic and framework.

The systems called "Revised Cost-based Funding" and "Cost-based Funding with a New System for Inflation" respond to weaknesses in the PFS identified by the evaluation of the PFS in 1979-80. One such weakness, the tendency of an inflation factor based on wages alone to undercompensate large, urban authorities, has already been addressed by HUD in changing to a factor that includes non-wage purchases of goods and service and adjusts the current AELs for past underestimates. The Revised Cost-based Funding System will also simplify the "delta" adjustment, which was found to be an inadequate measure of changes in operating circumstances; add an appeals system to provide for major changes in operating circumstances; and provide an adjustment to allowable expense levels to offset the fact that limitations of the variables included in the original PFS cost equation worked to the disadvantage of large, urban PHAs. The new inflation system will correct the weakness in the present system that permits errors in predicting inflation to be compounded over time and PHAs to be substantially over-or under-funded as a result. It will also provide for reconciliation of past-year funding levels when errors in predicting inflation have become known.

Another option for improving the cost based funding system is also identified. The proposed system would calculate a PHA cost equation to estimate the anticipated expenses of various types of PHAs. Unlike the prototype formula calculated when PFS was established, the new cost formula would include a proxy for the difficult operating conditions faced by some

PHAs. Once the estimated costs of the PHA, are established, a range test would be developed to limit the amount by which PHA expenses could exceed the estimated levels. Other proposed reforms under revised cost based funding would also apply to this system, such as a simplified Delta calculation and reconciliation inflation prediction with observed inflation rates.

"Cost-based Funding with Strong Management Incentives" responds to the criticism that the PFS provides insufficient incentives for efficient management. To some extent this criticism is actually a quarrel with funding levels under the PFS. If funding levels are not too high, managers are forced by the PFS to be efficient in that they must make prudent decisions on funds allocations and approaches to the various tasks of operating public housing in order to operate within the overall budget constraint. An exception to this is the already-mentioned lack of flexibility to make trade-offs between maintenance and replacement.

Even if we accept the PFS funding levels as a sufficient constraint on management, however, the system has a weakness on the revenue side. Since the PHA's subsidy is the difference between the PFS cost estimate and income from rents and other sources, the incentive to maximize income is weak. The cost-based system with strong management incentives offsets that flaw by permitting the PHA to keep a share of increased revenue beyond the year in which it is collected. The system also provides for cost-sharing incentives in two key areas of PHA operations: budgeting and income verification.

Finally, "Cost-based Funding with a Replacement and Improvement Allowance" is a system that continues to use historical spending levels for public housing as the basis for the estimate of operating costs, but provides an additional amount (a fraction of operating costs) for replacement reserves. The system thus includes the advantages of combined funding

of maintenance and replacements but, unlike the FMR system, does not use private market rents as an estimate of the overall costs of providing housing.

Direct Approaches to Reducing Public Housing Costs

We thus have only two basic sources for the levels of funding necessary to operate public housing. Each of the proposed systems relies, with some adjustments, either on private market rents or on historical spending levels for public housing. We have, therefore, also included in this report a discussion of two areas that can have a major effect on funding levels needed but which are basically independent of the system for allocating subsidies. One area, treated in Chapter 2, is increasing rental revenue through changes to rent determination rules or income limits. Another such area, the subject of Chapter 3, is reducing the total funds necessary for public housing by eliminating the most costly projects from the public housing inventory.

Local Control of Public Housing

It is often asserted that more rational, cost-effective management of public housing would come about if key decisions now made at the Federal level were made at the local level instead. In addition to cost savings that might be acheived through greater efficiency, increased local responsibility might also lead to greater willingness of local governments to participate in the funding of public housing. Chapter 11 of this report will discuss great local control and responsibility in three areas: determining rents and income limits, sources and use of modernization funding and decisions on the disposition of public housing projects.

The alternative funding systems proposed in this report all assume that Federal legislation and regulations will continue to determine household-paid rents (in relation to income) and income limits for receiving assist-

ance.1/ The implications of combining the subsidy allocation systems with local flexibility on rents and incomes will be discussed in Chapter 11, but no attempt to design such a system in detail or estimate its funding implications will made.

On the other hand, all the funding systems proposed here assume that the Federal regulation severely limiting a PHA's freedom to sell or demolish projects will be relaxed. Three of the funding systems, as already indicated, assume greater local control over modernization decisions.

In addition, two other recent proposals would give more control over public housing policies and operations to the PHAs. These proposals are from The President's Housing Commission and from NAHRO; The National Association of Housing and Redevelopment Officials. Both of these proposals would increase local control over rents and over the disposition of public housing projects. Both proposals would also alter the subsidy allocations by using Fair Market Rents in the funding calculations.

These issues will be discussed further in Chapter 11. Chapter 11 will also discuss the relationship between the PHA and the general purpose local government in decision-making for public housing.

Criteria for Analyzing Alternative Funding Systems

This report will not make recommendations about the alternative(s) that are preferable, but will evaluate the rationale and some of the problems of each system, with particular attention to the estimated costs of the system and the distribution of the funds to various types of PHAs. Instead

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1/ In the voucher system, these "rents" determine the size of the voucher rather than the rent of the public housing units.

of setting objectives against which the alternative systems should be evaluated, we have established a set of analytical issues that will guide the discussion of the systems. In this way, policy makers with differing objectives can all use the analysis in the report and make their own trade-offs among the estimated outcomes of the system. The issues to be addressed include the following:

Description and Rationale of the System

- A general explanation of the system evaluated, including the theoretical basis of the system for reimbursing the costs of operating multifamily housing projects for low income tenants.

- The system's administrative feasiblity and simplicity, including burden on PHA staff, HUD staff, and the availability and cost of the data required for maintaining the system.

- The ease and potential costs of transition from the current system.

Analysis of Funding the System

- The aggregate cost of the system compared to other systems and to the current Performance Funding System.

- The distribution of subsidies to different types of PHAs (by size, type of jurisdiction, regional location) compared to other systems and to the Performance Funding System.

Implications of Adopting the System

- The system's implications for the financial health of PHAs. Estimates of numbers and types of PHAs and numbers of units that would face financial hardship.

1.5 METHODOLOGY AND BASIS FOR COMPARISONS

The financial analysis of each of the alternative Public Housing subsidy systems, and its particular features, is based on computer analyses of two data files created for this study.

Sampling

The two data files used in the study consist of a four year time series file of 133 PHAs and a cross sectional file for 1980 with 314 PHAs. The time series file consists of the same PHAs that were sampled when the PFS was originally developed. Data has been collected yearly for these PHAs and used to estimate the national PFS budget. The time series file is primarily used in this report for the analysis of inflation adjustments to subsidies. The file consists of much of the data from HUD's PFS data file and also includes additional data for 1980.

In order to obtain a more robust sample for the purpose of developing cost estimates of alternative PHA subsidy policies, it was decided to develop a larger data file. A cross sectional data file of 314 PHAs was obtained for 1980. The research team attempted to collect data on each PHA of extra-large (over 6,500 units) or large (1200 to 6,499 units) size, and data was successfully obtained for 21 of 22 extra-large PHAs and 107 of 112 large PHAs. These PHAs alone contain 64 percent of the Public Housing dwelling units. The cross sectional data file also contains 86 medium sized PHAs (with 500 to 1,249 units) and 100 small PHAs (100 to 499 units.) No data was collected for the 1,004 PHAs which have less than 100 units, since these PHAs contain only 4.6 percent of the Public Housing stock and generally obtain either very small operating subsidies or none at all. The cross-sectional file represents PHAs with 729,000 units, or about three-quarters of the Public Housing stock under PFS. The PHAs in the medium and small categories are a random sample of PHAs in those categories (see table 1-4).

Data Sources

Much of the data in the analysis files comes from standard forms which PHAs are required to submit to HUD annually, with financial and other data needed to run the Performance Funding System. A wide variety of other data was also added to the file, comprising information about such topics as public housing debt service, recent modernization funding, local private market rents and public housing tenant incomes. The nature and sources of this data are summarized in (Table 1-5.)

Table 1-4

NUMBER OF PHAs AND DWELLING UNITS
BY PHA SIZE AND REGION

PHA TYPE	ALL PHAs	PHAs IN THE ANALYSIS SAMPLE	TOTAL DWELLING UNITS	DWELLING UNITS IN THE ANALYSIS SAMPLE
Extra-large	22	21	388,228	381,448
Northeast	7	7	226,299	226,299
South	4	4	37,720	37,720
Central	9	8	108,914	102,136
West	2	2	15,293	15,293
Large	112	107	272,549	260,720
Northeast	43	42	92,964	88,567
South	27	24	70,227	65,546
Central	30	30	76,354	75,429
West	12	11	33,004	31,178
Medium	178	86	133,559	65,404
Northeast	56	26	43,609	20,042
South	51	27	37,595	20,799
Central	54	24	39,629	17,846
West	17	9	12,726	6,717
Small	882	100	193,992	21,904
Northeast	217	27	52,031	8,396
South	272	27	61,480	5,148
Central	306	40	61,616	7,237
West	87	6	18,865	1,123
Total	1,194	314	988,326	729,476

SAMPLE: PFS Cross Section Analysis Sample.
DATA SOURCES: PFS Cross Section Analytic Data Base.
NOTE: This table lists only PHAs with over 100 units receiving PFS subsidies. There are about 2,800 PHAs in all.

Estimates of Subsidies and Comparison Cases

For each of the alternative subsidy systems included in the analysis, costs are estimated from the cross-sectional sample of 314 PHAs. The sample is divided into the four size categories previously explained and each size category is divided into four regions. Costs, revenue and subsidy per unit month are directly estimated from calculations using the sample. National estimates are made by weighting the unit month figure to the total number of unit months in the population for each size and regional class.

In order to base the report's estimates on realistic numbers without distortions from varying assumptions about inflation, all estimates in this report are stated in 1980 dollars. This is the year for which our cross-sectional file includes PHA financial data. Since 1980, however, two changes have occurred that will greatly affect PHA subsidy amounts. First, allowable expenses have been increased because of changes in the inflation index used within PFS. This adjustment will take place in 1982 and is explained in Chapter 5. If the new adjustment had been in place in 1980, actual total expenses of $157.22 per unit month would have been allowed to rise to a national average of $161.87 per unit month. (see Table 1-5). In Table 1-6, this effect can be seen in the first column, where the comparison costs are shown and reflect the new inflation adjustment. The second column shows the actual historical costs in 1980 for comparison.

The second and more important change in PHA subsidies was triggered by the Omnibus Budget Reconciliation Act of 1981. This law included language that will substantially increase PHA revenue from rents. Rent payments from tenants will rise from the current 25 percent to 30 percent of net income over a five year period, with current tenants seeing their rent payment rise by one percent of income yearly. New tenants will immediately pay 30 percent of income for rent. In addition, deductions from income will be standardized and thus become much more limited than they are currently at many PHAs. These changes will greatly increase rental income

from public housing tenants. Changes reflecting increases in revenue and decreases in subsidy levels are shown in Tables 1-5 and 1-6 under the Comparison PFS columns. We are assuming full implementation of these changes in the calculations. On the other side of the ledger, increases in rent will cause many of the relatively higher income Public Housing tenants to move out as they are able to find better housing values on the private market. Since rents are charged as a percent of income, when tenants with relatively higher income leave Public Housing and are replaced with tenants with lower incomes, PHA rent receipts will decline. At the end of the implementation period, we estimate that rental revenues will substantially rise from $83.43 p.u.m. by between 9 and 14 percent to between $91 and $95 p.u.m. in 1980 dollars. Required subsidy amounts will decline from national average of $73.80 p.u.m., in 1980 dollars to about $62.00 to $66.00. The effects of these rent changes and the possibility of further changes will be explored in detail in Chapter 2. This is an enormously important area and one in which change is already being implemented. There will be substantial revenue gains and decreases in subsidy for PHAs in every size and regional group. Thus, we are already implementing a significant solution to the problem of rising public housing subsidies.

Two important points should be made about the revenue changes anticipated and the way in which these numbers are used in this report. First, the revenue estimates both here and in Chapter 2 are totally subject to assumptions about the relative number of higher income households who will move out of public housing units because they find relatively better deals on the private market as rent changes are phased in over a five-year period. (See Chapter 2 for details). We cannot be sure of the numbers of families who will do this and, therefore, we can only make reasonable estimates of the average rents and subsidies required. The second point is that our estimates of revenues under the Comparison PFS are different from the estimates derived from the analysis in Chapter 2. The Comparison PFS figures are estimates derived from data we have on tenant incomes and are not adjusted for such items as PHA vacancies.

Table 1-5

COMPARISON OF P.U.M. COSTS, OPERATING SUBSIDY
AND PHA REVENUE UNDER COMPARISON PFS AND HISTORICAL PFS

	1980 DOLLARS, P.U.M.					
	COSTS a/		REVENUE		SUBSIDY	
	COMPARISON PFS	1980 PFS	COMPARISON PFS	1980 PFS	COMPARISON PFS	1980 PFS
Extra-large	210.46	203.34	114.67	91.45	95.78	111.80
Northeast	243.13	234.80	133.54	112.50	109.59	122.29
South	142.55	138.87	75.21	54.68	67.35	84.20
Central	170.17	164.60	88.80	61.51	81.37	103.09
West	181.39	172.87	117.19	86.19	64.20	86.68
Large	144.81	141.10	93.61	75.04	51.49	66.06
Northeast	182.36	178.05	103.73	88.13	78.63	89.91
South	127.73	125.25	78.79	66.56	48.94	58.69
Central	116.45	113.18	86.43	64.02	30.72	49.16
West	141.00	135.34	113.24	81.67	28.53	53.68
Medium	128.58	125.70	99.17	83.66	31.24	42.05
Northeast	157.30	153.94	104.24	92.02	53.61	61.92
South	111.19	109.45	98.07	75.91	17.35	33.54
Central	111.60	108.93	94.34	83.08	18.80	25.85
West	134.47	129.23	100.15	79.67	34.31	49.56
Small	111.52	109.24	94.33	78.82	20.33	30.47
Northeast	150.18	147.17	104.57	97.14	45.72	50.03
South	94.66	93.29	86.83	68.31	10.84	24.98
Central	99.66	97.51	91.54	74.84	11.46	22.74
West	98.62	94.93	99.65	75.56	10.19	19.68
Total (Weighted P.U.M.)	161.87	157.22	102.78	83.43	60.04	73.80

SAMPLE: PFS Cross-Section Sample, N=314

NOTE: Costs equal allowable expense levels, utilities plus audit and other minor expenses.

Table 1-6

COMPARISON OF NATIONAL COSTS, PHA REVENUE, AND OPERATING SUBSIDY UNDER COMPARISON PFS AND HISTORICAL PFS

	MILLIONS OF 1980 DOLLARS					
	COSTS		REVENUE		SUBSIDY	
	COMPARISON PFS	1980 PFS	COMPARISON PFS	1980 PFS	COMPARISON PFS	1980 PFS
Extra-large	980.4	947.3	534.2	426.5	446.2	520.8
Northeast	660.2	637.6	362.6	305.5	297.6	332.1
South	64.5	62.9	34.0	24.7	30.5	38.1
Central	222.4	215.1	116.1	80.4	106.3	134.7
West	33.3	31.7	21.5	15.8	11.8	15.9
Large	473.6	461.5	306.1	245.4	168.4	216.1
Northeast	203.4	198.6	115.7	98.3	87.7	100.3
South	107.7	105.6	66.4	56.1	41.2	49.5
Central	106.7	103.7	79.2	58.7	28.1	45.0
West	55.8	53.6	44.8	32.3	11.3	21.3
Medium	206.1	201.5	159.0	134.1	50.1	67.4
Northeast	82.3	80.6	54.5	48.2	28.1	32.4
South	50.2	49.4	44.2	34.3	7.8	15.1
Central	53.1	51.8	44.9	39.5	8.9	12.3
West	20.5	19.7	15.3	12.2	5.2	7.6
Small	259.6	254.3	219.6	183.5	47.3	70.9
Northeast	93.7	91.9	65.3	60.6	28.5	31.2
South	69.9	68.8	64.1	50.4	8.0	18.4
Central	73.7	72.1	67.7	55.3	8.5	16.8
West	22.3	21.5	22.6	17.1	2.3	4.5
Total	1,919.7	1,864.5	1,218.0	989.4	712.0	875.2

SAMPLE: PFS Cross Section Analysis Sample.

DATA SOURCES: PFS Cross Section Analytic Data Base.

NOTE: Costs equal allowable expense levels, utilities plus audit and other minor expenses.

On tables 1-5 and 1-6, the Comparison PFS estimates are shown in dollars per unit month and total dollars. Table 1-5 shows an average revenue difference of $19.35 p.u.m. between the historical 1980 PFS revenues and the Comparison PFS due to changes in rent payment rules. This should not be taken as an estimate of actual revenue growth, but simply as information showing the differences between the historical PFS and the revenue assumptions made in this report for the purpose of comparing the current funding system and other systems. In the remainder of the report we will ignore the Historical 1980 PFS and use the Comparison PFS as the basis for comparison with other systems and the revenue estimates for Comparison PFS as the revenue estimates for all systems. Because all of the comparisons are based on the same assumptions, the comparisons between systems are accurate and differences between the various systems are made in an internally consistent manner.

A further base case for comparison will be introduced in Chapter 7. In that chapter, we will describe a system for dealing with subsidies required to pay for public housing replacements and improvements. For the past several years, HUD has allocated money for this purpose from the Public Housing Modernization Program, and is now beginning the Comprehensive Improvement Assistance Program (CIAP) as a replacement for the Modernization Program. Capital spending under the Modernization Program averaged about $375 million (in 1980 dollars) between 1969 and 1981, or about half as much as the Revised PFS total. In the past few years, the HUD budget obligations for capital spending have been much higher, at $926.7 million in 1981 and $981.9 million in 1982. This spending is paid for through twenty year debt service annual contributions on PHA notes and requires an addition of about $90 million in contract authority in both 1981 and 1982. However, both capital spending and the budget authority required to pay for it is expected to decline greatly in the coming years. Although modernization funding is allocated outside of the PFS formula, the subsidy is part of the total public housing subsidy system and, therefore, the PFS plus the Historical Modernization Program subsidy provides a second basis for comparison. Chapter 7 will introduce and explain this comparison case, and subsequent chapters, which evaluate subsidy systems including replacement and improvement reserves, will compare those systems against that comparison case.

Appendix 1-1

DATA SOURCES FOR PUBLIC HOUSING SUBSIDY STUDY

DATA DESCRIPTION	SOURCE
Public Housing Expenditures	HUD Form 52599
Performance Funding System Calculations	HUD Forms 52721A, 52720D, 52722B, 52720B, 52723C
Section 8 Existing Fair Market Rents	Federal Register and calculations for this study by HUD Division of Economic and Market Analysis
PHA Reserve Funds	Office of Housing Report
Tenant Incomes and Other Characteristics	Tenant Income Survey, 1979 and HUD R-42 Occupancy Data, 1978
PHA Development and Modernization Costs	HUD Office of Finance and Accounting
CDBG Grants Formula	HUD Report C13LXCA
Private Market Operating Costs	IREM Survey, 1980
HUD Insured Housing Operating Costs	HUD-OLMS Information System

GLOSSARY OF TERMS FOR COMPARING ALERNATIVE PUBLIC HOUSING SUBSIDY SYSTEMS WITH THE CURRENT SYSTEM

Historical 1980 PFS. The acutal expenditures, income and subsidy amounts under PFS in 1980.

Comparison PFS. The basis for comparison used in this report for PHA expenditures, income and subsidy amounts. The Comparison PFS assumes full implementation of new rules on inflation adjustments and percentage of income paid for rent. It does not adjust for such items as rent delinquencies and, therefore, revenues estimated are somewhat higher than acutally expected.

Comparison PFS with Historical Modernization Funding. The average amount per year given to PHAs under the Public Housing Modernization Program between 1969 and 1981 is added to Comparison PFS. We do not have PHA by PHA data on the new CIAP Program which is replacing Modernization.

Revised Cost Based Funding. A revision of PFS which would still be based on the historical costs of running Public Housing like PFS, but which would alter the system to make it simpler and more equitable.

Comparison PFS with a Replacement Allowance. A comparison case used for determining whether PHA subsidies under the FMR system would be unreasonably high and, therefore, should be limited by the rules of the system. The comparison with this case is also used to indicate PHAs for which the FMR system would require significant downward adjustments in spending to meet cost constraints.

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CHAPTER II

RAISING THE RENTS CHARGED PUBLIC HOUSING TENANTS

2.0 INTRODUCTION

The main opportunity for reducing funding levels needed for operating public housing lies in increasing the proportion of the total cost of public housing derived from rental income. This approach has already been taken by Congress and the Administration in the Omnibus Budget Reconciliation Act of 1981, which eliminated many previously prescribed adjustments to income for rent charge purposes, and established a 30 percent rent-to-income ratio for all housing assistance programs.1/ There are additional measures that could be taken, including other changes to income limits, income definitions and rent levels. Some of these additional measures have been proposed as part of the FY 1983 HUD budget.

This chapter will discuss rent-income relationships in public housing and review the history of incomes and rents in the Public Housing Program. The likely effect of the 1981 changes will be estimated as if they had been fully phased in during 1980. This estimate is used elsewhere in the report in modeling the revenue side of the Comparison PFS and of all the alternative funding systems analyzed. The estimate of the revenue generated by the 1981 changes includes an estimate of the change in average income that will result when some households respond to higher rents by moving out of public housing. The estimates provided in this report relating to implementation of the 1981 changes were in part developed for, and are methodologically consistent with, HUD's FY 1983 budget projections.

1/ Under the 1981 Act, rents are the higher of 30 percent of adjusted income, 10 percent of gross income, or welfare payment rent rates. The 30 percent rate will apply to most households.

We then review other changes that could be made which might result in further increases in rental income. Finally, this chapter concludes with a discussion of the implications of charging higher rents on the types of households that will live in public housing and for the funding systems discussed later in this report.

2.1 PUBLIC HOUSING RENTS AND INCOMES

Private market rents are primarily a function of the market value competitively placed on different sets of housing services. Any particular unit's value is determined by its size, condition, amenities and neighborhood. Aside from minor market imperfections, tenant rents for similiar housing services will differ in the private market only to the extent a given tenant is considered by a landlord to be relatively more or less desirable in terms of payment regularity, unit maintenance, noise, and any other factors considered important. In contrast, Public Housing Program rent charges have little or no relationship to market values. Rent charges have always been set as a percentage of income for most tenants, although the percentage used has changed over time, and fixed dollar rent ceilings and floors were permitted during the 1960s.

In the private market, the proportion of total income used by any given household for housing costs is highly correlated with total household income. There is a strong inverse relationship between housing-cost-to-income ratios and total income. The highest income renter households tend to spend no more than 10 to 15 percent of their total income on housing, while the lowest income (those with incomes less than 20 percent of area median) frequently spend more than 50 percent of their income on housing. (HUD, 1981, pages 13-16) Use of the same rent-to-income ratio for all public housing tenants thus means that those with the lowest incomes will receive the highest relative benefits from participation -- not just in dollars of subsidy but also in comparison with how they would fare if they lived in private rental housing. It also means that setting the program

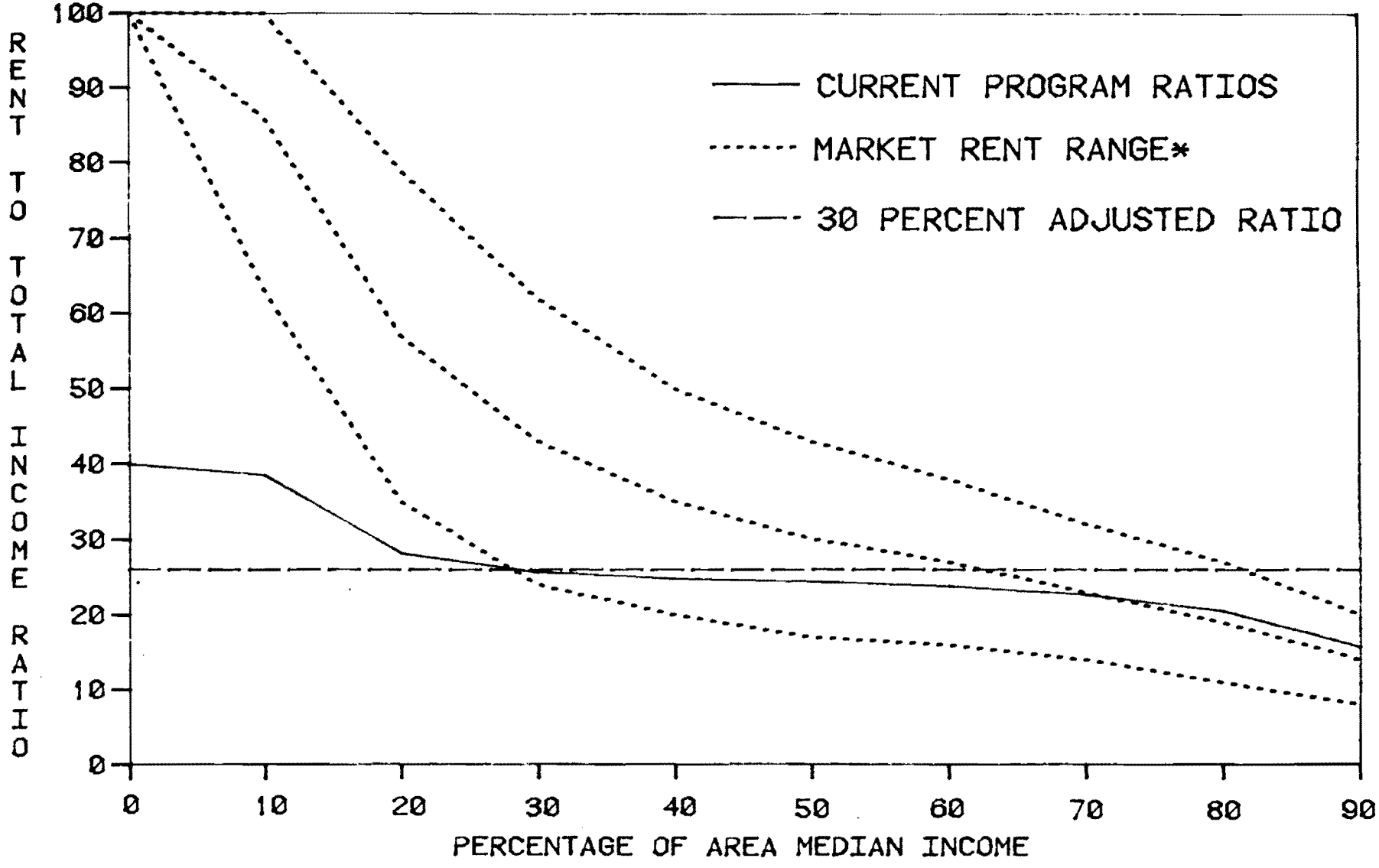
rent contribution level at either 25 or 30 percent would discourage most moderate and middle income households from participating in the program in most housing markets unless program units were far superior to private market units. Figure 2-1 provides a comparison of rent-to-income ratios for private market and public housing tenants.

Figure 2-2 shows the distribution of subsidized household incomes in the Public Housing Program as of 1979. The figure shows that most tenants have incomes less than 40 percent of area median family income. Almost 50 percent of all participants have income less than 30 percent of area median income, and almost 90 percent have incomes less than 50 percent of area median income. Exceptions to this pattern are not widespread.

It is the group with incomes below 40 percent of median that find Public Housing Program rents are, for them, much less than private market rents for comparable housing. Between 1974 and 1981 Federal legislation resulted in income limits normally being set at 72 percent of area median income, yet program participation begins falling sharply above 40 percent of median. 1/ This has occurred despite the fact that there have been special efforts to obtain more "higher" income eligible households. Income limits thus cannot be said to explain the very limited program participation by the large number of income-eligible tenants of moderate income.

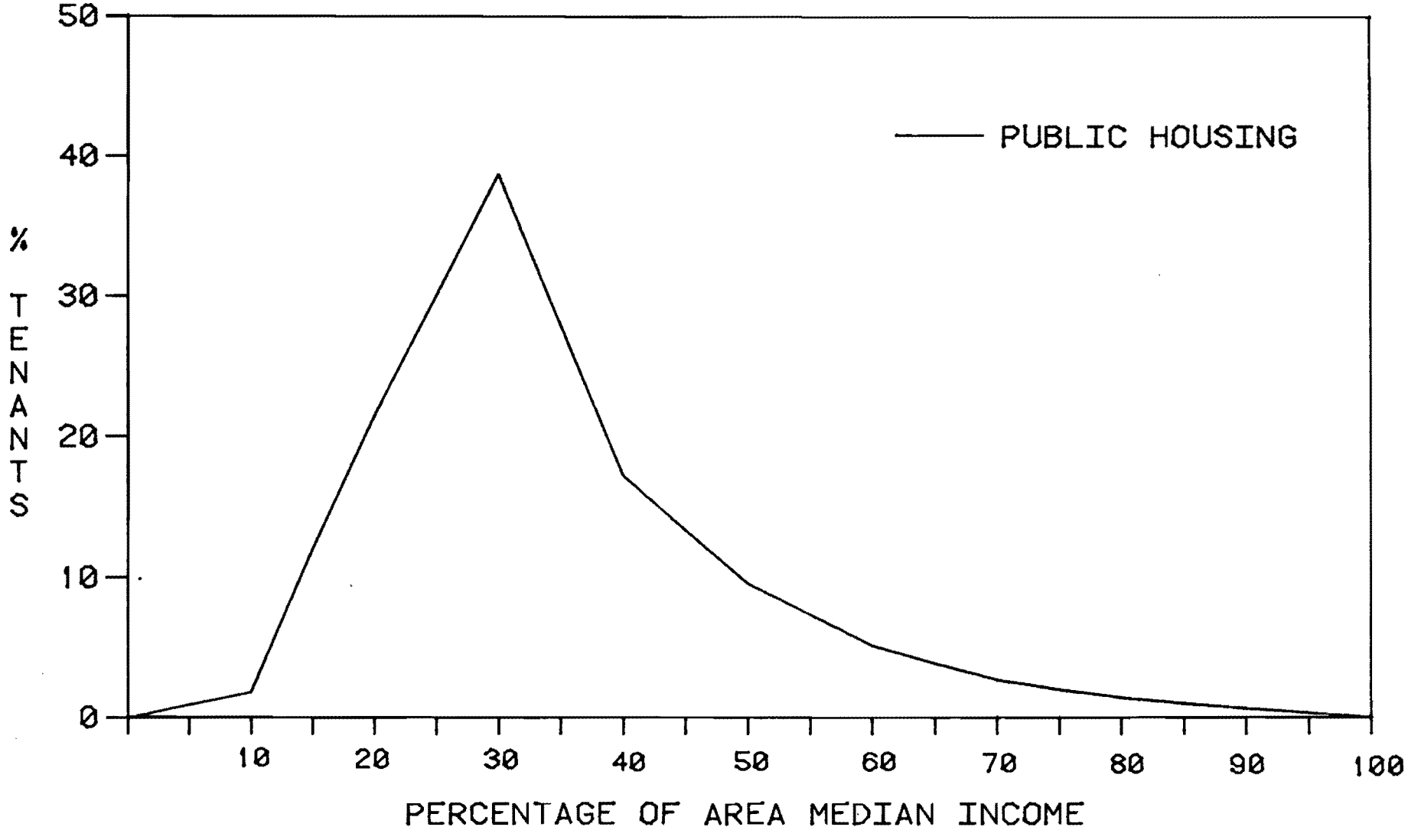
1/ 1974 legislation indirectly led to an administrative requirement that PHA income limits be set between 80 and 90 percent of Section 8 income limits, unless a PHA could document the need for income limits above or below the 80 to 90 percent range. In actual practice they are nearly always set at 90 percent of the Section 8 limit, or 72 percent of the area median income.

FIGURE 2-1
PRIVATE MARKET VERSUS ASSISTED HOUSING
RENT-TO-INCOME RATIOS: 1979



* MARKET RENT-TO-TOTAL-INCOME RATIO RANGE FROM THE MEDIAN TO PLUS OR MINUS ONE STANDARD DEVIATION.

FIGURE 2-2
PUBLIC HOUSING TENANT INCOME DISTRIBUTION: 1979



SOURCE: HUD, OFFICE OF POLICY DEVELOPMENT & RESEARCH, 1981

Those of moderate rather than very low income who do live in public housing fall into two categories. The first category have high program-permitted deductions from the income base against which rent is charged. Before the 1981 HCD Act, these deductions were subject to Federal rules in a manner which permitted a modest amount of PHA discretion. The second category includes those tenants paying "ceiling rents" which are well below the area's market value for similar units. The solid line on Figure 2-1 that represents Public Housing rent-to-income ratios as of 1979 illustrates the effect of deductions and ceiling rents on relatively higher-income tenants. However, despite the effect of deductions and ceiling rents, the rent-to-income comparison with private market rental housing explains why public housing is a financially unattractive option for most moderate income tenants.

2.2 HISTORY OF INCOME ADMISSION AND RENT POLICIES

From 1949 onward, the Public Housing Program is a classic example of the difficulty of reconciling conflicting objectives in a Federal program. The most serious conflict was between trying to serve more of the types of households least able to afford and/or obtain private market housing, on one hand, while trying to avoid increases in Federal costs on the other.

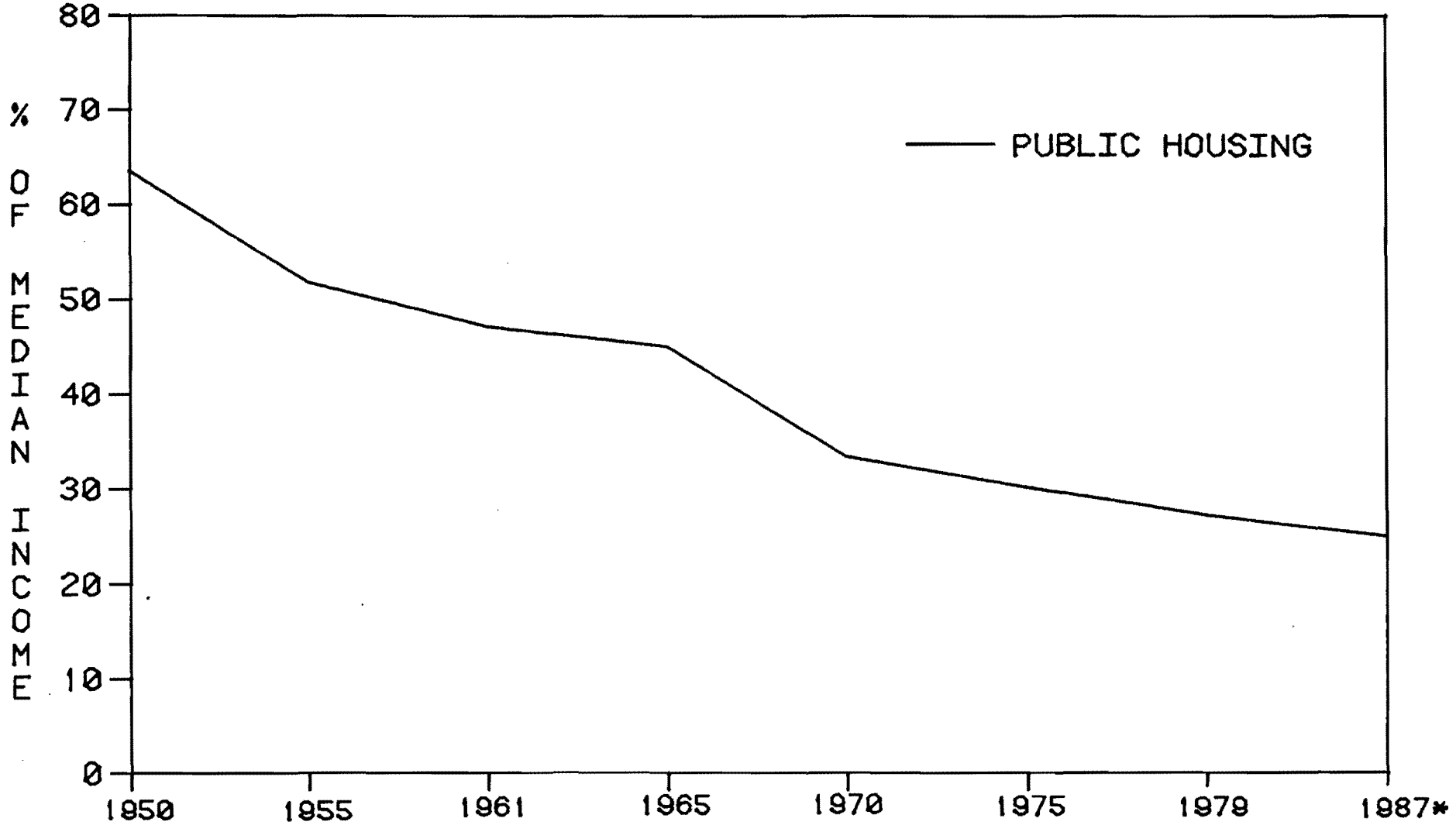
Before 1949 Public Housing was viewed as a means of assisting families who were temporarily in poverty as a result of the Great Depression of the 1930s. Many PHAs provided waivers of income limits to house defense workers during World War II, but this was a temporary exception. Applicants were many, and PHAs could be highly selective. Applicants generally had to have a high enough income to meet all operating costs associated with their dwellings, and there was an explicit recognition that the program was not designed to serve the very poor. During the 1937-1949 period, rent revenues were high enough to meet all operating costs and pay most of the long-term program debt.

The Housing Act of 1949 required PHA's to refocus the program toward those of low and very low income. The real estate industry and, to a lesser extent, Congress believed that the program was inappropriately competing with the private sector. Income limits for admission to the program were lowered, and PHAs could no longer exclude welfare families for whom the 20 percent of adjusted income payment required at that time was inadequate to meet operating expenses. Construction cost limits and exemptions from income were also changed so as to encourage PHAs to build projects for large families (Kolodny, 1979, p.33). These changes were far more successful in retargeting the program toward those of low and very low income than was anticipated. Part of the drastic decline in public housing income which occurred over the next 30 years, however, was also due to the placement and types of projects being built, and to the fact that a variety of private market housing options were increasingly available to those of moderate income.

By the late 1950s there was widespread dissatisfaction with the Public Housing Program. The Federal Government was beginning to be responsible for most of the program's long term capital debt payment. Many large city public housing projects were thought to have "undue concentrations of low income and deprived families with serious social problems" (Congressional hearings, 1959). Despite these concerns, however, program eligibility had been widened to include elderly individuals and certain other group who tended to be of very low income. This dissatisfaction with how the program was operating led to an explicit attempt to change program rules to attract and retain more moderate income working families.

The Housing Act of 1959 eliminated the requirement that tenants had to pay a minimum of 20 percent of adjusted income for rent in order to permit PHAs to charge higher income tenants lower rents. In a directly related move, PHAs were given wide discretion in setting minimum and maximum rents in an attempt to reverse the falling income trend shown in Figure 2-3. Public Housing production during the 1960s, however, placed a heavy

FIGURE 2-3
PUBLIC HOUSING TENANT INCOME DISTRIBUTION: 1950-1987



SOURCE: HUD, OFFICE OF POLICY DEVELOPMENT & RESEARCH, 1982
* ESTIMATE BASED ON TENANT PARTICIPATION MODEL IN CHAPTER 2

emphasis on elderly housing, which was inconsistent with the objective of increasing program revenues given the very low average incomes of elderly public housing applicants and tenants. Successful tenant protests and legal challenges to management rules and eviction policies tended to further erode the control PHAs had on admissions and evictions, and the addition of required HUD lease and grievance procedures placed further major obstacles to evicting non-paying or unruly tenants.

Another factor that contributed to a changing tenant population was the location of public housing developments:

> In the 1950s and 1960s, many new projects were located in inner city neighborhoods rather than in suburban locations as had been true during the 1930s and 1940s. This change occurred as suburban communities began to resist the construction of low-income housing within their boundaries and as PHAs purchased inner city vacant land that became available by means of urban renewal. That land was often in neighborhoods already occupied by low-income households who then moved into the new housing. In addition, the changes in residential patterns in many areas left housing projects constructed in the 1930s and 1940s in racially changing neighborhoods. (Merrill, Sally, et al, 1979, p.28)

By 1969 it was clear that the attempt to reverse the downward spiral in tenant incomes and program rent revenues had generally been a failure. The public housing population had shifted from a predominantly working class group of white, husband-wife households to one comprised primarily of elderly persons, minority families, and very poor households. Small operating subsidies had been instituted for elderly, large family, displaced, and very low income households in recognition of the likelihood that rents from such households would not cover operating expenses. In addition, the Federal Government had begun to fully pay for most debt service payments. Renter incomes were so low that many very low income renters paid minimum rents too low to cover operating expenses, but which nonetheless were greater than 25 to 30 percent of income.

The "Brooke Amendments" of 1969-71 imposed a statutory ceiling of 25 percent of adjusted income on rent charges and increased the deductions that were permitted from the income base used to calculate rent charges. Operating subsidies were made available to compensate PHAs for the loss of income caused by the Brooke Amendments. At the same time, PHAs were encouraged by HUD to attempt to achieve an "income mix" including moderate as well as low-income tenants to offset losses from serving low-income tenants, and to improve the "social stability" of projects. This income mix policy was explicitly required by the Housing and Community Development Act of 1974.

Tenant incomes continued to decline both in constant dollar terms and relative to national median income patterns during the 1970s, but at a slower rate than in the 1950s or 1960s. This was partly because tenant incomes had begun to "bottom out" at welfare and social security income levels. Also, the ceiling rents adopted by a number of PHAs helped retain some moderate income households. Operating subsidy costs increased dramatically during the 1970s despite the imposition of the constraints of the Performance Funding System approach after 1975. This increase was a result both of inflation in utilities and other operating costs and of the continuation of the secular decline in tenant incomes and rent revenues that began in 1949. It is unclear that the Brooke Amendments had any measurable impact on program tenant income trends, although they clearly did increase the need for Federal subsidies by decreasing rental income.

Appendix 2-1 provides a brief history of public housing income eligibility and rent policies.

2.3 1981 CHANGES IN PROGRAM RULES

The Omnibus Budget Reconciliation Act of 1981 contains three provisions with major implications for program rent revenues and tenant composition patterns. These changes are as follows:

- Income limits will be reduced to 50 percent of area median family income for most applicants and tenants.

- The rent-to-adjusted-income ratio will be increased from a maximum of 25 percent to a mandatory uniform rate of 30 percent for most tenants. The full impact of this measure will not occur for 5 or 6 years. Congress placed a 10 percent annual rent increase constraint on rent increases resulting solely from the 1981 Act. HUD also plans to impose a provision that no existing tenant's rent can rise by more than 1 percent of adjusted income a year, if their 1981 rent ratio was 25 percent of adjusted income.

- Fixed dollar rent ceilings were abolished. All tenants will eventually be subject to a 30 percent-of-adjusted-income rent charge.

To implement these changes, HUD has proposed regulations which revise how "adjusted income" is calculated in a manner which simplifies and standardizes deductions and exemptions from total income. These changes will substitute fixed dollar amount deductions for deductions calculated as a percentage of income, eliminate certain deductions, and end PHA discretion in permitting higher deductions and fixed dollar ceiling rents. The regulations currently proposed by HUD involve a $400 deduction per minor and $300 deduction for an elderly household. These deduction were presented and discussed when the 1981 changes were considered by Congress. The Department has taken the position it is committed to these specific deductions from income, since they were a part of its proposal. In the remainder of this report these deductions will be treated as part of the 1981 legislative changes, although they are not found in the 1981 Act.

These changes will have conflicting net impacts. Of itself, the change in income limits would tend to further depress tenant incomes and thus reduce rent revenues. Increasing the rent-to-adjusted-income ratio will increase rents received from public housing tenants who remain in the program, but is likely to result in the loss of some moderate income tenants for whom a 20 percent or more rent increase is enough to make private market housing more attractive. Abolishing rent ceilings will result in loss of any moderate income tenants who can obtain acceptable private market housing for less than 30 percent of their adjusted income. The administrative changes to income deductions and exemptions will benefit very low income households but are disadvantageous to higher income households, and will become less valuable to both groups over time unless adjusted for inflation because they are set in fixed dollar amounts. These effects have been considered in estimating future program operating subsidy needs.

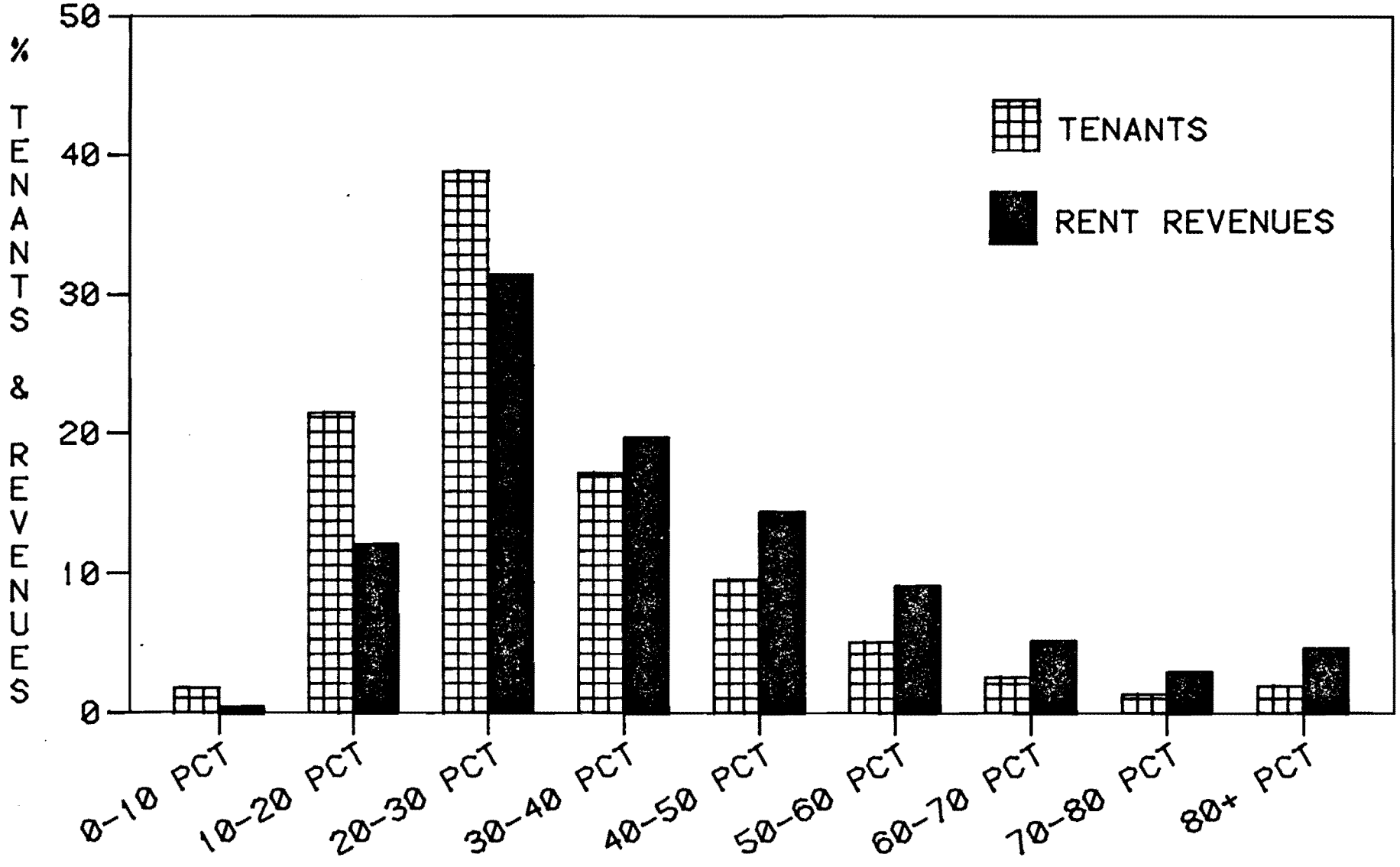
2.4 ESTIMATING THE IMPACT OF THE 1981 CHANGES

The key to estimating the revenue impact of an increase in public housing rents is to know the effect of that increase on the income distribution of public housing tenants.

Because rents charged public housing tenants are a percent of income, tenants with incomes close to the program average pay rents about equal to the average program rent. This occurs, at present, in the range of 30 to 40 percent of area median income. Outside this range they tend to pay rents with either a significant negative or positive impact on average per unit program revenues. Tenants in the 10 to 20 percent of median bracket make up 22 percent of all tenants in the Public Housing Program, but provide only 11 percent of all revenues. In contrast, tenants in the 50 to 60 percent of median income bracket comprise only about 5 percent of all tenants but contribute almost 10 percent of all revenues. Figure 2-4 shows this relationship between income and tenant rent contributions.

FIGURE 2-4

PUBLIC HOUSING INCOME AND RENT REVENUE DISTRIBUTIONS: 1979



SOURCE: HUD OFFICE OF HOUSING, 1981

If some relatively higher income tenants move out of public housing as a result of rent increases and they are replaced by lower income households, the drop in average incomes will offset much of the revenue-generating impact of the increased rent paid by remaining tenants. A loss of a high enough precentage of above average income tenants could conceivably result in a decline in rental income, a decline that would be caused by an increase in rents. Such a decline would occur if losses of rent revenues from high income tenants who move out more than offset increased rent revenues from lower income tenants.

A micro-simulation model was developed to predict the circumstances under which households of a given size, income, and pattern of income-for-rent deductions would not be likely to participate in the Public Housing Program. This approach was much easier than attempting to determine who would be likely to participate. It can be used to predict a range within which households who now reside in public housing would be likely to leave as a result of program changes. However, it provides little information on the household characteristics of those likely to replace any household so lost. For purposes of this analysis, it was assumed that the replacements would have the same mix of household type and size characteristics as other remaining public housing households. 1/

1/ Note that this approach follows some of the same logic, but is not the same, as the model used in Chapter 9 to simulate move-outs and move-ins to public housing in five cities under a system in which public housing tenants are given portable housing vouchers and PHAs compete for subsidized and unsubsidized tenants.

To determine the rent levels at which households of particular incomes will move out of public housing, we used public housing tenant income and Annual Housing Survey data (both data sets are described in Appendix 2-2) to analyze current program participation rates at different income and rent levels. We assumed that the absence of public housing tenants above a certain income/rent level means that such households can rent in the private market. This assumption is strongly supported by the data in Figure 2-1. We then looked at the ratio between the rents such households would have paid in public housing and the private market rents typically paid in different housing markets by households of the same size, type and income (using Section 8 Existing Fair Market Rents derived from the Annual Housing Survey as a proxy). The combination of information on program participation rates by income and rent charges, plus knowledge of the cost of private market options, permits us to predict the likelihood a household will not participate in the program. This information gives us the ability to express the likelihood that a specific household type with a given income will remain in public housing if charged a higher rent. It also gives us the ability to make more general predictions about when higher public housing rent levels will make public housing less attractive than private housing for households of different income levels.

The resulting figures should be considered conservative estimates of the number of households that would move out of public housing, since we assumed that a move-out occurs only when rents are increased to the point where there is less than a one-half of one percent likelihood that a household of a given size, type, and income at a given rent level is currently residing in public housing. Therefore, public housing tenant incomes are actually likely to decline more than these estimates suggest.

On the other hand, rental revenue estimates here and elsewhere in this report are expressed in 1980 dollars. This results in understating the revenue increases resulting from the 1981 rule changes. This is partly because the proposed new deductions (i.e., $400 per minor and $300 for households with an elderly head) used to calculate adjusted income, against which a rent ratio is applied, will replace a mix of percentage-of-income deductions, variable deductions, and fixed dollar amounts. As inflation in incomes occurs, an increasingly large percentage of income will therefore be subject to the percent-of-income rent charge unless adjustments are made for inflation. The other reason is simply that incomes of tenants, and thus rental income, will increase at least somewhat in nominal dollar terms because of inflation.

Another uncertainty in projecting rent revenues relates to the implementation of a 1981 modification to the Aid to Families with Dependent Children (AFDC) legislation which gives states the right to treat HUD-assisted housing subsidies and food stamp grants as duplicative of the portions of the AFDC grant allocated for housing and food, respectively. Thus, the 60-70 percent of the grant typically alloted to housing and food could be withdrawn, which in turn would greatly reduce the income base against which a rent charge ratio is applied for public housing tenants. In a state with roughly median AFDC grant levels such as Ohio, where the maximum AFDC grant for a family of four with no other cash income was $327 a month in 1981, cash income could drop to about $114 a month. Under the 1981 rules and proposed regulations, public housing rents would drop from $68 to $14 a month as a result of this decline in income.

Roughly 33 percent of all public housing tenants receive AFDC grants. It is as of yet unclear how states will implement the discretion to count food stamps and HUD assistance as income. If, however, they all exercised maximum discretion, the outcome would be a massive loss in public housing

revenues even if the 1981 rent increases were fully implemented. Maximum state discretion is probably as unlikely as no state action on this matter. The possible effects of state AFDC grant discretion are so massive, and so contingent on unknown decisions, that no attempt is made to incorporate possible related impacts into any estimate provided in this report.

Finally, the model includes no information on non-rent related tenant mobility patterns not directly related to rent levels. It implicitly assumes, for instance, that tenants will not move out solely because a project begins to have more very low income tenants or a different racial mix. It also assumes that the reduction of income limits to 50 percent of area median family income for most tenants, as required by the 1981 Act, will have no additional program-wide effect on average incomes in public housing, beyond the effect of rent increases in inducing move-outs. This latter assumption should make little difference, since nearly all public housing tenants with incomes above the 50 percent of median income cut-off are likely to move out due to the 1981 legislated rent increases. HUD intends to devote to public housing part of the quota for admission of households with incomes between 50 and 80 percent of median permitted by the 1981 Act, but this is probably irrelvant for the same reason.

For most public housing tenants, program rents are extremely low relative to what they would be forced to pay on the private market. Such households are "rent-insensitive" relative to any of the rent increases being considered. For between 7 and 15 percent of all current tenants, however, participation in the program can be explained only by the fact that it is a somewhat "better deal" than the housing they could obtain in the private market. These households have incomes above 40 percent of area median family income.

The average tenant predicted by the model as likely to move had a 1980 income of about $12,000, paid a 1980 rent of $164 per month under old rules, and would have had to pay $282 per month in 1980 if the 1981 changes had been fully implemented. Such tenants are referred to as program "rent-sensitive".

REVENUE IMPACT OF THE 1981 CHANGES

Table 2-1 presents the impact of the 1981 changes during the five-year phase-in of those changes, expressed in 1980 dollars. The rental revenue estimates used for calculating subsidy for the analysis of funding systems elsewhere in this report assume that 1981 changes were fully phased in as of 1980. This makes possible comparisons among the systems and the "base cases" presented in later chapters without introducing the distortions that could result from improper inflation assumption. Confusion concerning which year of the rent change phase-in is being simulated is also reduced. Thus, the "full implementation" rent estimate from Table 2-1 is the basis for estimates readers will find elsewhere in the report relating to the cost of different program options.

The revenue estimates for Historical 1980 PFS are based on rents actually charged by PHAs as reflected in their rent rolls reported as part of their PFS subsidy calculation. In other words, they reflect both the 25 percent of income maximum charge and the lower charges by many PHAs for many households plus several types of adjustments. The revenue estimates for Comparison PFS are based on tenant incomes from a 1979 survey, up-dated to 1980 (Loux and Sadacca, 1980). They take into account allowances for tenant-paid utilities and otherwise are 30 percent of an adjusted income figure that is assumed to average 10 percent less than gross income. Gross income has been adjusted to reflect our estimate of moderate income household move-outs in response to rent increases. As already noted, there is probably an underestimate of move-outs, but, on the other hand, the change to fixed-dollar deductions means that over time inflation will reduce the value of the fixed dollar deduction to income to an amount much less than 10 percent of

TABLE 2-1

NET IMPACTS OF 1981 LAW ON PUBLIC HOUSING
RENT USING 1980 BASELINE INCOMES AND RENTS

	P.U.M. Impacts a/ (1980 Dollars)	Total Increase (Decrease) In Revenues (In Millions of 1980 Dollars)	Median Tenant Income As Percentage of Area Median Family Income
Total Actual Estimated 1980 Contract Rent:	$83.43	-0-	27.2%
Implementation of 1981 HCD Act with 10% annual rent increase limit:			
1982 -- 26% maximum rent ratio for existing tenants	(-4.70) b/	(-65m) b/	26.7%
1983 -- 27% "	+1.90	+26m	26.5%
1984 -- 28% "	+6.20	+86m	26.3%
1985 -- 29% "	+8.60	+119m	26.0%
1986 -- 30% "	+10.30	+143m	25.9%
Full Implementation (1988)	+10.00 c/	+139m c/	25.7%

Source: HUD, Office of Policy Development and Research, 1982.

Notes:

a/ "P.U.M." means per unit month.

b/ This decrease in revenue would occur if there were no rent increase constraints and this rate was left the same for the 3 to 4 years needed for all tenant responses to occur. In actuality, an initial increase in revenue is more likely because of these two factors.

c/ The loss of higher income households between 1986 implementation levels and 1988 full implementation results in an estimated loss of per unit rental income in 1980 constant dollars.

gross income. In addition, we have adjusted gross income for each PHA to reflect our average estimate of the effect of move-outs on income. Current rent structures, income levels, and the different quality of the public housing stock will probably result in higher move-outs for some authorities and lower move-outs for others. This, in turn, may affect the revenue changes for different PHAs in a manner significantly different than that shown in Table 2-1.

Table 2-1 also shows the effects of phasing in the 1981 rule changes, subject to the rent increase constraints previously described in Section 2.3 of this report. In practice, tenant rent increases will precede any resulting tenant move-outs by periods of up to in excess of a year. The largest change occurs from first year rent increases when tenants now paying fixed dollar ceiling rents will begin having rent increases of 10 percent in constant dollars, and larger increases in current dollars. The loss of higher income tenants as result of first year increases, and their replacement by households paying rents equal to the PHA average, results in a calculated net loss in program income. In fact, delayed tenant responses to higher rents are likely to avoid this effect. In subsequent years, rent increases generally outweigh the effects of losing those paying the highest rents.

Tables 2-2(A) and 2-2(B) show how the distribution of tenants in the program would have changed if the 1981 changes had been implemented several years prior to 1980. Statistics are shown for total family income, 1980 actual program rent, and estimated rent if the 1981 Act changes were fully implemented. The sample sizes available were not large enough to estimate impacts by PHA size and region, partly because the subset of households likely to be "rent-sensitive" and move is small. In general, however, PHAs that succeeded in carrying out the directive to achieve an income mix which included a number of moderate income tenants will be

Table 2(a)

TABLE: HOUSEHOLDS LIKELY TO MOVE AS RESULT OF 1981 STATUTORY RENT INCREASES

NUMBER / ROW PCT / COLUMN PCT / MEAN / MEDIAN /	ELDERLY HD 1 ADULT NO CHILD	ELDERLY HD 2+ ADULTS NO CHILD	ELDERLY HD 1 ADULT 1+ CHILD	ELDERLY HD 2+ ADULTS 1+ CHILD	NON-ELD HD 1 ADULT NO CHILD	NON-ELD HD 2+ ADULTS NO CHILD	NON-ELD HD 1 ADULT 1+ CHILD	NON-ELD HD 2+ ADULTS 1+ CHILD	TOTAL
0-20 PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OF MEDIAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OLD RENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEW RENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20-30 PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OF MEDIAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCOME80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OLD RENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEW RENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30-40 PCT	1,774.9	368.6	49.7	185.6	73.2	154.2	39.2	41.8	2,687.1
OF MEDIAN	66.1	13.7	1.8	6.9	2.7	5.7	1.5	1.6	100.0
INCOME	7.7	1.6	4.3	3.3	1.2	1.0	.1	.1	1.9
INCOME80	5,454.5	6,665.9	6,227.9	7,624.0	5,406.8	6,628.8	8,031.7	7,519.4	5,920.6
OLD RENT	97.5	118.9	99.6	125.0	97.8	119.0	120.1	106.1	104.1
NEW RENT	128.4	158.6	131.5	163.3	134.8	165.3	167.5	166.3	138.5
40-50 PCT	10,387.7	6,665.5	376.4	1,019.4	792.0	1,678.1	3,327.5	1,173.6	25,420.4
OF MEDIAN	40.9	26.2	1.5	4.0	3.1	6.6	13.1	4.6	100.0
INCOME	44.9	28.6	32.5	18.1	13.3	11.0	11.8	2.9	17.7
INCOME80	6,437.8	7,488.3	8,342.2	9,591.0	6,575.2	7,827.8	9,115.0	9,951.0	7,476.6
OLD RENT	115.8	130.2	125.3	146.9	118.1	133.5	137.4	153.4	126.8
NEW RENT	153.0	179.2	181.9	212.6	163.9	195.2	202.8	224.8	175.6
50+	10,975.8	16,263.8	731.9	4,433.2	5,105.0	13,490.4	24,730.3	39,940.7	115,671.1
OF MEDIAN	9.5	14.1	.6	3.8	4.4	11.7	21.4	34.5	100.0
INCOME	47.4	69.8	63.2	78.6	85.5	88.0	88.0	97.0	80.5
INCOME80	8,552.4	10,954.8	11,655.0	14,247.7	9,981.1	12,986.1	11,986.5	16,111.4	13,052.5
OLD RENT	140.7	162.8	151.6	182.4	150.1	170.4	167.1	193.4	173.2
NEW RENT	205.8	265.9	266.4	327.8	248.9	324.2	277.3	375.9	309.1
TOTAL	23,138.4	23,297.9	1,158.0	5,638.2	5,970.2	15,322.8	28,097.0	41,156.1	143,778.6
	16.1	16.2	.8	3.9	4.2	10.7	19.5	28.6	100.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
INCOME80	7,365.4	9,895.2	10,345.4	13,187.7	9,473.2	12,357.2	11,640.9	15,927.0	11,933.4
OLD RENT	126.2	152.8	140.8	174.1	145.2	165.8	163.5	192.2	163.7
NEW RENT	176.2	239.4	233.1	301.6	236.2	308.4	268.4	371.4	282.3

SOURCE: MICRO-SIMULATION SYSTEM, OFFICE OF POLICY DEVELOPMENT AND RESEARCH, HUD
THURSDAY, MARCH 25, 1982

Table 2(b)

TABLE: HOUSEHOLDS UNLIKELY TO MOVE AS RESULT OF 1981 STATUTORY RENT INCREASES

NUMBER / ROW PCT / COLUMN PCT / MEAN / MEAN / MEAN /	ELDERLY HD 1 ADULT NO CHILD	ELDERLY HD 2+ ADULTS NO CHILD	ELDERLY HD 1 ADULT 1+ CHILD	ELDERLY HD 2+ ADULTS 1+ CHILD	NON-ELD HD 1 ADULT NO CHILD	NON-ELD HD 2+ ADULTS NO CHILD	NON-ELD HD 1 ADULT 1+ CHILD	NON-ELD HD 2+ ADULTS 1+ CHILD	TOTAL
0-20 PCT	77,717.0	7,172.6	3,735.3	1,654.6	35,747.9	9,833.6	115,953.4	20,304.9	272,119.4
OF MEDIAN	28.6	2.6	1.4	.6	13.1	3.6	42.6	7.5	100.0
INCOME	17.1	9.1	32.2	11.4	41.9	28.3	39.2	14.5	24.4
INCOMEBO	2,580.5	2,793.2	2,828.5	3,158.2	2,367.7	2,527.3	2,895.3	3,032.1	2,731.0
OLD RENT	47.8	50.9	46.0	47.3	46.5	48.0	42.9	43.5	45.3
NEW RENT	56.5	61.8	49.2	52.8	58.7	62.7	49.8	50.9	53.8
20-30 PCT	278,371.9	24,453.2	5,366.4	5,729.7	36,634.1	10,262.2	98,568.3	37,002.6	496,388.4
OF MEDIAN	56.1	4.9	1.1	1.2	7.4	2.1	19.9	7.5	100.0
INCOME	61.4	30.9	46.2	39.6	43.0	29.5	33.3	26.5	44.6
INCOMEBO	3,341.5	4,096.3	4,096.9	4,946.8	3,201.1	4,055.9	4,831.9	5,298.7	3,851.6
OLD RENT	61.3	73.9	68.4	78.5	60.1	75.0	82.0	83.2	68.1
NEW RENT	75.5	94.4	78.9	96.0	79.5	100.9	90.0	102.0	82.4
30-40 PCT	82,019.5	30,162.0	2,106.8	4,911.6	8,006.4	8,487.4	42,510.2	37,081.0	215,284.9
OF MEDIAN	38.1	14.0	1.0	2.3	3.7	3.9	19.7	17.2	100.0
INCOME	18.1	38.1	18.2	33.9	9.4	24.4	14.4	26.5	19.3
INCOMEBO	4,619.7	5,439.8	5,849.7	6,962.5	4,615.9	5,537.2	6,722.3	7,284.1	5,710.2
OLD RENT	83.8	97.2	96.6	108.6	85.3	99.3	107.9	115.2	97.2
NEW RENT	107.5	128.0	120.9	144.2	114.8	138.0	137.1	150.2	126.0
40-50 PCT	13,791.0	15,017.0	345.0	1,772.2	3,081.8	4,678.9	30,120.2	28,855.0	97,661.2
OF MEDIAN	14.1	15.4	.4	1.8	3.2	4.8	30.8	29.5	100.0
INCOME	3.0	19.0	3.0	12.2	3.6	13.5	10.2	20.7	8.8
INCOMEBO	5,840.3	6,745.7	6,842.5	8,629.3	6,073.1	6,965.7	8,016.2	9,145.6	7,742.6
OLD RENT	105.7	118.4	114.6	137.7	109.9	125.0	128.2	144.3	127.7
NEW RENT	138.0	160.7	147.4	184.3	150.8	173.7	175.2	198.5	173.8
50+	1,390.6	2,381.3	49.7	413.0	1,753.9	1,469.0	8,411.6	16,436.3	32,305.4
OF MEDIAN	4.3	7.4	.2	1.3	5.4	4.5	26.0	50.9	100.0
INCOME	.3	3.0	.4	2.9	2.1	4.2	2.8	11.8	2.9
INCOMEBO	7,013.0	8,194.6	8,503.3	10,384.2	7,377.3	8,271.8	9,270.8	11,232.8	9,957.3
OLD RENT	122.5	138.2	153.2	162.3	129.8	141.7	149.3	173.0	158.2
NEW RENT	167.3	196.9	187.9	226.7	182.7	206.3	208.3	249.7	225.5
TOTAL	453,290.1	79,186.0	11,603.2	14,481.1	85,224.2	34,731.1	295,563.6	139,680.01	113,759.3
	40.7	7.1	1.0	1.3	7.7	3.1	26.5	12.5	100.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
INCOMEBO	3,529.6	5,115.7	4,107.3	6,031.8	3,174.2	4,555.4	4,794.9	6,989.3	4,455.4
OLD RENT	64.6	91.1	68.0	94.8	60.0	82.9	77.0	109.1	76.0
NEW RENT	80.2	119.9	79.4	121.9	78.8	113.4	93.0	144.7	96.0

SOURCE: MICRO-SIMULATION SYSTEM, OFFICE OF POLICY DEVELOPMENT AND RESEARCH, HUD
THURSDAY, MARCH 25, 1982

relatively adversely affected in terms of revenues, since they will lose most of these moderate income tenants who pay the highest rents. PHAs which serve mostly very low-income tenants will have significant revenue increases.

Table 2-3 shows the increase in revenue in 1980 dollars brought about by full implementation of the 1981 changes. Our estimate is that these changes would have reduced the cost to the Federal Government of public housing operating subsidies by about $100 million in 1980, and possibly as much as $139 million. The less optimistic assumption was used in the FY 1983 HUD budget planning estimates for FY 1984 through FY 1987 for reasons noted in Appendix 2-2.

2.5 FURTHER CHANGES IN RENT RULES

Table 2-4 provides estimates of the impact of a number of additional rent rule changes that might be applied in a further attempt to increase PHA revenues and reduce public housing costs to the Federal Government. The estimates of the revenue generated by these changes assume that the 1981 changes have already been fully implemented. They include estimates of further move-outs by relatively higher-income tenants resulting from the rent increases which would accompany the proposals discussed. The first two have been proposed as part of the FY 1983 HUD budget and legislative program.

ELIMINATE NEGATIVE RENTS

The phrase "negative rent" is used to refer to instances where a tenant receives a payment from a PHA because the allowance for tenant-paid utility bills exceeds the the tenant's rent contribution. For instance, a tenant could have an adjusted income of $2,900, a monthly rent charge of $60, and be responsible for directly paying for electricity in an all-electricity unit. If the PHA-estimated allowance for normal utility use was $80 a month for electricity, the PHA would write a check to the tenant for $20.

Table 2-3

NATIONAL COSTS OF THE PFS IN 1980: HISTORICAL PFS, THE COMPARISON CASE AND REVENUE INCREASE ESTIMATE

	Millions of 1980 Dollars		
	HISTORICAL (1980) PERFORMANCE FUNDING SYSTEM	COMPARISON PFS	DIFFERENCE
Operating Subsidy	875	835 (712) b/	-40 (-163)
PHA Rental and Other Income	989	1085 (1219) b/	+96 (+230)
Total Funds Available a/	1864	1920	+56

SAMPLE: PFS Analysis Sample, N = 314.
DATA SOURCES: PFS Cross Section Analytic Data Base.
NOTES: a/ Total Funds Available, the sum of subsidy and PHA revenue, differ slightly from total costs: PHAs that would rceive "negative" subsidy under a formula where Subsidy = Costs - Revenue are recorded as receiving zero subsidy. See Chapter 1 for further explanation of Comparison PFS.

b/ Numbers in parentheses are those used for the "base case" (comparison PFS) and for the revenue side of the alternative funding systems analyzed in Chapters 4 through 9 of this report. They overstate the difference in revenue from historical 1980 PFS since they have not been adjusted to account for vacancies and for data base differences.

Table 2-4

IMPACT OF ADDITIONAL CHANGES TO RENT RULES

	P.U.M. Revenue Increases (Non-additive) (1980 Dollars)	Total Increase in Revenue (In Millions of 1980 Dollars)	Median Tenant Income as a Percentage of Area Median Family Income
Eliminate negative rent payments to tenants	+$ .50	$6-7m	25.7%*
Count Food Stamps as income	+13.50	187m	**
$50/month minimum rent	1.40	19m	25.7%
$100/month minimum rent	20.10	279m	**
Charge 30% of total income	10.50	147m	25.3%
Charge 35% of adjusted income	+9.00	125m	25.0%
Set rent ceiling at 50 percent of Section 8 Existing Fair Market Rents	+.90 to + 4.10***	12 to 59m	25.3%

* Median income after full implementation of 1981 changes. Possible move-outs among the very lowest income tenants not included in this estimate, but the impact on revenues would be positive.

** Probable impact would be to raise median income above 25.7% of median level, since some very low income families would leave the program.

*** Impacts highly sensitive to tenant rent-sensitivity assumptions.

In PHA terminology, there is a "negative rent" of $20 a month paid to the tenant. Since relatively few instances of negative rents of this type occur, the increased revenue from eliminating them would be small, about $6 or $7 million annually for the entire Public Housing Program.

The elimination of explicit negative rents would affect only the very lowest income public housing tenants, those who are "rent insensitive" because they are not likely to find better alterntives in the private market at their public housing rents. Therefore, there would be little or no effect on the income distribution of public housing tenants as a result of this change. Any change which did occur would be a result of forcing out households unable to pay their utility bills. It might also induce some PHAs to move away from tenant-paid utilities.

There are really two kinds of utility-related negative rents. The first is the explicit type just discussed. The other is a less obvious, "implicit" type, which occurs when the PHA is directly billed for utilities, and tenant rent contributions are less than the average amount paid for utilities by the PHA. It is extremely difficult to assign a cost estimate to this latter type of negative rent, and no such attempt is made in this report. In the absence of individual metering or check metering, there is normally no reasonable way of relating utility consumption to a particular building except by using an arbitrary project or PHA-related average. Use of the average PHA utility consumption to set a minimum rent would have no relationship to actual utility consumption, nor would it provide any direct incentives to tenants for energy conservation.

Probably the most effective means of achieving tenant utility conservation is a system involving individual metering and billing for all utilities, with any utilization in excess of a reasonable "utility allowance" treated as an addition to the monthly rent charge. This is now done with all major utilities in only a relatively small number of projects, primarily because of (1) the cost of converting master metering to individual metering and (2) because the heating plants in some projects make individual

metering infeasible. To the maximum extent possible, individual metering is included in modernization and new construction funding, but these offer only very gradual improvement potentials. Use of "check metering" and related measures should be considered when feasible, and offer potential for significant savings. From a public policy perspective, movement towards individual metering is highly desirable.

COUNT FOOD STAMPS AS INCOME

About one-half of all public housing tenants receive food stamps. Most such tenants are relatively "rent-insensitive", and would have no private market housing option available if their rent increased as a result of counting food stamps as income for rent calculation purposes. The amounts of money involved are large since food stamps often equal as much as 30 to 50 percent of a recipient public housing tenant's cash income. Counting food stamps as income would most adversely affect those of lowest income in the program.

The argument for counting food stamps as income for rent calculation purposes is simply that it is, for almost all purposes, the same as income. Therefore the Department of Housing and Urban Development has proposed that the statutory prohibition against doing so be removed.

FIXED DOLLAR MINIMUM RENTS

Reinstituting fixed dollar minimum rent charges would affect those of lowest income. A $100 minimum rent charge would have required about 22 percent of all Public Housing tenants to pay more than 50 percent of income for rent in 1980 and would affect about one-third of all program tenants in FY 1982. Fixed dollar rent charges would affect all very low income households in a uniform manner. The impact of fixed dollar rent floors set at any given level will decrease over time with inflation, unless an inflation adjustment is included.

Few tenants would probably leave as a result of a $50 or $100 minimum rent charge. About 53 percent of those affected by a $100 minimum rent would be elderly, and another 9 percent disabled or handicapped non-elderly. Those who would leave would probably move in with relatives, double up in one-household units, or move into private rental units costing less than $100 a month.

The secondary impacts of minimum rent charges have not yet been analyzed in any detail. Those secondary impacts that would occur would be positive in terms of revenue, since replacement households would tend to have average monthly rent charges of more than $100.

CHARGE 30 PERCENT OF TOTAL INCOME

Work done to date on the number and types of households likely to move out of public housing (see Table 2-2) in response to rent increases suggest that most tenants remaining in the program once a 30 percent of adjusted income rent charge is fully implemented will be relatively "rent-insensitive". That is, they are not significantly more likely to leave the program because of marginal increases in rents. Raising rent charges from 30 percent of adjusted to 30 percent of gross income would, therefore, be likely to have at least as large a positive impact on revenues as the revenue savings from going from 25 to 30 percent of adjusted income.

Large families would be the most adversely affected by this measure, since their adjusted income would be the most different from total income if the currently proposed regulations to implement the 1981 Act's provisions are implemented.

CHARGE 35 PERCENT OF ADJUSTED INCOME FOR RENT

The impact of charging 35 percent of adjusted income would, as expected, be somewhat smaller in terms of revenue increases than the impact of charging 30 percent of total income. Interestingly, more "higher income" households would be retained, since large, rent-sensitive families would have smaller rent increases at 35 percent of adjusted income than at 30 percent of gross income. Elderly and other small households would be required to pay higher rents under this proposal than under the 30 percent of gross income rent charge proposal.

USE 50 PERCENT OF SECTION 8 EXISTING FMR AS RENT CEILING

Imposing a rent ceiling could, if carefully calculated, result in retention of some relatively higher income households. Establishing a rent ceilings in order to maximize revenue should, however, be done only after consensus is reached on basic program objectives.

The idea of using ceiling rents to retain higher income tenants is not new. From 1959 until the 1981 Act PHAs had the discretion to set maximum fixed dollar rent ceilings that were lower than percentage-of-income rents. At present, moderate income renters pay the highest dollar rents but the lowest percentage-of-income rents.1/ It is only because public housing rents are low that most such households remain in the program. If properly set, ceiling rents can serve to increase program rent revenues by retaining moderate income households.

1/ "Moderate income" is defined to mean program income-eligible households with incomes above 40 percent of area median income. Such households typically have at least one full-time working member or are relatively well-off elderly households.

Moderate income households appear, on average, to place a low value on most public housing compared with private market units with similar characteristics. Deciding at what level ceiling rents should be set to maximize revenues is extremely tricky, since it involves estimating the market value of a public housing unit relative to a "comparable" private market unit not located in a project. Fifty percent of local Section 8 Existing Fair Market Rent (assuming FMRs are set at the 50th percentile of all area rental units) was selected as a rent ceiling after some very limited sensitivity testing, but is probably the right order of magnitude if a single standard is to be used. PHA discretion on a project by project basis would be likely to produce much better results than use of a single standard if incentives were structured to maximize revenues.

GIVE ADMISSION PRIORITIES TO HIGHER INCOME FAMILIES
(With or without change in 1981 statutory income admission policies)

Simply giving an admission priority to higher income families would be very unlikely to increase higher income household participation, since it would not of itself negate the reasons why such households currently continue to leave the program. The history of the program indicates that a level of skepticism is appropriate in considering measures to increase the number of relatively higher income tentants. Even the relatively drastic actions contained in the Housing Act of 1959 had no effect on reversing the loss of higher income tenants.

Moderate income households will participate in public housing only if the program units made available are acceptable and a "good deal" relative to private market options. This means they tend to reject very low income projects in poor locations, and wait for more desirable units, once they reach the top of the admission waiting list. Poorer households cannot generally afford to wait, and take whatever is available. The 1981 Act

will increase program rent charges, and make moderate income households even more selective in their choices. Aside from other forces at play, this would tend to produce a lower income mix and correspondingly few units which are "good deals" for moderate income households. It will be difficult to formulate an income mix policy with substantial effect in these circumstances.

2.6 IMPLICATIONS OF INCREASING RENTS FOR THE PUBLIC HOUSING PROGRAM

The previous discussion is seriously lacking in one essential respect -- it fails to analyze the options presented in light of what the program is intended to do. What it does show is that there are direct trade-offs in meeting some objectives. For instance, reducing Federal program subsidies is inconsistent with serving only the very poorest households, and a 30 percent of adjusted income rent ratio is inconsistent with retaining any of the tenants with incomes above 50 percent of area median who now pay the highest rents. An internally consistent set of policy objectives with recognition of the trade-offs inherent in the objectives selected is needed.

The major findings of this chapter may be summarized as follows:

- Revenue changes resulting from rent increases initially serve to increase rents in a manner directly proportional to the changes. Secondary and equally important impacts can also occur, as tenant participation patterns change in response to rent charge changes. An estimated 10-14 percent of current public housing tenants are likely to gradually move out as a result of 1981 legislative changes.

- A 30 percent of adjusted income rent charge will produce much less than a 20 percent increase in revenues (the increase from a 25 to a 30 percent of adjusted income rent charge equals 20 percent). The actual increases would be larger than 20 percent in the absence of

move-outs by higher income tenants because of definitional changes in the way adjusted income is calculated, but actual rent revenue increases resulting from the 1981 Act are likely to be less than the 12 percent estimate in Table 2-1 because of secondary impacts (i.e., move-outs by higher income tenants) and secular trend patterns in tenant incomes.

- Even without admission income limit restrictions, less than 2 percent of the public housing stock is likely to be occupied by households with incomes above 50 percent of median area income once a 30 percent of adjusted income rent charge is fully in place.

- Measures which increase the rents only of very low income tenants have the most positive influence on rent revenues. Such measures include counting food stamps as income, charging fixed dollar minimum rents, eliminating so-called "negative rents," and setting utility charges as minimum rents.

Chapter 11 will discuss the implications of letting decisions on rent and income rules -- and therefore on basic program objectives -- be made PHA by PHA on the local level.

2.7 IMPLICATIONS OF INCREASING RENTS FOR PUBLIC HOUSING SUBSIDY SYSTEMS

The alternative housing subsidy systems discussed later in this report will all be influenced by any changes made in rent charges. The influences are significant, but vary with the type of subsidy system used.

The most obvious impact of increasing rents is that it makes all systems cheaper to the Federal Government to the extent average rents are increased, and costs shifted from the Federal Government to tenants. This is reflected in the revenue side of all alternatives, where subsidy costs are assumed to have been reduced by measures in the 1981 Act to increase rents.

There will be some reduction in the income levels of tenants in response to increased rents. The change in the types of tenants served may in turn effect program costs. Increasing the number of very low income single-parent households on welfare, while decreasing the number of small, two adult households, is generally thought to result in operating cost increases. Under a cost-based subsidy system, an increase in very low income tenants might be grounds for an appeal to increase base allowable expenses. Increasing the percentage of very low income tenants would, of itself, make all of the subsidy systems discussed except vouchers harder to run within cost constraints.

The impact of any changes in tenants types on a voucher system will be highly dependent on the timing of the rent increases vis-a-vis the timing of the switch to vouchers. If the rent increases are largely phased in before a change to vouchers occurs, the households most likely to use their vouchers to move out of pubic housing may already have done so.

To the extent rental revenues increase as a result of changes PHAs are required to make to increase rents, PHAs should not simply be permitted to keep and spend the increase. Most or all increases should be offset by reductions in subsidies. Any incentive for increasing rent levels should be designed to distinguish between increases in tenant incomes as opposed to increased amounts due solely to Federally-required rent increases. Such an incentive will be discussed in Chapter 6 of this report.

Period	Income Admission Policies	Rent Charge Policies	Income Mix Policies	Tenant Mix/ Financial Impact
1. 1937-1949	Limited to 2 or more person families of low income. "Families of low income" were defined as: 1) those "whose net income at the time of admission does not exceed five times the rental (including the value of head, light, water, and cooking fuel) of the dwelling unit." For families with three or more minors, the admission ratio was six-to-one. 2) those "who cannot afford to pay enough to cause private enterprise in their locality or metropolitan area to build an adequate supply of decent, safe and sanitary dwellings for their use." This definition resulted in income limits tied to the cost of providing Public Housing.	1. Determined by PHA. Rents had to equal or exceed 20 percent of a family's net income. Rental income had to pay for all operating expenses and include an allowance for an operating reserve.	1. No explicit policies. Implicit policy was that income of most tenants had to equal or exceed operating costs.	1. Tenants were primarily working households of modest income. The median income of the average tenant is believed to have been in the 50-70 percent of median family income range. PHAs' rental income paid for all operating costs, provided sizeable cash reserves, and paid for over 80 percent of all long term project capital costs. At least some of these positive financial conditions were due to the shortage of housing for defense workers, and the resulting high income mix.

Period	Income Admission Policies	Rent Charge Policies	Income Mix Policies	Tenant Mix/ Financial Impact
2. 1949-1959	The following new rules were added: - A 20% rent gap was established between the top rent of public housing in the locality and the bottom rent at which unaided private enterprise could provide an adequate supply of decent housing (existing as well as new). Since public housing tenants were required to pay a minimum of 20% of their income for rent, the new rent gap produced lower local income limits. - Maximum income limits for admission and continued occupancy and mandatory removal of over-income households were required. - Discrimination against welfare families was prohibited. - Priority was given to families displaced by public construction and urban renewal.	2. No change, except in relation to calculation of net income.	2. The decision to limit public housing to the poor, to prevent competition with private rentals, and to require admitting families who could not afford rents high enough to cover operating charges reflected a decision to target the program at a lower income mix.	2. Debt service subsidies increased as rent revenues fell. Very low income urban renewal displacees became a significant share of new tenants. Administration or lower income tenants believe to contribute to move-outs by higher income tenants. Median family income fell from 64 percent to about 48 percent over the 1949 to 1959 period.

Period	Income Admission Policies	Rent Charge Policies	Income Mix Policies	Tenant Mix/ Financial Impact
	- Attention was directed to large families by shifting cost limits from a per unit to a per room basis and by mandating an exemption of $100 for each minor in calculating net income for admission and for continued occupancy. Income limits were set by PHAs but subject to Federal approval. The Housing Act of 1956 extended the definition of "family" to include elderly individuals.			
1959-1969	Extension of definition of "family" to include individuals who where handicapped, the remaining member of a household, urban renewal displacees, and certain other groups.	Elimination of minimum rent to income ratio of 20 percent so-as to attempt to attract, as well as retain, higher income tenants. It was explicitly decided that a 20% rent ratio was too	Return to higher income mix with more working families sought. 1959 legislation instructed local authorities to take into account the financial stability and	The attempt to retain higher income tenants was a failure. Relative private market housing costs declined during the 1960s and the housing choices of the more prosperous poor widened. The heavy emphasis on elderly housing during the 1960s

Period	Income Admission Policies	Rent Charge Policies	Income Mix Policies	Tenant Mix/ Financial Impact
		high to attract moderate income households.	solvency of projects in selecting tenants.	(accounting for over 50% of all new construction) further reduced the ability of PHAs to attract higher income tenants. Median tenant incomes fell from about 48% of the national median family income in 1959 to about 34% in 1969. Operating subsidies of $10 per month became conditionally available for each elderly household in 1961. Unusually low income and unusually large families became eligible for this subsidy in 1968. By 1969, net PHA contributions to debt service (i.e., aggregate excess residual rent receipts minus aggregate operating subsidies) had disappeared.
1969-1974	No significant changes.	The "Brooke Admendments" resulted in the following changes: - Brooke I (1969) placed a statutory ceiling on	PHAs were encouraged by a 1970 HUD policy to attempt to maintain a "income mix" of higher as well as lower income tenants in admit-	Increases in social security and welfare benefits offset part of the revenue losses from the continuing decline of higher income tenants. The Brooke Amendments necessitated provision of

APPENDIX 2-1 (cont.)

PUBLIC HOUSING INCOME ELIGIBILITY AND RENT POLICIES: 1937-1982

Period	Income Admission Policies	Rent Charge Policies	Income Mix Policies	Tenant Mix/ Financial Impact
		rental charges to tenants of 25% of adjusted income; - Brooke II (1970) defined the types and amounts of deductions and exemptions to be used in calculating the "adjusted income" used in determining rent charges. General result was increased deductions. - Brooke III (1971) made it clear that the 25 percent limitation applied to families receiving public assistance, and that their welfare benefits should not be cut because of any decrease in rent resulting from Broke I or II. - A minimum average rent-to-adjusted-income ratio of 20 percent was administratively required for operating subsidy eligibility.	ting tenants. This policy was overthrown by a 1974 court decision, which ruled it lacked a statutory basis.	operating subsidies to offset decline in rental income. The continued decline in renter incomes decreased rent revenues, and caused large increases in operating subsidy amounts. Declines in real dollar rent income plus increases in program units explain most of the increased need for operating subsidies in the 1970s. The Brooke Amendments had the effect of causing significant reductions in PHA rental income.

Period	Income Admission Policies	Rent Charge Policies	Income Mix Policies	Tenant Mix/ Financial Impact
1975-1981	The HCD Act of 1974 resulted in the following changes: - repeal of the "20 percent gap" in assisted housing and private market rents; - administratively established income limits that were normally required to be "within a range of 80-90 percent of the HUD-approved Section 8 locality income limits for a 4-person family, with adjustments for smaller and larger families." - "establishment of tenant selection criteria designed to ensure that... the project will include families with a broad range	No significant changes - set minimum rent as higher of 5 percent of gross or actual adjusted income rate, and permitted using welfare rent as minimum rent charge for those receiving welfare assistance.	Explicit statutory and regulatory direction to achieve an "income mix" which included more higher income tenants (i.e., tenants with incomes over 50 percent of the median area family income). The 1974 legislation also added a requirement that at least 20 percent of all households served must be of very low income, but the majority of tenants already fell into this category.	The median income of PHA tenants continued to decline, but at a somewhat slower rate as tenant incomes "bottomed out" at the welfare or social security income levels. Rental income continued to decline in real terms, leading to increasing Federal operating subsidy outlays. Operating expenses increased much faster than tenant incomes during this period. Rapidly increasing utility costs had a much bigger impact on those of low income than on the population as a whole. In public housing, the result was a proportional increase in operating subsidy needs.

Period	Income Admission Policies	Rent Charge Policies	Income Mix Policies	Tenant Mix/ Financial Impact
	of incomes and will avoid undue concentrations of low-income and deprived families with serious social problems..." - deleted statutory requirement for continued occupancy income limits			
1981 HCD Act onward	The 1981 HCD Act contained major changes in admission policies: - application of Section 8 income limits to the Public Housing program - a requirement that 95 percent of all tenants admitted to new United States Housing Act housing, and 90 percent of all current tenants, be of "very low income" (i.e., with incomes no more than 50 percent of area median family income).	The 1981 HCD Act contained the following provisions: - the PHA option of establishing fixed dollar rent ceilings was abolished - "adjustments to income" were simplified - the rent-to-adjusted income charge was increased to the higher of 30 percent of adjusted income, 10 percent of gross income, or the welfare rent	The 1981 HCD Act effectively over-ruled the 1974 legislation requiring an "income mix", since it eliminated the possibility of admitting more than a few tenants with incomes over 50 percent of area median income.	The 1981 HCD Act will accelerate the decline in tenants with incomes over 50 percent of area median income. This will tend to decrease rent revenues, a tendency which may be more than compensated for by increases tenant rent charges.

APPENDIX 2-1 (cont.)

PUBLIC HOUSING INCOME ELIGIBILITY AND RENT POLICIES: 1937-1982

Period	Income Admission Policies	Rent Charge Policies	Income Mix Policies	Tenant Mix/ Financial Impact
	To implement the 95 percent rule, HUD currently plans to implement regulations permitting that only very low income applicants can be admitted in Public Housing.	- an annual limit on rent increases due solely to changes in the 1981 HCD Act of 10 percent a year was required - discretion to set other constraints on rent increases was given to the Secretary of HUD. The 1981 legislation defines rent charges such that there is a single formula rent applicable to each tenant. There is no longer any PHA discretion with respect to setting minimum or maximum rents.		

APPENDIX 2-2

DATA SOURCES AND METHODOLOGY

Data Sources:

Detailed data on Public Housing Program participants are available from the Subsidized Housing and Continued Occupancy system (SHACO), a sample obtained during 1979-80 as part of a certification-recertification process study, and a special sample of 10,000 tenants collected for HUD by the Urban Institute in 1979. Comparable private market data were obtained from the 1979 Annual Housing Survey. The Urban Institute sample was primarily used in preparing the estimates in Chapter 2, although results were selectively cross-checked with other data.

HUD's Office of Policy Development and Research's Research Inquiry System was used to merge Annual Housing Survey, Urban Institute, SHACO, LIAPS, Section 8 Fair Market Rent, HUD housing project, and area median income and market data files. All data used were from 1979. Comparative SMSA level data were available for the 126 largest SMSAs, and other data were compared using Census Region, metropolitan/non-metropolitan categorizations.

Methodology:

The probability a household will not reside in assisted housing in a given market can be quantified as a function of household income, family size, private market rents, and assisted housing rents. These relationships can be demonstrated graphically, although use of nationally aggregated averages or medians on data of this type are of limited usefulness because of the significant differences in income and rent structures from housing market to housing market.

For the purposes of this study the income ranges within which assisted housing household behavior was sensitive to changes in rent charges were identified by household income and size categories. Based on the applicable private market rents paid by the household's private market cohort balance,

and on comparisons with actual program participation rates, the rent level at which a household is highly unlikely to reside in subsidized housing can be estimated within specified ranges. Household sensitivity to program rents can then be examined as a function of family size, income, and private versus assisted housing rent charges. In some markets the sensitivity point is as low as 30 percent of area median while in others it is as high as 50 to 70 percent of area median income for large families or households with unusually high program deductions from income-for-rent calculation purposes.

Estimates are based on the observation that literally all progam participation by households with incomes above 50 percent of area median income can be explained by the fact that their pre-HCD Act of 1981 program rents are lower than rents paid for units of "acceptable quality" by the household's private market income/family size cohort. Housing quality is not treated as an independent determinant of participant behavior. Other assumptions made relate to the manner increases in rent or income definitions are translated into shifts in income distributions, and how how these shifts effect rent revenues. These and other assumptions made are as follows:

1) Low rent ceilings in Public Housing will be eliminated, as is done in the proposed regulations, with the result that higher income households would be charged percentage-of-income rents.

2) Rent ratio changes will be made in accordance with draft January 1982 HUD regulations. These regulations provide for a 1 percent a year increase in rent-income ratios for existing tenants until a 30 percent of adjusted income ratio is reached. A Congressionally set constraints of 10 percent a year on rent increases due solely to changes in the 1981 Act is also applicable.

3) No household in the "rent-insensitive" segment of the income distribution would leave assisted housing as a result of any of the changes being considered. This assumption is questionable, especially if high minimum dollar rents are imposed.

4) Households in the rent-sensitive segment of the income distribution would seek private market housing once it became "competitive" with assisted housing rents. A move-out was assumed to occur if rents were increased such that there was a 99.5% likelihood that an eligible household of a given income level would not be likely to reside in assisted housing, as measured by current rent patterns. The "likelihood" referred to was expressed as a functional relationship between Section 8 Existing Fair Market Rents and observed tenant rent structures for different income groups and family types in a locality.

5) The income distribution of tenants occupying new units and replacing move-outs was assumed to be the same as the income distribution of remaining tenants. There are reasons to assume it could be lower, but the question does not lend itself to meaningful analysis.

6) Changes in income definitions and rent changes were assumed to have immediate impacts.

7) New tenants will be charged 30 percent of adjusted income for rent. Since the proposed policy governing implementation of the HCD Act of 1981 applies a 30 percent rent charge to all new tenants, it is necessary to adjust for turnover in determining the applicable percentage of income rent charge. The model used applied a 14 percent

normal annual turnover rate assumption based on recent program experience. Those not subject to the 30% of income rent ratio are a declining balance relative to turnover. Mid-FY 1982 implementation was assumed. The results of these assumptions are as follows:

FY	Maximum Rent Ratio for Existing Tenants	Rent Ratio of New Tenants	Move-ins Subject to 30% Rule as % of all Tenants
1982	26%	30%	3.5%
1983	27%	30%	13.5%
1984	28%	30%	25.6%
1985	29%	30%	36.0%
1986	30%	30%	44.9%

The sensitivity ranges selected to calculate the minimuim and maximum probable outcomes of rent charge changes are relatively large, but the approach does not lend itself to error or probability analysis. The potential for error is, however, significantly reduced by the tendency for upward shifts in rent burden to be partially compensated for by downward shifts in program income distribution patterns within the range of changes examined. This type of offsetting behavior would be far less noticeable if rent-to-income ratios were being changed from 30-35 percent, since it is in the 25 to 30 percent range that interaction with the private market is most noticeable.

The major flaw with the approach used is that it implicitly assumes that no tenants above the low participation threshold points selected are likely to leave the program due to higher rents. The information presented in Figure 2-1, however, shows that there has been a downward secular trend in income distribution independent of rent policy changes. It can be

concluded that this assumption will therefore tend to result in an overstatement of rental income. What sensitivity testing has been attempted, however, suggests that the method used covers most of the move-outs likely to result. More work is being undertaken which should result in better estimates by late 1982. To the extent the model used has a bias, it is in the direction of understating probable move-outs among higher income tenants. This flaw will tend to result in an overstatement of revenues, but without further research it cannot be determined if the bias is significant.

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CHAPTER III

ELIMINATING HIGH-COST PROJECTS FROM THE PUBLIC HOUSING INVENTORY

3.0 INTRODUCTION

In addition to increasing rents charged to tenants, another means of reducing the funding levels needed for operating public housing is eliminating high-cost projects and making certain that the funding system reflects the resulting decrease in a PHA's average costs. At first glance, it would seem that any reduction in the public housing inventory reduces the costs to the Federal Government of operating the Public Housing Program. Such reductions in the inventory could occur through PHAs' selling projects, demolishing them or boarding them up. It is not necessarily the case, however, that PHAs' eliminating some of their projects would save the Federal Government money. The Government may have on-going obligations that cannot be ended simply by closing down projects.

First, the Government is legally committed to pay the outstanding debt incurred to finance the capital costs of the construction and subsequent rehabilitation of public housing projects. This commitment has been made both to the PHA and to the holders of public housing bonds and notes and is backed by the "full faith and credit of the United States." Thus, unless a project can be sold for enough money to cover the outstanding debt, the Government must continue to make debt service payments (annual contributions) until that debt has been paid in full.

A second obligation is to the current occupants of public housing units. It may be very difficult for a PHA to take actions that result in the displacement of low-income tenants without providing alternative affordable housing. We will assume, therefore, that a Section 8 Existing or housing voucher

certificate must be provided to any displaced public housing tenants who cannot be moved into vacant units in other public housing projects. We will also assume that the Section 8 or voucher subsidy would have the same duration as the continued funding of public housing. In other words, disposing of public housing projects is a cost-saving strategy, but it is not a strategy for reducing the number of households served by low-income housing programs.

Because of funding requirements that continue after a project is taken out of the public housing stock, the Government might lose rather than save money by shutting down any particular project. It is necessary to analyze the several components of the cost of continuing each public housing project compared with the costs associated with disposing of it.

3.1 PAST EXPERIENCE WITH DISPOSING OF PUBLIC HOUSING

There is some precedent for public housing projects being removed from the stock. The most well-known case is Pruitt-Igoe, a 2,762 unit high-rise project built for family occupancy in the 1950s in St. Louis. Pruitt-Igoe was demolished in 1972 with much attendant press coverage. The Government continues to make debt service payments for the project, but the issue of alternative benefits to tenants did not arise. The buildings had been largely vacated before the decision to demolish occurred, and the remaining tenants were successfully moved to other public housing projects.

Other examples in which PHAs have disposed of entire projects have been rare. The most common decision to take units out of the stock has involved a few units rather than a whole project. For example, PHAs sometimes convert ground-floor units in a high-rise building into community space, or tear down one of several low-rise buildings as part of a strategy to reduce a project's density. In 1980, only 2,334 units were eliminated from the program, or less than two-tenths of one percent of the total.

In any decision to remove units from the Public Housing Program, the PHA has had to get approval from the Federal Government. This is required by the annual contributions contract between HUD and the PHA and by Section 6(f) of the U.S. Housing Act. Section 6(f) sets terms for "closeout" of public housing projects under which HUD and the PHA must agree that a project (or units) is unusable and that its rehabilitation is not feasible. HUD may also approve disposal of units found in "excess" of need. The conditions under which HUD would agree to removal of units from the Program were not spelled out in regulations until 1979. The 1979 regulation (24 CFR Part 870) is extremely restrictive. It provides that only HUD Central Office (the Assistant Secretary for Housing) can approve demolition or disposition, no matter how small the number of units. The PHA is required, not only to plan for the relocation of any displaced tenants, but also to provide for "replacement housing on a one for one basis" unless it can show that there is no unmet need for low income housing in the locality.

What these requirements mean is that any PHAs that have experienced real funding constraints under the current combination of operating subsidies and modernization funding have been unable to respond by getting rid of their least efficient units. There is anecdotal evidence that some PHAs have let their highest-cost or most seriously deteriorated projects deteriorate further and become substantially vacant. But the operating subsidy system continues to provide subsidies for these units. They are still counted in the unit months available or "u.m.a.s" that are multiplied by the Allowable Expense Level in the PFS and, therefore, are still susidized even though they are empty. In other cases, precious modernization funds are spent on projects that cost far more than alternative forms of subsidy, or that cannot be rehabilitated with lasting effect because of site or neighborhood problems but which Federal policy has not permitted to be shut down.

HUD is currently developing modifications to the 1979 demolition and disposition regulation that will relax the standards for approval of removing units from the public housing inventory and has proposed legislation that will clarify the circumstances in which projects may be removed.

The implementation of any of the funding systems analyzed in this report, and especially those that provide substantially lower levels of funding to some PHAs, should be accompanied by broad discretion to shut down projects. Such discretion is assumed to exist in the discussion of the funding systems later in this report.

3.3 PROJECTS WITH HIGH VACANCIES

Prime candidates for projects to be taken out of the public housing stock are projects with large numbers of vacancies. Projects have usually become substantially vacant because they are in very poor physical condition or are in locations that result in severe problems for their tenants. For a vacant unit, the savings in current funding need not be balanced against the cost of alternative assistance for a tenant. Furthermore, for a partially vacant project, it is likely that many of the remaining tenants can be relocated to other public housing units. If it is necessary to use Section 8 Existing certificates or housing vouchers to relocate some tenants, those tenants are more likely to move willingly from projects with high vacancies, since such projects usually are not desirable places to live.

In order to give some sense of the extent of savings that could be realized by shutting down projects with high vacancies, we have made some very rough calculations based on the small amount of project-level data we have available. First, we have defined a project with high vacancies as one with 14 percent or more vacant units. There are 380 such projects in the Public Housing Program, and such projects comprise some 60,500 units or just over 5 percent of the program. The average vacancy rate for such projects is 27 percent. 1/

A calculation of the relative costs of maintaining units as public housing compared with the costs of disposing of them must take into account the following elements of costs:

1/ Source: HUD data from form 51235 for 1977, weighted by PDR "Multi" program. There is no reason to believe vacancy rates have changed substantially since 1977.

Costs of continuing to operate units as public housing:

- o operating subsidy
- o debt service payments
- o funding needs to bring units up to a reasonable physical standard (modernization backlog)
- o funding needs for future replacements as buildings continue to age

Costs associated with eliminating units from the public housing program

- o cost of alternative housing assistance (Section 8 Existing or voucher subsidy for the same households now living in public housing).
- o residual debt service (difference between sales proceeds of the project or its land and the project's debt, expressed as the ACC payments necessary to continue to pay off the debt).

All these costs can be expressed, for comparison purposes, as per unit month (p.u.m.) costs.

These are the major costs that must be considered in a determination of whether it is cost-effective to dispose of a project. Other costs that would have to be taken into account in the calculations for any particular project, but which are relatively small, include any household moving costs paid for by the Government; demolition costs and on-going costs of protecting and maintaining the sites of boarded-up or demolished projects. Moving and demolition costs are one-time costs that are small when amortized over the years in which the project would otherwise have continued to operate. Maintenance costs for inactive projects or their sites may go on indefinitely, but usually are small in any case. Pruitt-Igoe, for example, has residual operating costs of sixteen cents per unit month.

For these very crude estimates relating to projects with high vacancies we have considered only major costs. To work around the absence of project-level data for most projects and most cost elements, we have made some reasonable but essentially unproven assumptions about the location of high-vacancy projects and their costs:

- We have assumed that such projects are located in PHAs with vacancies one standard deviation above the mean, or at least a 7.5 percent vacancy rate. We have considered only large and extra-large PHAs, since we do know from project-level vacancy data that most high-vacancy projects are in PHAs with over 1,200 units. (Data base described in Perkins and Will, 1980). There are fourteen high-vacancy PHAs. Four are extra-large and ten are large. Six of these high-vacancy PHAs are in the Northeast, six in the Central census region, and the South and West have one apiece.

- We have assumed that operating subsidies, ACC debt service payments for development and past modernization and alternative housing subsidies for such projects are the average for high-vacancy PHAs. Alternative housing subsidies need to be paid for 80 percent of the occupied units. Twenty percent of current tenants are relocated into vacant public housing units in other projects. The alternative subsidy is a voucher payment for a tenant with average income for the PHA and a payment standard or Fair Market Rent (FMR) set at the 40th percentile rent of recently occupied standard units in the local area.

- We have assumed that the entire outstanding debt will continue to be paid by the Government. This is a conservative assumption, since sales of such projects, or their land, would often cover part of the debt. 1/

- We have used an estimate for the modernization backlog funding need of high-vacancy projects derived from a HUD study of modernization needs of 338 projects. Modernization funding is translated into p.u.m. terms by assuming it will be funded immediately and the debt amortized over a twenty-year period at current budgetary assumptions for financing public housing modernization. 2/

- We assume future replacements, funded by the Federal Government through a modernization program or some other mechanism, will cost at least 15 percent of non-utilities operating costs. (See Chapter 7 for discussion of this assumption).

1/ The PHA is required by the ACC to turn over sales proceeds to the Federal Government. The Government might not choose to apply the proceeds to pay off the obligation for that project, but the proceeds would nonetheless represent a reduction in net Federal outlays for payment of debt service on the PHA's obligations.

2/ Permanent notes bearing an interest rate of 6-5/8 percent are sold to the Federal Financing Bank and HUD pays debt service on the notes, plus the difference between debt service at that rate and debt service at a taxable rate of 10 percent.

Table 3-1 shows the results of these calculations for high-vacancy projects. Even with the conservative assumption that the entire outstanding debt would have to be paid for high-vacancy projects, it appears that there would be a substantial savings in cost from eliminating high-vacancy projects in each of the fourteen PHAs examined. 1/ The savings ranges from less than 8 percent of the costs of continuing the projects as public housing (PHA #13) to over half of current costs (PHA #7). Table 3-1 shows the debt service for each PHA separately. If part of the debt service could be covered by the sale of the project or its land, the savings from disposing of the project would be larger.

1/ Another conservative assumption is estimating the voucher subsidy based on 40th percentile movers' rents. The Administration's proposal for a Modified Section 8 Existing program has a payment standard (FMR) at the 40th percentile rent of all standard units except newly built units. For more discussion of FMRs and vouchers, see Chapters 8 and 9.

Table 3-1

COST COMPARISONS FOR HIGH-VACANCY PROJECTS

1980 Dollars Per Unit Month

HIGH-VACANCY PROJECTS IN PHA	A COSTS AS PUBLIC HOUSING a/	B COSTS AFTER PROJECT ELIMINATED b/	DEBT SERVICE	DIFFERENCE IN COST (A-B)
1.	253	168	(94)	85
2.	286	159	(105)	127
3.	202	165	(71)	37
4.	233	177	(95)	56
5.	257	189	(127)	68
6.	158	121	(66)	37
7.	315	157	(123)	158
8.	180	119	(59)	61
9.	189	124	(84)	65
10.	160	138	(82)	22
11.	193	148	(109)	45
12.	163	137	(113)	26
13.	165	152	(111)	13
14.	155	132	(90)	23

DATA SOURCES: PFS Cross-Section Data Base; estimates of modernization needs from data base described in Perkins and Will, 1980.

NOTES:

a/ Operating subsidy, debt service on development, past modernization and modernization backlog, and an on-going replacement needs estimate at 15 percent of non-utilities operating costs.

b/ Voucher subsidy and debt service.

In addition, the cost comparisons reported in Table 3-1 reflect average operating subsidy for each PHA. If projects with high vacancies would have operating costs higher than the PHA average even after their modernization needs were taken care of, then either the PHA or the Federal Government would realize additional savings from no longer having to fund the operation of those projects.

3.3 HIGH-COST PROJECTS

While high-vacancy projects may be the most obvious candidates for disposal, there are other projects in the Public Housing Program that are high-cost compared with an alternative subsidy for project residents and the continuation of some Federal payments on behalf of the projects.

We have not attempted even the crude sort of estimates of the numbers of high-cost projects or potential savings from eliminating them that we made for high-vacancy projects. We cannot, for example, estimate from currently available data the number of projects that are high-cost because of recent construction and high debt service, the number with low debt service but high operating costs, the number with low operating and debt service costs but large modernization needs, or the number with high costs in more than one category. The alternative cost of a voucher subsidy is another key cost element, which may show large variations for a PHA's different projects because of differences in household sizes of current tenants.

A study of costs, conditions and alternative treatments for public housing projects is now under way at HUD. This study will collect and analyze project-level cost data on a much more extensive basis than has been done previously and will provide a clearer picture of the types of projects that have high costs.

For the present analysis, what we have available is extensive data on <u>average</u> costs for PHAs and a modest amount of data on variations in operating

costs for projects owned by particular PHAs. These data can only be suggestive of the extent of high-cost projects in the Public Housing Program. Although we are unable to make complete cost comparisons for the projects in particular PHAs, we can show the ranges of average costs of various types among PHAs with similar characteristics (size and region) and the ranges of operating subsidies for projects within certain PHAs.

Table 3-2 describes the ranges of operating subsidies, debt service and recent modernization funding for different types of PHAs. This table suggests that some medium and even large-sized PHAs do not receive operating subsidies at all. This should be qualified by a reminder that, for this report, we are assuming substantial increases in tenant rents as a result of changes legislated in 1981. However, the ranges of operating subsidy would be even larger had we not assumed rent increases, since we set all negative operating subsidies (where rental income exceeded allowable operating costs) to zero.

It should also be stressed that the extreme values for different types of costs shown in this table are for different PHAs. In many cases a PHA with high operating costs has low debt service costs. The large amounts spent for modernization by some PHAs in recent years may be reflected in low operating costs for those PHAs. However, the ranges of all types of costs shown in Table 3-2 are large, and the size of the maximum values suggests that there is considerable opportunity for savings through disposing of high-cost projects.

Differences in operating subsidies are even more striking when we look at project-level data rather than PHA averages. Table 3-3 shows ranges of operating subsidies needed for projects in PHAs. Here we do show negative subsidies, and these reflect the fact that rents collected by PHAs for some of their projects exceed those projects' costs, while other projects owned by the same PHA require huge operating subsidies. The subsidy amounts shown on Table 3-3 are not affected by assumptions about future rent increases, because they are based on project-by-project data on recent costs and rental revenues supplied by PHAs with project-level accounting systems.

Table 3-2

RANGES OF PHA AVERAGE COSTS

1980 dollars p.u.m.

	OPERATING SUBSIDY a/			DEBT SERVICE b/			RECENT MODERNIZATION c/		
	High	Low	Mean	Max	Min	Mean	Max	Min	Mean
Extra-Large									
Northeast	121	27	94	133	67	92	50	10	34
South	94	46	62	106	51	74	29	20	24
Central	116	29	65	103	64	78	68	18	38
West	94	38	66	94	49	72	57	35	46
Large									
Northeast	152	10	74	143	14	90	130	9	45
South	72	13	46	143	36	78	62	11	30
Central	68	0	30	142	51	102	75	5	38
West	67	0	30	147	55	99	98	29	46
Medium									
Northeast	173	0	55	223	64	103	77	0	32
South	56	0	17	128	0	117	117	0	31
Central	57	0	17	186	57	100	68	0	26
West	61	0	31	130	0	80	88	29	54
Small									
Northeast	141	0	44	272	57	139	91	0	44
South	46	0	10	120	33	74	85	0	25
Central	75	0	11	254	0	94	102	0	26
West	31	0	11	144	65	99	104	19	64

SAMPLE: PFS Cross-Section Analysis Sample.
DATA SOURCE: PFS Cross-Section Data Base.

a/ Operating subsidy figures assume 1981 changes in rent rates are fully phased in and the recent adjustment to the inflation factor has been made. See Chapter 1 for a description of this Comparison PFS.

b/ For development and prior modernization.

c/ Average loan authority allocated to each PHA in the sample for capital costs of modernization, 1969-1981, in 1980 dollars p.u.m.

Table 3-3

RANGES OF OPERATING SUBSIDY NEED FOR PROJECTS WITHIN PHAS

Difference between Operating Costs and Revenues for Each Project in 1980 Dollars p.u.m.

PHA	Maximum	Minimum	Mean
Alexandria	$ 45.40	$ -11.15	$ 40.71
Baltimore	180.89 b/	66.56 b/	117.70
Boston	316.04	4.48	207.46a/
Charlottesville	59.50	15.07	35.26a/
Chicago	382.46	-114.47	159.62a/
Columbia S.C.	241.71	11.32	31.28a/
(Cleveland) Cuyahoga	183.43	41.71	116.78a/
County of San Joaquin	87.65	53.42	67.57
Dallas	139.56	-24.46	78.82
Dayton	123.17	36.14	53.77a/
Los Angeles	167.35	48.20	58.34a/
Louisville	90.48	.56	58.23a/
Madison County	56.38	-1.72	27.40
New York City	276.94	26.36	121.18
Schuykill County	55.89	-6.24	12.94
St. Louis	$125.76	-29.68	71.62
St. Louis County	69.60	-36.30	40.77
St. Petersburg	54.04	41.54	46.86

SOURCE: PHA project-based budgeting reports, fiscal years ending in FY 1981.

NOTES:

a/ PHA average not available. Actual operating subsidy estimate for FY 1981 is used in its place, and includes funding for PHAs with negative reserves.

b/ Adds average expenses not allocated at project level.

Of course, these figures reflect not just underlying costs but also PHA decisions on spending for particular projects. For example, the PHA may be providing heavy maintenance rather than modernization for a "high-cost" project, while a seemingly low-cost project is being undermaintained and will require enormous modernization funding if it is not removed from the stock.

Nonetheless, the very high operating costs for some of these PHAs' projects makes us conclude that alternative treatment of those projects may be in order. We should not automatically assume that every high-cost poject should be removed from the program, however. In some cases cost-reduction strategies through energy modernization, "thinning out" the number of units in the project, or converting the project from family to elderly use may be feasible. Again, what is needed is detailed analysis of the characteristics and costs of each project. All we can conclude within the scope of analysis available for this report is that substantial opportunities for cost reduction exist.

3.4 BARRIERS TO REDUCING THE PUBLIC HOUSING STOCK

A cost-reduction strategy through disposing of high-cost projects may be limited in its extent, or the rapidity of its implementation, at any particular PHA.

In many major cities, Public Housing is a significant portion of the total rental stock. In table 3-4, we see that the Public Housing Program provides 9 percent of the rental housing stock in Philadelphia, 10.3 percent of the stock in Baltimore and 14.6 percent of the rental stock in Atlanta. All of these cities have reasonably high vacancy rates, so a loss of some public housing units could be absorbed over time, but a dramatic decline in the number of units available or loss of all of the public housing units could not be reasonably absorbed by the market. There are many are cities in which public housing makes up 5 percent to 8 percent of the rental stock, and a few cities in the West, such as San Jose and San Diego, without any public housing.

TABLE 3-4

PUBLIC HOUSING AND HOUSING MARKETS FOR SELECTED CITIES

CITY	PUBLIC HOUSING AS PERCENT OF RENTAL HOUSING	1980 RENTAL VACANCY RATE IN COUNTY(s)
New York	5.6	3.3
Chicago	5.4	6.3
Los Angeles	1.1	3.9
Philadelphia	9.0	7.5
Detroit	5.0	8.1
Houston	0.9	8.0
Baltimore	10.3	5.5
Indianapolis	2.3	10.2
Washington, D.C.	5.9	5.9
San Francisco	2.4	4.1
Cleveland	8.6	7.1
Boston	8.0	7.1
St. Louis	5.9	5.9
Seattle	5.4	5.8
Denver	4.5	8.4
Atlanta	14.6	8.1
Buffalo	5.8	6.5

DATA SOURCES: HUD, Office of Housing, and Annual Housing Survey, Metropolitan Area Reports, 1974-76. Compiled in Struyk, 1980, p 14.

1980 Rental Vacancy Rates from Bureau of the Census, 1980 Census of Housing, report HC 80-51-1.

NOTE: Rental housing data are for the year in which the SMSA was surveyed by the Annual Housing Survey.

In this discussion of eliminating the most costly portion of the public housing stock we have assumed that families and individuals who are currently living in high-cost projects would obtain subsidies either in other public housing units or in the Section 8 Existing or housing voucher program.

If a large percentage of a PHA's units were closed in a given PHA, households could not be absorbed into other public housing projects. PHA vacancy rates are normally low (less than 3 percent), while turnover rates are about 27 percent yearly (Loux and Sadacca, 1980) but vary by unit type and housing market.

Public Housing households that are given Section 8 Existing or housing voucher certificates to replace their public housing subsidies would require some time to find acceptable private market housing. This is particularly the case since the public housing tenants displaced by eliminating projects are likely to be households that often face discrimination in the private market: larger households, minorities and single-parent families.

In Table 3-4 we see that single-parent minority families with one to three children are able to find standard quality housing and start receiving subisides only 25 percent of the time within 60 days after receiving a program certificate. This is considerably less often than non-minority single parents with children, who become recipients within 60 days 44 percent of the time. Elderly households, on the other hand, are successful in 56 percent of the cases.

Table 3-5 shows that the ease of becoming a Section 8 recipient differs greatly according to SMSA. The Los Angeles area, with a relatively low rental housing vacancy rate, is a difficult market, but St. Louis and Cleveland are also difficult, probably due to the poor quality of much of their housing stock and the difficulty in finding units which meet program standards.

Table 3-5

HOUSEHOLDS OBTAINING SECTION 8 EXISTING HOUSING SUBSIDIES

Percent of Certificate Holders Succeeding within 60 Days

HOUSEHOLD TYPE	NON-MINORITY	MINORITY	ALL HOUSEHOLDS
1 Person Elderly	58 (213)	50 (92)	56 (308)
1 Person Non-elderly	49 (71)	46 (68)	48 (143)
2 Person Elderly, 0 Children	50 (50)	34 (35)	44 (85)
2 Person Non-Elderly, 0 Children	55 (38)	33 (30)	45 (69)
1 Parent, 1-3 Children	44 (350)	25 (966)	30 (1339)
1 Parent, 4 + Children	24 (25)	22 (157)	23 (186)
2 Parents, 1-3 Children	43 (82)	31 (83)	37 (169)
2 Parents, 4 + Children	25 (20)	28 (25)	27 (45)
All Households	48 (866)	28 (1474)	36 (2382)

SAMPLE: Files of Section 8 Existing Housing certificate holders

SOURCE: Data from Wallace, et al. 1981. Data collected in 1979.

NOTES: Numbers in parentheses are sample sizes. Non-minority and minority households samples do not add to all household sample because of 42 cases missing data on minority/non-minority status.

Table 3-6

HOUSEHOLDS IN 15 SMSAs OBTAINING SECTION 8 EXISTING HOUSING SUBSIDIES

Percent of Certificate Holders Succeeding within 60 Days

SMSA	PERCENTAGE SUCCEEDING
Atlanta	20 (217)
Baltimore	48 (92)
Chicago	41 (238)
Cleveland	20 (171)
Houston	72 (129)
Los Angeles	10 (290)
Milwaukee	55 (141)
New York	45 (185)
Philadelphia	31 (153)
Providence	60 (105)
Raleigh	39 (57)
Roanoke	51 (91)
San Diego	53 (137)
Seattle	33 (197)
St. Louis	16 (190)
Total Sample	35 (2393)

SAMPLE: Files of Section 8 Existing Housing certificate holders.

SOURCE: Data from Wallace, et al., 1981. Data collected in 1979.

NOTES: Numbers in parentheses are sample sizes.

Furthermore, public housing tenants and other groups might resist an attempt to close down a project if they believe that the project provides good quality housing compared to alternatives or that alternative housing would be hard to find. PHAs may find that there are local political or legal barriers to disposing of projects that make it difficult to respond completely to a Federal policy based on cost considerations.

These considerations do not mean that a policy of eliminating high-cost projects from the public housing stock is not feasible, but only that such a policy would take some time to implement if it affected a major portion of the public housing units in a particular area. In addition, in some cases the cost of alternative housing assistance for a family now living in public housing might have to include a subsidy for the rehabilitation of a private market unit.

3.5 DISPOSING OF PROJECTS AND PUBLIC HOUSING FUNDING SYSTEMS

A policy of eliminating high-cost projects could be implemented to some degree regardless of the system in place for funding public housing operating subsidies. The current move away from extremely restrictive conditions for HUD approval of disposing of public housing units will doubtless lead to some increase in the number of units withdrawn from the program. However, the way in which a policy of eliminating certain projects is linked to the public housing funding system is of critical importance for a number of reasons.

In the first place, public housing projects are owned by PHAs and the Federal Government cannot unilaterally direct their closing. One of the main sources of leverage that HUD has over PHA actions is the ability to withhold operating subsidies or modernization funding. This makes the funding system an important tool for persuading PHAs to reduce costs by eliminating certain projects.

Secondly, how much of the savings that results from shutting down projects is passed along to the Federal Government depends on the structure and rules of the system for funding public housing operations and modernization.

Finally, because of the absence of system-wide cost data on a project-by-project basis, there may be no feasible way to discover which projects should be closed down other than working through the cost ceilings of a funding system. PHAs would still need some information about project costs in order to decide which projects should be shut down, but that information could be much less rigorous than a complete project-based accounting system.

Later chapters will return to the question of how a funding system can be linked to a policy of cost reduction through eliminating high-cost projects.

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CHAPTER IV

ALTERNATIVE FUNDING SYSTEMS: REVISED COST-BASED FUNDING

4.0 INTRODUCTION

Cost-based funding is the current approach to estimating the amount of subsidy needed by Public Housing Authorities. Its distinguishing feature is that it uses past operating costs of different types of PHAs as the basic source of information on the varying costs of operating public housing under the widely divergent conditions faced by authorities.

The foundation of cost-based funding in the historical costs of public housing is both its major strength and its major weakness. On the one hand, it can take into account real variations in the nature of the housing stock operated by different PHAs, such as age of the buildings and size of the units. On the other hand, it is difficult to say that the amount spent in a particular year (1975) by different types of authorities was the "right" amount. It has been argued that funding levels in 1975 had been depressed by budgetary decisions below the amounts actually needed for sound operation and maintenance of the public housing stock. It is also asserted, however, that obvious mismanagement and waste exists in the Public Housing Program and that, therefore, funding levels under the Performance Funding System must be too high.

It is difficult to disprove either of these assertions, since it is possible to point to examples both of well-managed PHAs that appear to need more money and of clear cases of inefficiency in the operations of other PHAs. While the PFS was supposed to exclude the excess costs of inefficient management by limiting all PHAs to the costs of "high performing" authorities, criteria used to define a well-managed authority may not have gone far enough toward excluding inefficient practices. For example, the PFS was designed to provide needed funding for the "standing stock." Costs of operating and maintaining very high cost projects were included as legitimate costs in the basic funding levels permitted, so long as those projects were managed by

"high-performing" PHAs. Similarly, over-staffing may have been built into cost levels in some cases, since explicit efficiency measures, such as ranges of acceptable staffing levels for different functions and numbers of units were not part of the test of high performance.

On the other side of the argument, the legitimate costs of efficient management for some PHAs may not have been acknowledged by the PFS. The cost formula ("prototype equation") on the basis of which some PHAs had their costs reduced below 1975 levels did not include some factors that affect costs. Furthermore, these "out of range" authorities were not permitted to appeal their formula-determined cost levels. Thus, costs related to variables omitted from the formula were not permitted back into the allowable cost levels through an appeals process.

The two Revised Cost-Based Funding systems proposed in this chapter are based on the premise that the weaknesses just discussed can be addressed within a system that continues to take historical costs as its starting point. Revised Cost-Based Funding starts from the current Allowable Expense Levels (AELs) that have resulted from the application of the prototype equation to date. However, the series of changes that are examined here are designed to improve both the fairness of the system to all types of PHAs and its responsiveness to the need for an efficient program operated at the lowest possible cost.

The key to revising a cost-based funding system to meet these objectives has been to move away from rigid dependence on the original prototype cost equation to determine allowable costs. At the same time, it is important that allowable costs continue to be largely formula-determined in order both to maintain the fairness and credibility of the system and to make it administratively feasible. A return to a system in which every PHA's budget is reviewed and possibly adjusted on an annual basis is definitely not recommended.

Several changes to the cost-based system are examined in this chapter. They are designed to be complementary and, together, to increase both the equity and efficiency of the public housing funding system through appropriate

upward and downward adjustments to AELs. However, none of these changes is essential to the continuation of a funding system based on PHA costs and any of them could be implemented independently of the others.

Summary of the Revised Cost-Based Funding System

The modifications proposed under Revised Cost-Based Funding may be summarized as follows:

- "Delta." The annual adjustment to the allowable expense level, the so-called "Delta" adjustment, has been greatly simplified. Delta will compensate PHAs simply for the effects on costs of the aging of their stock; the AEL is increased by one-half of 1 percent annually. This change will reduce administrative burden for both the PHAs and HUD, and help clarify the role of the funding formula in subsidizing PHAs.

- Offset Adjustment to AELs. Under Revised Cost-Based Funding, allowable expense levels will be increased for PHAs operating in relatively difficult or distressed economic environments. This change is designed to correct for past system bias against large, urban PHAs and will therefore rectify what is believed by many to be an inequity in the distributional character of the present system.

- Federal Oversight: AELs are not "entitlement" amounts that cannot be reduced as a result of Federal review. Rather, Revised Cost-Based Funding will include a regular process of review of those PHAs that show indications of having excess costs. The excess cost determination could be based on comparison with broadly-defined efficiency measures or with externally generated proxies such as private market rents. For "excess costs" PHAs, HUD will determine a lower AEL and will negotiate a strategy with the PHA for bringing down the authority's costs to the lower AEL.

- Appeals. Revised Cost-Based Funding includes a formal appeals process whereby PHAs can request review of their allowable cost levels, but only in response to extraordinary circumstances.

A Revised PHA Cost Equation and Range Test. Another option available for a Cost-Based Funding system is to recalculate a PHA cost equation (called the "Prototype Equation" in PFS) in order to more accurately reflect the differences in PHA operating circumstances. The cost equation would be combined with a "range test" to limit the extent to which PHAs could exceed their formula estimated expenditures level. Like the revised cost-based funding system described above, this proposal would also include a simplification of the "Delta" adjustment, possible discretionary reductions in the AELs of the least efficient PHAs, and an appeals process of limited scope.

In addition to the changes just described, Revised Cost-Based Funding already includes an improvement already in place under the Comparison PFS. As discussed in Chapter 1, AELs have been adjusted retrospectively for past underestimation of inflation that was beginning to cause the AELs of some authorities in effect to drop below 1975 levels.

Chapter 4 is organized as follows: the revised Delta adjustment is presented in Section 4.1; the adjustment to AELs for PHAs operating in distressed environments, is discussed in Section 4.2; Federal oversight, in Section 4.3; and a formal appeals system, in Section 4.4. The remainder of this introduction provides an overview of the subsidy formula under a cost-based funding system and further summarizes the rationale for the proposed changes. Section 4.5 describes national cost estimates under Revised Cost-Based Funding, and finally, Section 4.6 discusses the implications of the new system. Finally, Section 4.7 discusses the other major proposal under Cost-Based Funding, a revised PHA cost equation and range test.

Given the shortcomings of the PFS, changes for a cost-based funding system other than those discussed in this chapter are examined in succeeding chapters. For example, the inflation adjustment process could include a retrospective adjustment to correct for errors in predicting inflation. Also, the addition of management incentives would help transform a purely allocational formula into a more efficient form of funding. Discussion of reforms regarding inflation adjustments and management incentives are presented in Chapters 5 and 6. Finally, Chapter 7 proposes a funding system that retains PHA costs as the basis for estimating operating subsidy amounts but also includes funding for replacements and improvements as part of a single allocation to PHAs.

Description of the Subsidy Formula Under Cost-Based Funding

Before discussing further the rationale underlying the Revised Cost-Based Funding System, it may be useful to review the subsidy formula in order to highlight proposed changes.

Federal operating subsidies represent the difference between allowable costs (as defined by the system) and expected PHA income (determined by rules for growth in tenant revenue and expected occupancy rates and discussed further in Chapter 6). Allowable expense levels depend on the ongoing adjustments for inflation and aging of the stock and on other adjustments, such as those stemming from Federal oversight or the adjustment for distressed operating conditions that were not considered by the original PFS formula. Current AELs also depend on a number of historical factors including base level costs (the 1974 or 1975 budget); the test for the "reasonableness" of base level costs (the range test), which constrained the growth in costs for PHAs with expense levels above the allowed range; and the historical inflation factor and Delta (both now modified under Revised Cost-Based Funding). See Appendix 4-1 for a more detailed description of the formula.

Allowable expense levels do not include utility costs; the latter are currently handled through a separate set of regulations and are treated as partial "pass-throughs." This topic, also, will be discussed in Chapter 6.

The Rationale for Cost-Based Funding

As was discussed above, the rationale for the Revised Cost-Based Funding system stems from several underlying premises:

- Problems exist within the PFS that need to be corrected in order to reduce inequities and stem costs. However, these problems are remediable through changes that can be incorporated into a cost-based funding system.

- The majority of PHAs do not need complex adjustments to their allowable costs on an annual basis. The funding system can therefore be simplified, which will reduce administrative burden for both HUD and the PHAs, and make the funding system more straightforward.

- Exceptional circumstances may arise, however, that require upward or downward adjustments to costs. If they qualify, PHAs may appeal for adjustments. At the same time, HUD will review PHA costs that appear to be out of line and will insist on a plan for achieving lower costs in some cases. It is important to note that, although all available data will be used in assessing AEL adjustments, they are not based strictly on formula and qualitative judgments will be important.

- Transition from the PFS to Revised Cost-Based Funding can be accomplished quickly and smoothly. The adjustments to the system purposely rely on already existing data and tested concepts.

- A Revised Cost-Based System is preferable to a system based on FMRs or private sector costs. PHA operating costs are subject to a wide variety of influences that differ from those determining private sector costs. It is not at all clear that private sector costs or rents provide a proper benchmark for setting PHA subsidies; indeed, this may result in seriously inefficient distribution of subsidy funds--hardship for some PHAs and windfalls for others.

One evaluation of the PFS has suggested that several components of the current cost-based system should be modified (Merrill et al., 1980; Merrill and Mansfield, 1981). The major problems identified were inequitable distribution of subsidy funds because of system bias against large, urban housing authorities operating in distressed environments; the system's limited ability to respond to changing operating circumstances or costs beyond management control; underadjustment for inflation; and administrative burden stemming from unnecessarily complex adjustments to allowable costs.

In response to these problems, Revised Cost-Based Funding seeks to increase equity in allowable costs across different types of PHAs, simplify the system, and increase the ability of the system to respond to extraordinary problems so that they do not magnify over time. With the addition of improved inflation adjustment procedures to the funding system and management incentives, most of the major problems identified in the PFS evaluation will have been addressed.

One major drawback to any cost-based funding system, however, is lack of accurate knowledge about what it should cost to run a PHA. The Performance Funding System has been criticized because costs were not related to standards of performance and because the system lacked incentives encouraging efficient management. Both of these criticisms are valid. The extent to which the high costs of poor management performance in the past are "built into" current AELs is not known. The Revised Cost-Based Funding system does not attempt to rectify the effects of past management problems or to develop standards of performance. It would be extremely difficult to determine precisely what it "should" cost to operate a housing authority efficiently and at an acceptable level of service. Development of detailed operating standards (and the related costs) for different types of PHAs would require extensive research; also, the results run the risk of being subject to manipulation by PHAs seeking additional funds.

Another criticism of cost-based funding approach is its failure to impose the discipline of the private sector on PHAs. This objective may be difficult even under an FMR approach, however. To the extent that "adjustments" are required to increase the compatability between FMRs and PHA costs, discipline is decreased.

These adjustments may be necessary because the match between private and public sector costs will be worse in some situations than in others. Fair Market Rents are determined not only by underlying cost conditions but also by factors such as vacancies and turnover. For example, rents are likely to be relatively higher in a low vacancy market with a great deal of turnover than in a high vacancy market or one in which low mobility has allowed tenants to reap substantial tenure discounts. These factors are not expected to have much effect on PHA costs. If adjustments are made to FMRs to "constrain" winners under the system and provide transition funding for losers, then the system will lose some of its market discipline. The FMR-based system which is examined in this report provides both transition funding and a constraint on gains to PHAs. See Chapter 8 for further discussion.

In summary, Revised Cost-Based Funding attempts to solve the major problems identified under PFS and constrain future funding to reflect only well-identified needs. The major elements of the system and an estimate of its national costs are presented in the following sections.

4.1 SIMPLIFICATION OF THE "DELTA" ADJUSTMENT

Introduction

Under the Performance Funding System, the "Delta" adjustment to the allowable expense level is derived annually from the prototype cost equation. "Delta" was designed to adjust allowable costs for year-to-year changes in PHA characteristics. Historically, "Delta" has been extremely small, less than 1 percent of total allowable costs. The evaluation of the PFS concluded that "Delta" both is inappropriately derived and places an undue administrative burden on HUD and the PHAs. Creation of a "Delta"-type adjustment that was correctly derived and sensitive to the numerous potential changes in PHA operating conditions would be an extremely complex task requiring extensive data collection and statistical work. Since Delta is a very small part of costs and simpler approaches are possible, the detailed research approach was rejected. Thus, under Revised Cost-Based Funding, "Delta" is simply an adjustment to compensate PHAs for aging of the housing stock. The controversial prototype equation is eliminated and "Delta" is directly calculated as a one-half of 1 percent increase in the allowable expense level. The adjustment will occur on an annual basis.

Rationale and Design

"Delta" was designed to adjust costs for changes in PHA characteristics; currently, changes in PHA building age, building height, number of bedrooms per unit, and SMSA population affect "Delta." Historically, "Delta" has represented a very small adjustment to the allowable expense level, ranging from a low of roughly one-tenth of 1 percent in 1980 to a high of six-tenths of a percent in 1979. Table 4-1 shows "Delta" as a proportion of the allowable expense level under the PFS from 1977 to 1981 (only a partial sample exists for 1981). In addition to shifts in "Delta" over time, there have been systematic differences by size of PHA. Extra-large authorities have had smaller than average "Deltas" for four of the five years shown in the table; both medium and large PHAs tend to have larger per unit adjustments than the very large authorities. Finally, "Delta" has shifted from year to year within PHA size categories (especially for large, medium, and small PHAs); thus, it has been difficult for PHAs to plan for adjustments to costs. As will be discussed below, these shifts probably do not reflect differences in actual changes in operating circumstances for different categories of PHAs from year to year.

Table 4-1

"DELTA" AS A PROPORTION OF THE (P.U.M) ALLOWABLE EXPENSE LEVEL UNDER HISTORICAL PFS BY SIZE OF PHA a/

PHA TYPE	1977 "DELTA" (P.U.M.) / AEL (P.U.M.)	1978 "DELTA" (P.U.M.) / AEL (P.U.M.)	1979 "DELTA" (P.U.M.) / AEL (P.U.M.)	1980 "DELTA" (P.U.M.) / AEL (P.U.M.)	1981 "DELTA" (P.U.M.) / AEL (P.U.M.)
Extra-large	.0037	.0030	.0036	.0016	.0031
Large	.0070	.0047	.0059	.0015	.0041
Medium	.0055	.0062	.0091	.0026	.0074
Small	.0033	.0092	.0103	-.0006	.0067
All (Weighted Average)	.0049	.0050	.0066	.0013	.0045
Sample	(121)	(110)	(109)	(126)	(93)

SAMPLE: PFS Time Series Sample.
DATA SOURCES: PFS Time Series Analytic Data Base.
NOTES: a/ The "Delta" adjustment is the same under Historical and Comparison PFS.

"Delta" represents a rather substantial administrative burden to both HUD and the PHAs. HUD re-estimates the prototype equation annually. A complex set of numbers is then sent to the PHAs: parameter values from the prototype equation, values of the independent variables relevant to each PHA, and if necessary, data required for mathematical transformations of variables (to logarithms, square roots, etc.). The PHAs then assemble information on their building height, age, and bedroom size distribution and calculate the averages. Formally, "Delta" is derived from extensive calculations made on PFS Worksheets 52720 and 52720B and represents the difference between the estimated "formula expense level" in the requested and current years. The last step of the process involves the HUD area offices which must check the "Delta" calculation for each PHA as well as the cost and subsidy eligibility information on the remaining PFS Worksheets. In view of the fact that the actual value of "Delta" is small and, as discussed below, the present derivation is inappropriate, a great deal of effort could be saved by simply eliminating the calculation or replacing it with a more easily derived adjustment.

The criticism of and controversy over "Delta" have been out of proportion to its actual value in the system. To some extent, this is likely due to criticism of the prototype equation itself and lack of understanding of the role of the prototypte in the PFS. In fact, the only current use of the prototype is in the derivation of "Delta" and it has no other impact on current allowable expense levels. 1/

"Delta" is inappropriately derived for a number of reasons having to do with the PFS prototype cost equation. Important variables affecting PHA costs have been omitted from the prototype equation; the specification may be inappropriate for describing changes in costs, and lack of a theoretical grounding for the role of the equation leads to year-to-year shifts in the way the variables are used, resulting in constant shifts in "Delta" that may not be equitable or appropriate.

1/ Historically, the prototype was also used to calculate the information necessary for the range test, used to determine above- and below-range PHAs. As discussed in the Evaluation of the PFS (Merrill et al., 1980) and summarized below, the range test was seriously flawed and biased against extra-large and large PHAs.

Since many important variables were excluded from the prototype (see Merrill, et al., 1980, Chapter 4), "Delta" was not sensitive to many factors that influenced changes in PHA costs. It has been argued that this was not the intended purpose of "Delta," that the adjustment was designed to reflect only changes in the structural characteristics of the projects. However, if this was the only intended purpose, the specification was in error. Omitted variables can result in biased coefficients for the variables remaining in the equation. The most significant omission was a variable describing the size of the PHA, which has an extremely important impact on PHA costs (per unit costs increase with the number of dwelling units). In addition, the SMSA population variable (as well as building characteristics) was retained in deriving Delta and this appears to be inappropriate.

The issue concerns estimating changes in costs, rather than just their level at one point in time. A prototype cost equation which necessarily relies on proxy variables to describe differences in the level of PHA costs (because complete data does not exist) may not be appropriate for estimating changes in costs. The SMSA population variable is a case in point. For example, for PHAs comparable in other ways, "Delta" is larger for the PHA in a rapidly growing area than for the PHA in an area of slow, or no, growth. In fact, just the opposite may be more appropriate: PHAs in older, declining urban areas may experience higher increases in costs than PHAs in growing cities.

In summary, it is inadvisable to continue using the present procedures to construct "Delta." "Delta" is administratively burdensome, especially in relation to its size; there are known flaws in the prototype; and the value of "Delta" shifts over time and across types of PHA, perhaps inappropriately.

Design of a Simplified "Delta"

Several options were considered for redoing "Delta": (1) establishing a small, fixed adjustment based on the average value of "Delta" in the past; (2) eliminating the adjustment entirely; (3) simplifying the derivation by focusing on one or only a few variables; and (4) complete redesign of the model of PHA costs. Since the historical values of "Delta" show a great deal of variance and may not be properly derived, the first option was rejected. Complete redesign of the cost model was also rejected, since this would involve extensive data collection and statistical work and does not appear to be a cost-effective approach. After an assessment of the available research on factors that affect PHA operating costs, the decision was made to have "Delta" reflect only the cost increases stemming from the aging of PHA hous-

ing stock. No data collection for this adjustment is required by HUD or the PHA, and the formula is simple.

The effects of other variables are not as easily captured through a formula. Since substantial changes in PHA stock (for example, because of demolition) are expected to result in changes to numerous factors that affect the operating environment, an entirely formulistic approach is less feasible. Rather, the effect of such changes will be part of a negotiation of lower AELs when HUD determines that a PHA has excess costs. This is discussed in Section 4.3, below.

Under Revised Cost-Based Funding, "Delta" is calculated as one-half of 1 percent of the (non-utility) allowable expense level. Specifically, "Delta" is added to the previous year's AEL and the result multiplied by the inflation factor to form the current year's AEL. The value established for the adjustment was based on an analysis of a number of equations relating operating costs and variables describing building characteristics and operating environment. In all cases, building age proved to be an important determinant of costs (that is, the estimated parameters showing the effects of aging on operating costs were always positive and significant). The estimated annual increases in costs resulting from aging ranged from about three tenths of 1 percent to slightly over 1 percent; however, many of the estimates clustered around .5 percent and this was the adjustment finally selected. (See Appendix 4-1 for more discussion).

The dollar value of the revised "Delta" by size of PHA is presented in Table 4-2. As can be seen it is very similar to average "Delta" under PFS once the effect of year to year variations is removed. One notable difference is that there will no longer be negative "Deltas." These have resulted in the past from additions to the stock of some small and medium PHAs when the new units are judged by the prototype equation to reduce average costs. 1/

1/ Some of these negative "Deltas" have evidently been over-adjustments since they have resulted in reduced aggregate subsidies, not just reduced average subsidies, in response to an increase in the number of units.

Table 4-2

REVISED "DELTA" ADJUSTMENT TO THE ALLOWABLE EXPENSE LEVEL

	1980 DOLLARS, P.U.M.					
	"DELTA" UNDER COST-BASED FUNDING			"DELTA" UNDER PFS a/		
PHA SIZE	MEAN (STANDARD DEVIATION)	MINIMUM	MAXIMUM	MEAN (STANDARD DEVIATION)	MINIMUM	MAXIMUM
Extra-large	$.58 (.13)	.34	.74	.36 (.16)	.02	.87
Large	.39 (.08)	.18	.64	.38 (.18)	.05	.88
Medium	.34 (.08)	.17	.57	.41 (.24)	-.28	.90
Small	.30 (.07)	.16	.49	.31 (.45)	-1.62	.97
All (Weighted average)	.44 (.16)	.16	.74	.36 (.25)	-1.62	.97

SAMPLE: PFS Analysis Sample, N = 314.
DATA SOURCES: PFS Cross Section Analytic Data Base.
NOTES: a/ Average delta under PFS, 1977-1980, in 1980 dollars. The minimum and maximum averages are derived by taking the four-year average "Delta" for each PHA in the data base and reporting the PHAs with the largest and smallest four-year averages.

Transition to Revised Cost-Based Funding should be able to be accomplished smoothly and quickly as regards revised "Delta." "Delta" can be recalculated easily given information already recorded on the PFS Worksheets by the PHAs. HUD will need to revise the PFS Worksheets and accompanying materials; the result will be elimination of at least two of the Worksheets and extensive simplification of the back-up data formerly necessary to calculate the AEL.

4.2 ADJUSTMENTS TO THE ALLOWABLE EXPENSE LEVEL

Introduction

Under Cost-Based Funding, allowable expense levels have been increased for PHAs operating in distressed economic environments to take account of factors not considered under the original PFS equation. The PFS attempted to constrain excess costs resulting from inefficient PHA management by applying a "range test" (an excess costs test) based on the costs of PHAs deemed to be high performance PHAs. Although the notion of a constraint was certainly valid, in hindsight, the range test appears to have been applied too stringently to very large urban PHAs in difficult operating environments--that is, areas in which general aging of the urban infrastructure and demographic patterns have led to conditions that impose costs on PHAs. Some of of these PHAs may be over-funded despite the application of the range test, but this is a determination that must be made on a case-by-case basis and not by adjustment of the formula. (See Section 4.3, below).

The AEL adjustment to offset omissions from the original prototype rests essentially on judgments as to the extent of underfunding of certain PHAs. The original (1975) cost equation, including the important left-out information cannot, of course, be redone. Also, given the constraint that adjustments to funding systems proposed in this report must be capable of being made now, an entirely new data collection effort is not feasible. Thus,

existing allocation formulas based on variables similar to those omitted in the PFS were sought. CDBG Formula B, one of the formulas used in the allocation of CDBG grants, appeared to be most appropriate. The AEL adjustment is based on a model of PHA operating costs; estimates of this model include the per capita grant calculated under the 1977 CDBG formula (Formula B, also called the "age and growth lag formula"). This variable is positively and significantly related to PHA operating costs and is considered to be a good proxy for indicators of economic distress (Bunce and Goldberg, 1979). PHAs receiving greater than the average level of per capita funding will receive an increase in their allowable expense level; the size of the increase depends on the model relating PHA costs and the per capita grant and on the relative size of the grant.

Several important caveats should be noted at the outset, however. The cost equation has been used to test which of these formulas appears to contain variables that are related to PHA costs but, because of the feedback in the system (PHA costs are a function of what the PFS allows) and the fact that the CDBG variables can only be proxies for the variables omitted from the prototype equation, the size of the offset cannot be precisely calculated. The findings of the earlier evaluation of the PFS indicate that the adjustment is about the right size when calculated through the new cost equation. The size of the adjustment is further evaluated below.

Overall, the adjustment procedure results in AEL adjustments for 32 percent of the PHAs in the analysis sample. The distribution of the adjustments varies greatly by size and region of the PHA, however. For example, 76 percent of the extra-large PHAs receive an adjustment but only 8 percent of the small PHAs. Also, adjustments were most frequently made to PHAs in the Northeast and Central areas of the country. The average AEL adjustment for PHAs receiving an adjustment was about $5.50 per unit month, roughly 4.7 percent of the average allowable expense level.

The details of the AEL calculation and the size and distribution of the adjustment are described below, following a discussion of the rationale for the adjustment.

Rationale and Description

The allowable expense level is the most important component of a cost-based system, accounting for about 60 percent of total allowable costs for the following year. Utilities account for most of the remainder (the inflation adjustment, "Delta," and other minor costs complete the total). Thus, current allowable expense levels are a function of both historical factors and ongoing adjustments. These include: (1) PHA cost conditions existing before the PFS and inherited by it (including the possibly restrictive effects of the 1972-1974 Interim Formula); the so-called "range" test under the PFS which constrained AEL growth for certain PHAs, particularly the extra-large PHAs; and (2) the accumulated effects of adjusting AELs via "Delta" and the PFS inflation factor. One evaluation of the PFS suggested that the system is biased against large, urban PHAs that face various operating problems: for example, neighborhood crime and vandalism or troublesome tenant mix. The bias has multiple sources, including problems with "Delta" and the inflation factor.

One of the errors has already been corrected by changing the inflation factor and adjusting AELs to compensate for past errors in adjusting for inflation. We are proposing a simplification of "Delta" that will correct another error. However, another source of bias against large, urban authorities was the range test.

The application of the range test was important in establishing base year expense levels. A range factor was developed which established a "band" around the costs estimated using the prototype equation. For most authorities, the base year budget became the initial allowable expense level under the PFS; that is, the base year budget was "within" the allowable range. For other authorities, the base year budget was "out of range"--budgeted expenses exceeded (or were less than) their estimated prototype expenses plus (or minus) the range factor.

The attempt to identify inefficient authorities as those PHAs with costs above the "acceptable" level is, in theory, a reasonable approach. It will be equitable, however, only if: (1) the benchmark costs are derived from a

well-specified cost equation; (2) the allowed-for "error" is applied appropriately; and (3) the high-cost ("above range") PHAs have the ability to appeal before they are penalized by a reduction in anticipated subsidy. The PFS range test did not meet these criteria and the cumulative impact of these errors probably introduced a bias agianst large PHAs, particularly the extra-large authorities. The most important bias arises from omitted variables in the prototype.

The levels of PHA operating costs vary dramatically across PHAs and properly specified cost functions can help explain these differences. PHA costs vary according to numerous factors, including:

(1) Structural and design characteristics of the buildings;

(2) Size characteristics including overall PHA size, density, the number of projects, and number of rooms per unit;

(3) Age of PHA buildings;

(4) Many local and regional factors including differences in price levels, neighborhood conditions, crime and vandalism;

(5) Tenant profiles; and

(6) Management efficiency.

In order to illustrate the effects of omitted variables in the PFS prototype equation, an alternative cost equation was estimated during the PFS evaluation which included additional economic, structural, and tenant variables. It did not, of course, include management efficiency, since this is not a reason for acceptable variations in costs. These additions increased the explanatory power of this equation by 33 percent relative to the (1975) prototype equation in the PFS. The 1975 prototype included variables for building age, building height, bedrooms per unit, population of area served, and a regional cost index (derived from the operating costs of small PHAs). In contrast, the alternative equation included variables describing the manager's evaluation of neighborhood quality, tenant evaluation of neighborhood quality, union involvement, local wage rates, the cost of vandalism, number of social services, number of elevators, total number of units, number of projects, number of male teenagers, percent of minority households, building age, and the ten HUD regions (See Merrill, et al., 1980, p. 129).

Furthermore, the technical application of the range test was inappropriate. In theory, the range factor was derived so that approximately 95 percent of the PHAs would fall within range; in fact, only about 84 percent were within range.

The results of the range test by size of PHA were that 61 percent of the extra-large authorities were above range and none were below range based on the sample of PHAs used in the PFS evaluation (Merrill, et al., 1980). In contrast, small authorities were distributed symmetrically; 14 percent were above range and 14 percent were below. Regression analysis suggests that in addition to authority size, a higher proportion of black tenants increased the likelihood of a PHA being above range. (This variable is un doubtedly serving as a proxy variable for problems facing some urban PHAs.)

Using the alternative prototype cited above, the original range test was simulated for a sample of PHAs: only 41 percent of the PHAs determined to be above range under the original prototype were also above range using the alternative equation (also, about 2 percent not originally above range were in fact above range in the simulation) (Merrill, et al., 1980, Chapter 5).

Two options for adjusting current AELs to offset the bias introduced by errors in the range test were considered: (1) a retrospective fix based on estimates of the actual errors in historical PFS; and (2) use of currently available information related to PHA operating costs as input to a revised model of PHA costs. The first option was not feasible because of lack of appropriate historical data. With one exception, appropriate data for making retrospective adjustments to the PFS do not exist for the majority of PHAs. The exception is the retrospective inflation adjustment which adjusts AELs to reflect a more accurate inflation factor; this adjustment has already been incorporated into Cost-Based Funding. 1/ However, historical data appropriate for estimating a model of PHA costs (necessary for recomputing the range test and Delta) exists for only a few PHAs. 2/

1/ The retrospective inflation adjustment is discussed further in Chapter 5.
2/ As discussed above, the evaluation of the PFS simulated a new range test based on an improved cost equation; as expected, the outcome differed in favor of the large PHAs, that is, the probability that a large PHA was declared above range fell considerably. However, the only data that exist are 1973 and 1975 interview data covering 133 PHAs and there is no way to replicate this for the remaining PHAs.

Lacking appropriate historical data, the next step was to assess whether currently existing data might be used to describe PHA operating costs and, in particular, differentiate PHAs operating in distressed environments. The PFS (prototype) cost equation is not adequate in this regard because, among other problems with the equation, important variables that contribute to higher costs have been left out. Ideally, an alternative cost equation would include descriptors of PHA building characteristics, local and regional economic variables, tenant profiles, and neighborhood conditions, crime, and vandalism. However, many of these descriptors, especially for neighborhood conditions and crime, are not currently available and, in addition, tend to be extremely difficult to define and measure. Instead, the 1977 CDBG entitlement formula was used as a proxy for more specific indicators of difficult operating conditions in urban areas. 1/ Although CDBG Formula B certainly cannot account for all the local influences on operating costs, the formula is a well-developed, extensively researched index of need (Bunce and Goldberg, 1979). Furthermore, the AEL adjustments, using this factor, could be made quickly, as the CDBG entitlement data are both currently available and provide national coverage.

1/ It should also be noted that the standards for physical and economic distress used in UDAG (Urban Development Action Grants) were also investigated for possible use as a proxy variable but the results were not successful, possibly because the UDAG scores exist only for large cities and urban counties and thus do not differentiate these areas from smaller cities and non-urban areas.

Derivation of the Distress Adjustment

The 1977 CDBG formula is a function of relative growth lag, relative poverty, and the relative age of the housing stock. 1/ This formula was developed because the 1974 formula was considered unresponsive to the physical, social, and fiscal problems of older, deteriorating metropolitan cities (Bunce and Goldberg, 1979, p. 85). In contrast, analysis of the variables in the 1977 formula indicates strong association with community need. The age of the housing stock has a high association with economic decline, high tax effort, and lagging fiscal capacity (Bunce and Goldberg, 1979, p. 17); furthermore, population growth lag correlates with overall community development need more than any other variable in the current dual system (Bunce and Goldberg, 1979, p. 19).

1/ Refer to Bunce and Goldberg, 1979, Chapter 4, for a full description of the dual formula CDBG allocation process. The 1977 Formula (Formula B) is defined as:

$$.20 \frac{\text{Population Growth Lag}_j}{\text{Population Growth Lag}_{MC}} + .30 \frac{\text{Extent of Poverty}_j}{\text{Extent of Poverty}_{SMSA}}$$

$$+ .50 \frac{\text{Age of Housing Stock}_j}{\text{Age of Housing Stock}_{SMSA}}$$

where

j = jth entitlement city;

SMSA = indicates that the variable is defined for all SMSAs;

MC = indicates that the variable is defined for all metropolitan cities.

PHAs receive a distress adjustment if the CDBG index in their entitlement community exceeds the average index (that is, the average per capita grant). This procedure results in an adjustment pattern with quite distinct size and regional variations. Table 4-3 shows the distribution of adjustment for the analysis sample of PHAs. Overall, 32 percent of the analysis sample received the AEL adjustment. As would be expected, the adjustments are concentrated among the large and extra-large PHAs: 76 percent of the extra-large and 50 percent of the large PHAs receive AEL adjustments while only 26 percent of the medium and 8 percent of the small PHAs do so. In addition, adjustments are most likely to occur in the Northeast and Central regions, although for the extra-large authorities, adjustments are quite likely in every area of the country. The total number of dwelling units in PHAs receiving an AEL adjustment is 540,945, which represents about 55 percent of total PHA units.

The size of the AEL adjustment, shown in Table 4-4, is determined by two factors: the estimated parameter of the CDBG index in the cost equation used to test the relationship between the CDBG formula and PHA costs (see Appendix 4-2) and the extent to which the PHA's CDBG index value exceeds the mean value. The product of these variables determines the value of the adjustment. The adjustment calculation may be represented as follows:

AEL ADJUSTMENT	=	($270)	x	CDBG SCORE	-	AVERAGE CDBG SCORE
		The approximate value of the parameter in the PHA cost equation.		The per capita value of the CDBG grant for the PHA's jurisdiction.		The average CDBG grant for the sample.

Note also that the adjustment is subject to an upper limit. 1/ The adjustment is always positive since the PFS is already constraining the AELs of PHAs which do not operate in difficult environments by limiting their AEL increases to those justified by inflation and (to a small extent) calculated through the Delta.

1/ The upper limit was derived as follows. The average adjustment and standard deviation of the adjustment were calculated for each PHA size group. The maximum adjustment could not exceed the mean plus two standard deviations. This cap on the adjustment had minimal effect; it was simply designed to avoid "outliers" in the adjustment process.

Table 4-3

DISTRIBUTION OF PHAs RECEIVING AN ALLOWABLE EXPENSE LEVEL ADJUSTMENT UNDER COST-BASED FUNDING

PHA TYPE	NUMBER OF PHAs RECEIVING AN AEL ADJUSTMENT	PERCENT OF THE CATEGORY RECEIVING AN AEL ADJUSTMENT	TOTAL SAMPLE BY CATEGORY
Extra-large	16	76%	21
Northeast	7	100	7
South	2	50	4
Central	6	75	8
West	1	50	107
Large	53	50	2
Northeast	34	81	42
South	6	25	24
Central	9	30	30
West	4	36	11
Medium	22	26	86
Northeast	11	42	26
South	4	15	27
Central	7	29	24
West	0	0	9
Small	8	8	100
Northeast	6	20	30
South	0	0	27
Central	2	5	40
West	0	0	6
Total	99	32%	314

SAMPLE: PFS Cross Section Analysis Sample.
DATA SOURCES: PFS Cross Section Analytic Data Base.

Table 4-4

ADJUSTMENT TO THE ALLOWABLE EXPENSE LEVEL
UNDER COST-BASED FUNDING

PHA TYPE	1980 DOLLARS, P.U.M. AVERAGE ADJUSTMENT FOR THE FULL ANALYSIS SAMPLE	AVERAGE ADJUSTMENT FOR PHAs RECEIVING ADJUSTMENTS (STANDARD DERIVATION)		MAXIMUM ADJUSTMENT FOR PHAs RECEIVING ADJUSTMENTS	AVERAGE PERCENT ADJUSTMENT FOR PHAs RECEIVING ADJUSTMENTS
Extra-large	5.04	5.62	(1.90)	10.45	4.28%
Northeast	5.25	5.25		10.20	3.62
South	2.66	4.71		5.41	4.92
Central	5.75	6.85		10.45	5.75
West	2.80	6.04		6.04	3.78
Large	2.85	5.50	(3.31)	12.71	5.43
Northeast	5.23	6.21		12.71	5.58
South	1.30	4.60		10.27	5.83
Central	1.99	5.61		12.71	6.25
West	1.48	3.01		4.24	2.85
Medium	1.14	4.52	(2.53)	10.78	4.82
Northeast	1.86	4.53		7.34	4.75
South	1.00	6.27		10.78	7.22
Central	.83	2.99		5.63	3.65
West	.00	0		0	0
Small	.49	5.72	(1.95)	8.11	6.67
Northeast	1.58	6.62		8.11	7.24
South	.00	0		0	0
Central	.21	3.08		3.45	5.01
West	.00	0		0	0
Total	3.02	5.51	(2.41)	12.71	4.69%
(N)	314	99		99	99

SAMPLE: PFS Cross Section Analysis Sample.
DATA SOURCES: PFS Cross Section Analytic Data Base.

Overall, the value of the adjustment was $5.51 for PHAs receiving an adjustment (the overall average for the full sample is only $3.00). This represents approximately 4 to 7 percent of the allowable expense level for PHAs receiving adjustments. When compared with the extent to which extra large and large PHAs had their AELs reduced by the 1975 range test, 13 percent and 4 percent respectively on average, the proposed adjustment appears reasonable. Among PHAs receiving adjustments, the average does not vary much by size of PHA; also, no clear trends emerge for regions.

In summary, the AEL adjustment process appears to have adequately met the objectives for the adjustment: the CDBG per capita grant as defined under Formula B is positively and significantly related to PHA operating costs. Large, urban PHAs, i.e., PHAs that were most likely to receive shortfalls in funding under PFS are most likely to receive AEL adjustments under Cost-Based Funding. A number of important caveats should be mentioned, however. First, the CDBG index is, of course, only a proxy for distressed PHA operating conditions. Second, PHA cost data is no longer adequate to model what it should cost to operate a PHA. This is because the data reflect past HUD funding decisions under PFS as well as true, underlying cost variations. Third, local CDBG indices are affected by the year of the data. Some of the U.S. Census data in the current formula is dated and the formula score may be an out of date indicator in some cases. Finally, allocation of CDBG funds among SMSAs, non-SMSAs and the balance of state may be determined on grounds that are not relevant to measuring distressed operating conditions. Nevertheless, no direct indicators of PHA operating condition or "untainted" operating cost data currently exist. The CDBG proxy approach appears to be an attractive option which works well and deserves careful consideration.

4.3 FEDERAL OVERSIGHT WITHIN REVISED COST-BASED FUNDING

Background and Rationale

An essential part of the Revised Cost-Based Funding system is a process for Federal review of the AELs of apparently inefficient or very high-cost PHAs with an option to reduce the AELs of those authorities. This is an important correction to the most fundamental weakness of the Performance Funding System -- that, for the most part, it takes as the appropriate levels of public housing operating costs the historical levels of those costs.

The range test based on the prototype cost equation limited allowable costs to the costs of well-managed or high-performing PHAs, but the definition of a well-managed PHA did not include criteria relating either to cost-effective methods of doing business or to the efficiency of the housing stock managed. Thus, for example, the costs of projects that are very expensive to operate were included in the costs allowed by the PFS as long as such projects belonged to high-performing authorities. Similarly, the prototype cost equation included expensive approaches to providing services so long as the PHAs using those approaches were generally classified as well-managed.

As noted earlier in this chapter, it is doubtful that any amount of research would ensure that excess costs associated with inefficient operation were excluded from a formula-based funding system. On the other hand, it is not necessary that the Federal Government turn a blind eye to clear inefficiencies permitted by a funding formula in order to retain the advantages of a formulistic approach.

Outline of Proposed System

Federal review of the allowable costs of particular PHAs is not the same as an annual budget review. It involves the examination of the AELs of only those PHAs that exhibit clear signs of inefficiency or that have costs above some sort of proxy such as Fair Market Rents. One attractive way to focus on PHAs with costs which appear excessive would be to identify those PHAs with costs which are furthest above their Formula Expense Levels. (This method of identifying PHAs with high costs is similar to applying a "range test". See the explanation in this chaper.) The review process would reach only a limited number of PHAs in any year and would never be applied to the great majority of PHAs. The first PHAs to be reviewed would be either those with the largest indicators that their costs might be excessive or, alternatively, those with some signs of excess costs and with large potential for cost savings if their AELs were to be reduced (in other words, the PHAs with the largest numbers of units). Candidate PHAs for review of allowable costs might also be recommended by area offices following regular bienniel management reviews.

The indicators of inefficiency or excess costs used to trigger AEL reviews and to set the review schedule would not be used as targets for the AELs. Rather, lower AELs would be negotiated on the basis of a thorough review of the actual costs and operating circumstances of the authority. It should also be noted that indicators of inefficiency are not detailed performance standards, but, rather, broad measures of appropriate staffing levels or other inputs per unit month. Even so, a fairly substantial research effort would be required for their development. The logic should be that more than a certain number of hours of janitorial service per 1000 unit months, for example, is more than needed for a reasonable level of service. Similarly, if private market proxies for PHA costs are used to trigger AEL review, they should be set high enough that they are not simply measuring differences in the nature of the housing

stock and tenantry between public and private housing. For example, total FMR (as contrasted with FMRs net of ACC payments and/or modernization needs estimates) might be used-as the proxy for excess costs. (For other approaches to using FMRs in public housing funding systems, see Chapters 8 and 9, below).

The Review Process and Its Result. During a HUD review to determine whether a PHA's AELs should be reduced, the PHA would be permitted to demonstrate that special circumstances account for seemingly high costs and that no reasonable strategy for reducing those costs is available. For example, security and maintenance costs might be high because the PHA serves an unusually large number of families with teenagers. The PHA might be able to demonstrate that this is the case, and that alternative forms of housing assistance for those families would be more expensive or are not available.

If the HUD review concluded that a PHA's costs were both excessive and potentially controllable, a lower AEL would be established for that PHA and a transition plan agreed upon. The lower level would be based on detailed analysis of data on unit costs and circumstances of the PHA's current operations. While the decision on the reduced AEL would be informed by comparisons with costs of similar operations at other PHAs, the level would not be based on a pre-determined benchmarks or targets. In the end, the judgement of the HUD reviewers and a negotiation between HUD and the PHA would set the level and the terms of the transition.

The PHA's transition plan would establish in some detail the PHA's strategy for bringing costs within the new allowable levels. It might, for example, include the sale or demolition of some of the authority's projects, reduction in staff, renegotiation of wage contracts, or a change to contracting for services previously performed by PHA staff where it appeared that cost savings would result. Depending on the nature of the cost reduction strategy and the time required to effect changes, the plan might provide for a phased reduction of the AEL over several years.

Costs Other Than AELs. In concentrating, like the rest of this chapter, on the Allowable Expense Levlels of a cost-based funding system, this proposal for Federal review of PHA costs has ignored two important cost areas: utilities expenditures and capital improvements or modernization. Because of the size of utilities costs as a percentage of total public housing operating costs, it would be essential to include utilities costs in a HUD review of whether a PHA's costs are excessive. Since changes to the buildings operated by a PHA would frequently be part of a transition plan for cost reduction, use of modernization funds would be a key element in the transition plans. Indeed, one of the functions of the transition plan would be to make sure that PHAs with a record of inefficiency use modernization funds in a way that results in operating cost reductions and is in conformance with an overall cost reduction strategy. Modernization funding would often be used to bring about reductions in utilties costs, but energy-saving improvements are not the only type of modernization that can reduce operating costs.

Summary

A well-designed process for Federal review of allowable costs on an exceptional rather than program-wide basis can maintain the basic equity and administrative feasibility of a formula-based funding system, while achieving appropriate cost reductions. However, reductions in allowable costs should not be made capriciously, but should result from a thorough review of a PHA's operations and be carried out as part of a careful strategy for changing the PHA's operations. This process would involve a considerable expenditure of HUD staff time for the review of the costs of any one PHA, and only a few PHAs would be reviewed in any year.

4.4 APPEALS OF ALLOWABLE OPERATING EXPENSES

Background and Rationale

The last section has just described a process through which allowable operating costs are reduced as a result of Federal initiative. There are inherent limits to any formula based system which make it unable to respond to extraordinary operating circumstances or unanticipated crisis. By adding an appeals system to Revised Cost-Based Funding, the system could be given added flexibility to redress unintended inequities arising from the use of the formula and could thus help to get some PHAs through crisis situations.

When PFS was initially implemented in 1975 and 1976, a formal appeals system was developed so that PHAs could appeal their Allowable Expense Levels. Since AELs are adjusted for inflation each year, any successful appeal resulted in a permanent increase in the PHA's allowable operating expenses and, therefore, in its subsidy from the Federal Government.

HUD set aside $16 million to pay for successful appeals during the first two years of PFS and actually agreed to $12 million in increased AELs. Large and extra large PHAs got the lion's share of the appeals money. New York City alone obtained 28 percent of the appeals money, or over $3 million, and eight extra large PHAs collectively obtained 46 percent of the appeals money. Large PHAs obtained an additional 27 percent of the money. Since large and extra large PHAs constitute 64 percent of the Public Housing Program's stock, the fact that they obtain a high percentage of the appeals money would be expected.

It will be recalled that when PFS was established a prototype formula estimated a formula expense level for PHAs with various types of operating conditions. PHAs were allowed to incur operating expenses up to $10.31 above the formula level, but were regarded to be "out of range" if their costs were higher. PHAs with costs above that level were brought down to the allowable

range in the early years of PFS operation and these PHAs were not allowed to appeal their allowable cost levels. Thus it was the PHAs that had their costs most severely reduced by PFS that were not allowed to appeal their operating costs. This had the virtue of not allowing the highest cost PHAs to continue costs which were out of line. However, some of those PHAs may have had difficult operating conditions that required them to have high operating costs. The 1980 evaluation of PFS estimated that if those PHAs had been allowed to appeal their AELs and had been as successful as similar PHAs that were allowed to appeal, the costs of the appeals process would have more than doubled, from $12 million to $28.5 million. Almost every one of the extra-large PHAs either filed a successful appeal or was prohibited from doing so because its costs were out or range. A much smaller fraction of PHAs in other size categories filed successful appeals.

Outline of Proposed System

It is essential that the appeals system for Revised Cost-Based Funding be designed in such a way that total costs of the system can be tightly controlled and so that the procedures are simple enough that neither PHAs nor HUD find themselves burdened by a set of time-consuming and complicated rules. In addition, the grounds for possible appeal should be constrained so that there are a relatively small number of appeals to consider at any time. Therefore, the appeals procedure proposed here would allow PHAs to appeal their Allowable Expense Levels and receive increased subsidies only in cases of financial emergencies beyond the control of PHA management.

Cost of the System. An appeals system should not be designed as an open-ended commitment but as a budgeted amount that can be controlled by government decision makers so as to allocate the funds equitably among the claimants and to limit the expenditures. The amount budgeted should be a minimum of $10 million or about one percent of PFS subsidies and could reasonably range up to $25 or $30 million. Any amount less than $10 million, when spread over a billion dollar program with a million units, would not be

worth the effort to implement. A budget of $20 million is proposed here. No breakdown of costs by size or location of PHAs is possible in advance of the implementation of an appeals process. However, we know from our experience with the previous system, from a study of reserve accounts, and from our knowledge of where most of the program's units and subsidies are found that the largest PHAs would be likely to obtain a high proportion of the appeals money.

Effects of Successful Appeals. The system could have the effect of permanently increasing public housing subsidies, as higher AELs form the new base to which "Delta" and inflation adjustments are added on a yearly basis. This is the practice that was used in the appeals system at the beginning of PFS, and in effect means that HUD is still paying for appeals which were successful at that time. However, in order to constrain the costs of the system and to limit the use of the appeals to temporary emergencies, we do not propose to follow that practice in Revised Cost-Based Funding. Instead, successful appeals would result in higher subsidies for from one to three years. Appeals could be granted for increases that would be for one year only, or that would phase down in the second and third years.

PHAs would be excluded from appealing AELs for reasons that are systemic and should be anticipated. Excluded grounds for appeals would include:

- o General financial hardships
- o Aging housing stock
- o Generally rising wages or materials prices
- o Improved service delivery

Allowable grounds for appeal would include sudden, extraordinary changes in operating conditions or unanticipated costs required to correct conditions

that threaten the health and safety of PHA tenants or the public of the community. Examples would include expenditures required to meet new health or safety regulations, to meet emergency costs due to civil disturbances or natural disasters, or to temporarily increase protective services due to sudden changes in neighborhood conditions. The specific condition causing high operating costs would be cited as the grounds for the appeal.

Structure of the System. The goal of the system is to provide a fair opportunity for PHAs to present their appeals, but one which is administratively simple for both the PHA and HUD. A straightforward procedure with limited demands on staff is needed for HUD because of the already great demands on public housing management staff. Large and extra large PHAs have sufficient resources to make appeals under almost any type of procedures, but the system needs to be simple enough that small and medium PHAs with more limited expertise are able to make appeals as well.

The system would have the following characteristics:

- The system would be entirely staffed by current HUD public housing management staff members with expertise in the Public Housing Program. No new quasi-judicial groups would be established. Very few if any additional staff members would be required.

- PHAs would appeal for higher subsidies to the HUD area office, and the management officers most familiar with the PHA and its operating circumstances would be responsible for review of the appeal. The area office would also make a judgement about the amount of subsidy requested by the PHA and would forward its findings to HUD's Central Office.

- The Central Office Public Housing Management Division would compile all the appeals, review them and make a final determination. The appeals would be reviewed to ensure that there was equity of treatment of the PHAs at various area offices and that the budgeted outlays were not exceeded.

- All PHAs, including those that were out of range when the PFS was instituted, would be allowed to appeal. However, relatively high cost PHAs would have a higher burden of proof to justify their appeal.

Procedures. Procedures would be kept informal but would require the appealing PHA to submit sufficient information to clearly state its case and evidence for the appeal. The appeal would be in written form, and no hearing procedure would be provided. However, the area office would be free to contact the PHA to obtain additional information as needed.

In order to exclude appeals of trivial size, only appeals where more than one percent of the PHAs AEL is at stake would be permitted. The PHA would need to appeal within 60 days of receiving its AEL calculation for the year or within 60 days of the emergency event causing the appeal.

The PHA would file a position paper as support for the appeal that would:

- identify the issues at stake;

- state the amounts of money requested for each item in the appeal;

- summarize the facts behind the issues and provide documentary evidence justifying the funding requested; and

- request a length of time that the PHAs subsidy could be increased, ranging from one to three years.

Summary

An appeals procedure for Public Housing authorities could provide a safety valve to allocate funds to make up for costs beyond the control of the PHA. It would allow some flexibility to increase program equity within a basically formula-driven system. The appeals procedure as outlined above would be controlled through the budget. The procedures would be simple for both HUD and the PHAs, would be overseen at Central Office to encourage equity of application, and would make use of the management staff most familiar with the PHAs in HUD field offices. Successful appeals would increase the allowable expense levels of the PHAs and thus increase the subsidy, but in contrast to the procedure used in 1975-76, the increases to AELs would be temporary. Therefore, the cost of the procedure would not continuously compound. Such a procedure would be paired with the procedures explored in the previous section that would allow HUD to demand increases in PHA efficiency. In this way, the cost of the appeals process would be offset by reduced costs elsewhere in public housing operations.

4.5 COST ESTIMATES

This section presents an estimate of subsidy costs under Revised Cost-Based Funding. The revised "Delta" and the offset adjustment to Allowable Expense Levels are included in these estimates. No attempt has been made to assess what types of increases or decreases in AELs might occur as a result of Federal review of costs or of PHA appeals.

Total national costs, PHA revenues, and Federal operating subsidies under Revised Cost-Based Funding are presented in Table 4-5 and compared with similar totals for Comparison PFS. 1/

Total operating costs are minimally higher--2.2 percent--under Revised Cost-Based Funding than under the Comparison PFS. Since PHA revenues are assumed to be identical under these two funding systems, subsidies change by the same magnitude as costs, approximately $42 million. (Under both systems, operating subsidies are simply the difference between costs and revenues. However, since subsidies cannot be negative and are set to zero in the few cases where revenue exceeds costs, the total funds available (subsidies plus revenue) are slightly larger than total costs.)

Differences in costs between Revised Cost-Based Funding and Comparison PFS are entirely due to the AEL changes stemming from revised "Delta" and adjustments to PHAs operating in distressed environments. Average allowable expense levels (per unit month) under Revised Cost-Based Funding and Comparison PFS are shown in Table 4-6 by type of PHA. The average change from Comparison PFS to Revised Cost-Based Funding is small, about 3 percent.

1/ The way in which Comparison PFS differs from actual PFS funding in 1980 is explained in Chapter 1.

Table 4-5

NATIONAL COSTS OF ALTERNATIVE FUNDING SYSTEMS:
REVISED COST-BASED FUNDING

	1980 DOLLARS	
	REVISED COST-BASED FUNDING	COMPARISON PERFORMANCE FUNDING SYSTEM
Operating Subsidy	753,545,426	711,996,155
PHA Rental and Other Income	1,218,902,705	1,218,902,705
Total Operating Cost	1,961,792,424	1,919,721,877
Total Funds Available a/	1,972,244,813	1,930,898,860

SAMPLE: PFS Analysis Sample, N = 314.
DATA SOURCES: PFS Cross Section Analytic Data Base.
NOTES: a/ Total Funds Available, the sum of subsidy and PHA revenue, differ slightly from total costs; PHAs that would receive "negative" subsidy under a formula where Subsidy = Costs - Revenue are recorded as receiving zero subsidy.

Table 4-6

THE ALLOWABLE EXPENSE LEVEL UNDER REVISED COST-BASED FUNDING AND COMPARISON PFS FOR PHAs BY SIZE AND REGION a/

PHA TYPE	1980 DOLLARS, P.U.M. AVERAGE ALLOWABLE EXPENSE LEVEL UNDER REVISED COST-BASED FUNDING	AVERAGE ALLOWABLE EXPENSE LEVEL UNDER COMPARISON PFS
Extra-large	137.21	131.40
Northeast	154.79	148.69
South	90.89	87.67
Central	115.27	108.82
West	147.66	144.17
Large	91.33	88.00
Northeast	106.58	100.78
South	77.57	76.00
Central	79.31	76.89
West	105.49	102.90
Medium	77.9	76.52
Northeast	85.52	83.42
South	67.90	66.70
Central	71.02	69.88
West	102.77	102.60
Small	68.12	67.38
Northeast	80.17	78.15
South	58.96	58.91
Central	63.26	62.76
West	80.62	80.38
Total (Weighted P.U.M.)	102.99	99.44

SAMPLE: PFS Cross Section Analysis Sample.
DATA SOURCES: PFS Cross Section Analytic Data Base.
NOTES: a/ Allowable Expense Level Excluding Utilities, and Costs for Audits, and Deprogrammed Units.

The changes in AELs between Revised Cost-Based Funding and Comparison PFS show distinct patterns by size and region. Extra-large and large PHAs experience the greatest change in per unit allowable costs. Also, for PHAs of all sizes, the changes are likely to be greatest in the Northeast and Central regions. On average, the CDBG offset adjustment accounts for about 90 percent of the total adjustment. Table 4-7 indicates how the per unit AEL translates into total operating subsidy by size and region. The overall magnitude of the subsidy change is small--$41.5 million, or roughly 6 percent of subsidy under Comparison PFS. However, extra-large PHAs receive 65 percent of the total (although their share of total dwelling units is 39 percent). In contrast, large PHAs get just about their "share," while medium and small PHAs get a much smaller portion of the total.

The Distribution of Changes in Funds Available and Subsidies P.U.M.

Total funds available (per unit month) for Revised Cost-Based Funding and Comparison PFS and the difference between them is presented in Table 4-8. A similar description of per unit subsidy dollars is given in Table 4-9. (In fact, since total funds available are simply PHAs revenues plus federal subsidy, and revenues are the same under these alternative funding systems, the "difference" columns are the same in these tables.) As before, a comparison of the differences by size and region of PHA reveals the larger changes occurring for Northeastern and Central PHAs, large PHAs and particularly, extra-large PHAs.

The distributional impacts are presented in more detail in Tables 4-10 and 4-11. These tables show "gainers" and "losers" under Revised Cost-Based Funding as compared with Comparison PFS. The table entries include the percent of PHAs and percent of total dwelling units that fall into a particular gainer or loser category (the actual number of PHAs and dwelling units is also shown; the dwelling unit figures are "weighted" to represent total, national dwelling units). Several key conclusions emerge from these tables. The percent change in funds available is relatively small for all PHAs. Only a handful of PHAs are less well off under Revised Cost-Based Funding than under Comparison PFS.

Table 4-7

CHANGE IN FEDERAL SUBSIDY TO PHAs
BY SIZE AND REGION UNDER REVISED COST-BASED FUNDING

PHA TYPE	OPERATING SUBSIDY P.U.M. (1980 DOLLARS) REVISED COST-BASED FUNDING	COMPARISON PEFORMANCE FUNDING SYSTEM	DIFFERENCE IN SUBSIDY	PERCENT OF THE TOTAL DIFFERENCE
Extra-large	473,308,237	446,219,287	27,088,950	65%
Northeast	314,181,267	297,611,095	16,570,172	40%
South	31,940,466	30,484,486	1,455,980	4%
Central	114,763,775	106,342,110	8,421,665	20%
West	12,422,729	11,781,597	641,132	2%
Large	179,151,028	168,394,262	10,756,766	26%
Northeast	94,184,424	87,711,889	6,472,535	16%
South	42,576,124	41,245,365	1,330,759	3%
Central	30,351,599	28,140,798	2,210,801	5%
West	12,038,880	11,296,211	742,669	2%
Medium	52,186,695	50,063,916	2,122,779	5%
Northeast	29,150,218	28,052,886	1,097,332	3%
South	8,340,332	7,828,679	511,653	1%
Central	9,428,453	8,941,219	487,234	1%
West	5,267,691	5,241,132	26,559	a/
Small	48,899,467	47,318,691	1,580,776	4%
Northeast	29,733,744	28,541,410	1,192,334	3%
South	8,000,706	8,000,718	-	a/
Central	8,813,214	8,468,872	344,342	1%
West	2,351,804	2,307,690	44,114	a/
Total	753,545,426	711,996,155	41,549,279	100%

SAMPLE: PFS Cross Section Analysis Sample.
DATA SOURCES: PFS Cross Section Analytic Data Base.
NOTES: a/ Less than 1%.

Table 4-8

CHANGE IN FUNDS AVAILABLE TO PHAs BY SIZE AND REGION
UNDER REVISED COST-BASED FUNDING

PHA TYPE	FUNDS AVAILABLE P.U.M. (1980 DOLLARS) REVISED COST-BASED FUNDING	COMPARISON PERFORMANCE FUNDING SYSTEM	AVERAGE DIFFERENCE	STANDARD DEVIATION OF DIFFERENCE	SAMPLE SIZE
Extra-large	216.27	210.46	5.81	2.47	21
Northeast	249.23	243.13	6.10	1.46	7
South	145.77	142.55	3.22	2.57	4
Central	176.61	170.17	6.44	3.16	8
West	184.88	181.39	3.49	3.21	2
Large	148.38	145.10	3.29	3.89	107
Northeast	188.16	182.36	5.80	4.13	42
South	129.31	127.73	1.58	2.69	24
Central	119.55	117.14	2.41	3.39	30
West	143.64	141.76	1.87	2.76	11
Medium	131.74	130.41	1.32	2.43	86
Northeast	159.94	157.85	2.10	2.65	26
South	116.56	115.42	1.13	2.83	27
Central	114.16	113.14	1.02	1.83	24
West	134.64	134.47	.17	.53	9
Small	115.34	114.66	.68	3.09	100
Northeast	152.20	150.29	1.91	1.91	27
South	97.68	97.68	.00	.51	27
Central	103.47	103.00	.47	1.16	40
West	110.03	110.03	.19	.15	6
Total (Weighted P.U.M.)	166.32	162.82	3.50	3.52	314

SAMPLE: PFS Cross Section Analysis Sample.
DATA SOURCES: PFS Cross Section Analytic Data Base.

Table 4-9

CHANGE IN FEDERAL OPERATING SUBSIDY TO PHAs
BY SIZE AND REGION UNDER REVISED COST-BASED FUNDING

PHA TYPE	OPERATING SUBSIDY P.U.M. (1980 DOLLARS) COST-BASED FUNDING	COMPARISON PERFORMANCE FUNDING SYSTEM	AVERAGE DIFFERENCE	STANDARD DEVIATION OF DIFFERENCE	SAMPLE SIZE
Extra-large	101.60	95.78	5.82	2.47	21
Northeast	115.70	109.59	6.10	1.46	7
South	70.57	67.35	3.22	2.57	4
Central	87.82	81.37	6.44	3.16	8
West	67.69	64.20	3.49	3.21	2
Large	54.78	51.49	3.29	3.89	107
Northeast	84.43	78.63	5.80	4.13	42
South	50.52	48.94	1.58	2.67	24
Central	33.13	30.72	2.41	3.39	30
West	30.40	28.53	1.88	2.72	11
Medium	32.56	31.24	1.32	2.43	86
Northeast	55.71	53.61	2.10	2.65	26
South	18.49	17.35	1.13	2.83	27
Central	19.83	18.80	1.02	1.83	24
West	34.50	34.32	.17	.53	9
Small	21.01	20.33	.68	1.91	100
Northeast	47.63	45.72	1.91	3.09	27
South	10.84	10.84	.00	.51	27
Central	11.93	11.46	.47	1.16	40
West	10.38	10.19	.19	.15	6
Total (Weighted P.U.M.)	63.54	60.04	3.50	3.52	314

SAMPLE: PFS Cross Section Analysis Sample.
DATA SOURCES: PFS Cross Section Analytic Data Base.

Table 4-10

DISTRIBUTION OF CHANGE IN FUNDS AVAILABLE TO DIFFERENT SIZE GROUPS OF PHAs UNDER REVISED COST-BASED FUNDING AS COMPARED WITH COMPARISON PFS

	PERCENT CHANGE IN FUNDS AVAILABLE													
	LOSS OF MORE THAN 1%		LOSS OF 1-0%		GAIN OF 0-1%		GAIN OF 1-2%		GAIN OF 2-5%		GAIN OF 5% OR MORE		TOTAL	
PHA SIZE	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS
Extra-large	0 (0)	0 (0)	0 (0)	0 (0)	23.8 (5)	10.4 (40,180)	0 (0)	0 (0)	61.9 (13)	82.0 (318,669)	14.3 (3)	7.6 (29,371)	6.7 (21)	39.3 (388,219)
Large	.93 (1)	.50 (1,324)	4.7 (5)	5.3 (14,323)	46.7 (50)	45.7 (124,535)	8.4 (9)	8.8 (24,064)	24.3 (26)	25.7 (70,036)	15.0 (16)	14.0 (38,261)	34.1 (107)	27.6 (272,543)
Medium	1.2 (1)	1.1 (1,427)	3.5 (3)	4.9 (6,553)	73.3 (63)	71.2 (95,099)	4.7 (4)	4.9 (6,482)	19.0 (12)	14.5 (19,406)	3.5 (3)	3.4 (4,597)	27.4 (86)	13.5 (133,563)
Small	2.0 (2)	1.6 (3,170)	1.0 (1)	1.2 (2,230)	88.0 (80)	86.7 (168,200)	0 (0)	0 (0)	7.0 (7)	7.9 (15,269)	2.0 (2)	2.6 (5,118)	31.8 (100)	19.6 (193,987)
All PHAs a/	1.3 (4)	.6 (5,921)	2.9 (9)	2.3 (23,106)	65.6 (206)	43.3 (428,014)	4.1 (13)	3.1 (30,546)	18.5 (58)	42.8 (423,379)	7.6 (24)	7.8 (77,347)	100.0 (314)	100.0 b/ (988,312)

SAMPLE: PFS Cross Section Analysis Sample.
DATA SOURCES: PFS Cross Section Analytic Data Base.
NOTES: a/ Percent change in sample PHAs is unweighted; percent change for total dwelling units is weighted.
b/ Total units listed here (988,312) differ from universe total (988,326) only due to rounding error in the weighting program.

Table 4-11

DISTRIBUTION OF CHANGE IN SUBSIDY AVAILABLE TO DIFFERENT SIZE GROUPS OF PHAs UNDER REVISED COST-BASED FUNDING AS COMPARED WITH COMPARISON PFS a/,b/

	PERCENT CHANGE IN SUBSIDY													
	LOSS OF MORE THAN 5%		LOSS OF 5-0%		GAIN OF 0-5%		GAIN OF 5-10%		GAIN OF 10-25%		GAIN OF 25% OR MORE		TOTAL	
PHA SIZE	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS
Extra-large	0 (0)	0 (0)	0 (0)	0 (0)	33.3 (7)	49.3 (191,586)	42.9 (9)	39.5 (153,295)	18.0 (4)	8.6 (33,549)	4.8 (1)	2.5 (9,789)	8.0 (21)	43.0 (388,219)
Large	50.0 (2)	1.2 (3,113)	3.8 (4)	4.8 (12,534)	50.1 (53)	49.0 (129,398)	21.1 (22)	21.6 (57,200)	16.3 (17)	17.6 (46,599)	5.8 (6)	5.8 (15,264)	39.4 (104)	29.2 (264,107)
Medium	0 (0)	0 (0)	5.6 (4)	7.0 (7,979)	66.2 (47)	64.9 (73,902)	12.7 (9)	12.2 (13,943)	12.7 (9)	13.0 (14,803)	2.8 (2)	2.9 (3,289)	26.9 (71)	12.6 (113,916)
Small	50.0 (2)	2.3 (3,170)	1.5 (1)	1.6 (2,230)	72.1 (49)	71.0 (97,029)	2.9 (2)	2.7 (3,701)	13.2 (9)	14.5 (19,821)	7.4 (5)	7.8 (10,681)	25.7 (68)	15.1 (136,633)
All PHAs	1.5 (4)	.7 (6,283)	3.4 (9)	2.5 (22,744)	59.1 (156)	54.0 (491,915)	15.9 (42)	25.3 (228,139)	23.5 (39)	12.71 (114,773)	5.3 (14)	4.3 (39,023)	100.0 (264)	100.0 (902,876)

SAMPLE: PFS Cross Section Analysis Sample.
DATA SOURCES: PFS Cross Section Analytic Data Base.
NOTES: a/ Percent change is not calculated for PHAs receiving zero subsidy under Revised PFS.
b/ Percent change in sample PHAs is unweighted; percent change for total dwelling units is weighted.

Furthermore, the only possible source of "loss" is "Delta," which is quite small under both systems; thus the losses are also very small. Note that no extra-large PHAs are less well off under Revised Cost-Based Funding; instead, they are relative gainers, but the percent of gains are also quite small. The "winners and losers" subsidy table (4-11) of course presents a very similar pattern. Very few PHAs lose subsidy and very few make sizeable gains. The great majority of PHAs (dwelling units) receive no more than a 5 or 10 percent subsidy increase under Cost-Based Funding.

4. 6 A REVISED PHA COST EQUATION AND RANGE TEST

Among the alternatives for a revised cost based funding system is the estimation of a new prototype cost equation and the reapplication of the range test that determines whether the AEL of a particular PHA is acceptable or should be reduced to a level closer to the expense level predicted by the cost equation. In this section we will discuss the rationale for such a proposal and outline both its advantages and its disadvantages. This proposal differs from the proposal explained earlier to calculate an offset adjustment to AELs to compensate PHAs operating in difficult operating conditions. The proposal would calculate an entire new equation rather than simply make an adjustment to the AELs, and it would apply a new range test to reduce the AELs of the most costly PHAs. Other aspects of this cost-based funding proposal are similar to what would occur in the proposal for an offset adjustment. Because of the time constraint on this report, only the framework of a new formula ane range test is presented. However, it would be possible to re-estimate the PFS cost equation and reapply the range test within a few months if a decision were made to proceed with this approach. 1/

This alternative accepts the premise of cost-based funding systems, such as PFS, that the most accurate basis for assessing the costs of a PHA is the costs of other PHAs with similar characteristics. However this proposal also assumes that it is possible to apply the lessons we have learned about some of the weaknesses of the current PFS cost equation so as to improve both the equity of a cost-based funding system and its ability to constrain the costs of inefficient PHAs.

Rationale and Advantages of the Proposal

The proposal to develop a revised PHA cost equation and to apply a new range test would draw on the experience we have gained from administering the Performance Funding System since 1975 and the lessons we have learned from evaluations of the system. Instead of reducing allowable expense levels

1/ We are already proceeding with the analysis necessary to fully develop this option.

on the basis of individual PHA budget reviews as described in Section 4-2, this proposal would redevelop the cost equation in order to make possible the reduction of those AELs most likely to reflect inefficient operations throughout the public housing program.

A revised PHA cost equation could improve the accuracy of the formula expense levels. This was not so critical when PFS was implemented, because the range test allowed most PHAs to continue their previous operating cost levels, adjusted for inflation, even if they had costs above their predicted levels. However, if it is desired to apply a more restrictive range test in order to reduce the likelihood that the Federal Government is subsidizing inefficient operations, the accuracy and equity of the equation is more critical.

Once the full revision of the cost equation is completed, it could be used together with a new range test in much the same way as the original PFS equation was applied in 1975: PHAs would be allowed to have costs that are above those estimated to the extent that the costs remained within the new range test. However, an appeals system would be created so that PHAs with special circumstances would be able to request AELs above the new range test. Finally, the "Delta" annual adjustment would be simplified in the manner discussed in Section 4-1.

Disadvantages of the Proposal

It must be acknowledged that there are several disadvantages to the proposal to revise the PHA cost equation and reapply the range test. These disadvantages are shared with other cost based funding systems, including the current Performance Funding System. The most central problem is that no cost formula can ever include all of the variables that legitimately cause PHAs to have higher costs than otherwise similar PHAs. A cost formula is simply not able to come up with a "magic number" that would perfectly predict the required operating cost of a given PHA. There will always be excluded variables such as harsh weather conditions, distances between projects, poor design of projects, or local constraints due to state and local court decisions that cannot be taken into account in the equation.

Limitations on the measurement of variables that can be included is another constraint on the accuracy of the cost equation. HUD does not presently have detailed project by project budgets nor information on other project characteristics such as neighborhood conditions or project tenant attributes, and it would not be possible to obtain such data without extensive, costly, and time consuming research. As a result, the revised cost equation (like PFS) would rely on PHA-wide attribute data rather than project level data, which would yield more accurate estimates if it were available. Even PHA-wide data would have measurement problems due to such factors as timeliness of Census data, limitations in our knowledge about operating costs, and constraints on the number of variables which can be included in an equation before statistical anomalies begin to occur.

The lack of external validation of the predicted operating costs within a cost based funding approach is another problem of such a system. The system compares PHA costs to the costs of other PHAs that have been permitted by current and historical funding systems. Reapplying a PHA cost equation would not tell us what PHA operating costs should be based on any objective standards. Critics of the system could either note that the allowable expense levels are too high, since they are higher than the expenses of privately managed housing, or that they are inadequate because Federal Government requirements, tenant characteristics and neighborhood conditions impose high operating costs which are inadequtely subsidized by the current funding system.

The new PHA cost equation would be applied to the current expense base, just as the original PFS used 1975 as the base year. The chief difference between 1975 and current year costs is that current costs already reflect the lower costs for some PHAs that resulted from the range test already applied by the PFS. PHAs may be underfunded or overfunded at the present time either because 1975 costs were higher or lower than necessary, or because the PFS cost equation

and the original range test were flawed. However, current costs as allowed by the PFS have an important advantage in that we know that PHAs have been able to operate at this level of funding, although some have had financial difficulty in recent years. In contrast, external bases for determining allowable PHA costs may make it impossible for some PHAs, however much they may improve their management, to operate their current stock of public housing.

A Revised Prototype Equation

There are several changes that should be made to the current prototype equation. The first of these changes has already been discussed: the need to include a variable(s) which measures or provides a proxy for the difficult or distressed environments in which some PHAs must operate. The discussion of the offset adjustment to AELs (Section 4.2) noted that the lack of such variables in the present system is a source of inequity, since such factors as blighted neighborhoods, high crime rates, and vandalism have inevitable impacts on operating costs. The inclusion of "Formula B" from the Community Development Block Grant program serves as an interim proxy for these factors. A prototype equation including "Formula B" is shown in Appendix 4-3. Evaluation of the cost equation shows that the variables included in this proxy do have a significant relationship to costs. A revised prototype equation in a cost based funding system should include variables reflecting such conditions.

A measure of geographic differences in costs should also be included in the equation. In the cost equation used in PFS, the measure of local cost variations is based entirely on the cost of 30 small PHAs in each of 10 HUD regions. The exclusion of larger PHAs from the regional cost measure is a problem with the current PFS and should be corrected, especially since the large majority of public housing units is found in large or extra-large PHAs. The PHA cost equation shown in Appendix 4-3 includes a regional cost variable that includes the costs of larger PHAs. Further

work is required to determine whether it would be better to use measures of local costs from outside the public housing system. Research performed by the Urban Institute in 1975 suggests that local government wage rates are highly correlated with other regional cost variables. Other measures of local costs such as FMRs should also be explored for potential use (Sadacca, et al., 1975, p. 64).

Tenant characteristics have been shown to have important effects on operating costs, but this group of variables is generally excluded from the current PFS cost equation. The only exception to this is that the equation includes the PHA's average number of bedrooms per unit, a variable correlated to some extent with the presence of families with children. More direct measures of tenant characteristics were excluded from the cost equation because of fears that including tenant characteristics would encourage the authorities to "break the subsidy system" by admitting a high proportion of the most expensive tenants (Sadacca, et al., 1975, pp.39-40). In fact the tenant mix in most PHAs is determined by matching the available units with families on the PHA waiting list, and few observers believe that PHAs would unfairly manipulate tenant admittance to try to maximize subsidy levels. By including information about the tenants served in a PHA, the PHA cost equation could more fairly subsidize housing authorities for doing their job in serving the neediest families. Examples of tenant characteristics which should be evaluated for use in such an equation incude those identified as significant in the earlier evaluation of PFS: percent minority households, average number of children per adult, percent of households with one parent and percent of households receiving income from welfare (Merrill, 1980, p.86).

Work on the cost equation may be also able to further refine some of the variables already used. For example, the current PFS prototype equation includes the PHA's average building age and height as building characteristics that affect operating costs. It may be that there are better measures of building characteristics which affect operating costs, such as the percentage of units in elevator buildings.

Figure 4-1 shows the effect on Formula Expense Levels (FELs) of applying a new PHA cost equation. The new equation has a steeper slope than the old equation, illustrating that it takes into account more of the conditions causing difficult operating conditions and therefore leading to higher operating costs.

The Range Test

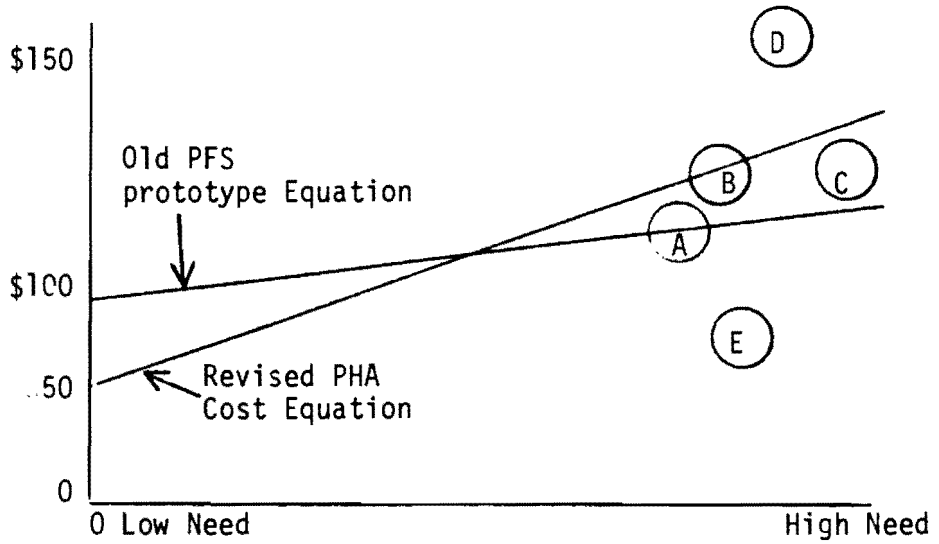
An improved PHA cost equation would yield a more accurate predicted cost level for each PHA, but the actual costs of PHAs would range both above and beneath the predicted costs. PHA costs which are above the predicted values could exceed the estimated values for any of four reasons: 1) the PHA could be inefficient; 2) the cost equation could fail to include good reasons which cause its costs to be above the estimated amount; 3) the PHA could be delivering more services to its tenants than other, similar PHAs; and 4) measurement error could mean that the estimated cost for the PHA was inaccurate despite the inclusion of relevant variables. Combinations of those reasons are also possible.

Since about half of the PHAs will have costs above those estimated by the cost equation, some strategy for dealing with the high cost PHAs is required. Many of the PHAs could be above the estimated cost for good reasons, and some leeway is desirable so that PHAs which are only slightly above estimated cost are given the benefit of the doubt. If the cost equation is well developed, particular types of PHAs should not be unfairly disadvantaged by the procedure. Specifically, the problem in PFS that the range test adversely affected the largest PHAs should not recur.

The original PFS range test allowed PHAs to have AELs of $10.31 above the amount predicted by the equation. The way in which the range test was implemented had the effect of compounding the problems caused by the cost equation in underfunding the largest PHAs, according to one evaluation of the PFS (Merrill, et al., 1980, p. 95). That evaluation proposed a relatively

FIGURE 4-1

FORMULA EXPENSE LEVELS PREDICTED BY COST EQUATIONS



NOTES: Letters refer to examples of PHAs.

A. This PHA has operating costs exactly as predicted by the PFS Prototype Equation.

B. This PHA has operating costs exactly as predicted by the Revised PHA Cost Equation.

C. This PHA operates in a difficult environment. Under the PFS cost equation, it showed costs above the levels estimated by the equation, but under the revised PHA cost equation it is seen to have reasonable costs after taking its operating environment into account.

D. This PHA operates in a difficult environment. Although it appears to be closer to its estimated costs under the new formula, it is still above the estimated level.

E. This PHA is efficiently run and has costs below those of other PHAs in high cost environments.

complex proceedure to take the place of the constant $10.31 range test used in PFS for PHAs of all sizes. However, a simpler procedure is proposed here. The range test should be implemented by allowing PHAs a certain percentage range above the allowable expense level predicted in the cost equation. Because large PHAs tend to have higher AELS than small PHAs, basing the range on a percentage of AEL rather than a dollar amount will be fair to both large and small PHAs.

When the range test was implemented for PFS, the intent was to apply a confidence interval to the equation so that only 5 percent of the PHAs would be out of range. In fact, about 16 percent of PHAs with over 100 units turned out to be above range when the test was applied. These PHAs include a disproportionate percentage of the largest PHAs and contain 37 percent of the program's units (Merrill, 1980, pp. 101-104). These PHAs had their non-utility operating expenses frozen (effectively reduced because of inflation) until they were no longer out of range.

Under this funding option, the range test would be applied so that a certain percentage of the PHAs are out of range and would have their AELs reduced to the range limit. The exact percentage of PHAs to be regarded as above range would be determined after work on the new prototype equation is completed and would depend in part on how much we have been able to improve the equation. This re-application of the range test would further reduce the AELs of the most costly PHAs. However, a PHA constrained in 1975 might or might not be affected by the new range test, depending on the results of the re-estimation of the cost equation. If a PHA's FEL predicted by the new equation is close to its AEL, it will not be out of range, even with a more restrictive range test.

Appeals of AELS

The larger the number of PHAs that have their costs reduced through the application of a new range test, the more important it will be to have an appeals system. There will undoubtedly be some PHAs that are above the new range test but that are inherently costly to operate because they have attributes not included in the new cost equation. In contrast with the application of the range test 1975-76, PHAs that are above range would be allowed to appeal their AELs. In addition, some PHAs facing difficult operating conditions as confirmed by the new cost equation would be allowed to appeal their current AELs even if they were within range. The PHAs allowed to appeal would be those PHAs which had their costs constrained under the original PFS range test in 1975 but which were now within range as shown by the revised PHA cost equation and range test. PHAs whose AELs were not constrained under either range test would have no grounds for appeal.

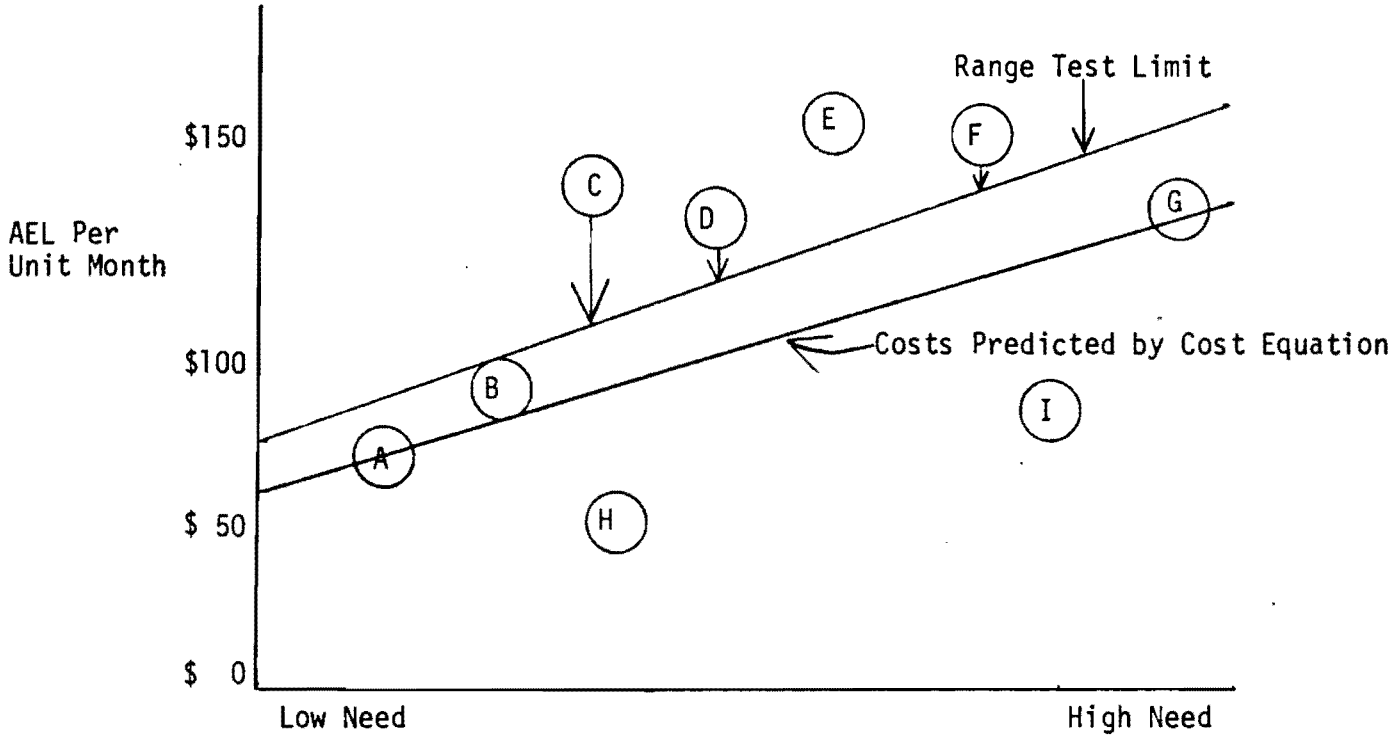
However, the total amount of appeals would be limited either by an appeals budget or by some other rule (eg., an "outer limit" range test). Successful appeal of AELs would have the effect of permanently increasing AELs, but subsequent appeals requesting additional subsidies for emergencies would be for a limited duration as described in Section 4.4. The example on figure 4-2 shows graphically how a new PHA cost equation would affect the AELs of different types of PHAs.

Use of the System in Future Years

Most PHAs would not need to reapply the PHA cost equation in future years: they would simply increase AELs yearly for inflation and use the simpified "Delta" to obtain slight increases in AEL to allow for the higher costs of paying for aging stock. However, PHAs with significant changes in their stock due to the addition of units in their pipeline or the disposal of housing would recalculate the cost equation.

FIGURE 4-2

EXAMPLE OF APPLYING NEW PHA COST EQUATION



NOTES: Letters refer to examples of PHAs

A. This PHA has expenditures which are exactly as predicted by the new PHA cost equation. Its AEL and subsidy are unaffected by the revised system.
B. This PHA's expenditures are above the new predicted level but within the predicted range. Its AEL and subsidy are unaffected by the revised system.
C. This PHA has costs which are above range because of inefficiency. Its AEL is reduced to the limit of the new range test.
D. This PHA has costs which are above range because it is providing services beyond those provided by most PHAs. Even though it is relatively efficient, its AEL and subsidy are reduced.
E. This PHA has costs above the predicted level and above range because it has high needs which are not adequately measured by the PHA cost equation. It is allowed to retain a high AEL and subsidy level after appeal to HUD.
F. This PHA, like "E", has costs above the predicted level because it has high needs which are not adequately measured or considered in the PHA cost equation. The PHA was unable to obtain a successful appeal and therefore had its AEL and subsidy level reduced.
G. This PHA, like PHA "A", has expenditures exactly as predicted in the PHA cost equation. Its needs are much higher than the needs of PHA "A" and therefore its AEL is higher.
H.) and I.) These are relatively efficient PHAs with costs below the level predicted. Their AELs and subsidies are unaffected by the new system.

4. 7 THE IMPLICATIONS OF COST-BASED FUNDING

The modifications to the current funding system proposed under Revised Cost-Based Funding are designed to redress past errors in subsidizing operating costs (via the retrospective inflation adjustment and the adjustment for difficult PHA operating conditions) and to improve ongoing adjustments (the complexity of Delta is much reduced and both HUD and the PHA have formal mechanisms for changing costs). Revised Cost-Based Funding is therefore expected to generally maintain or increase the quality of the existing public housing stock, maintain an acceptable level of operating reserves, and decrease administrative burden. However, the imposition of either a new range test or of discretionary adjustments to AELs will require some of the least efficient PHAs to decrease costs, which will be difficult for some PHAs to accomplish.

Cost-Based Funding will not deal with serious backlog of repair and modernization needs that now exist in the public housing stock. A recent study by Perkins and will provides an estimate of the catch-up task; this issue is discussed in Chapter 7 and need not be repeated here. Revised Cost-Based Funding is basically designed to maintain the cost-effective portion of the housing stock at an acceptable level of service; like the PFS, however, it has no provision for funding past levels of deferred maintenance. Thus, it can be argued that a transition period is required to adjust both the quantity and the quality of the existing public housing stock so that only the relatively more cost-efficient and manageable projects ultimately receive operating funds.

Revised Cost-Based Funding is designed to allow PHAs to maintain an acceptable level of quality in the public housing stock without depleting financial reserves. Among its key features are an appeals system for PHAs and a Federal oversight procedure for cost adjustments by HUD. Thus, unlike the PFS, if miscalculation of the relationship between allowable costs and "necessary" costs do, in fact, exist, the errors can be adjusted. This will hopefully decrease the threat of financial insolvency, additions to the backlog of deferred maintenance, and situations of excess funding.

Although the current era of tight budget constraints on public housing operating costs is certain to force both HUD and PHAs into some difficult decisions under any type of funding system, Cost-Based Funding has some advantages over other ways of constraining costs. The two cost-constraint options explored in this chapter, a new range test and discretionary adjustments by HUD, both attempt to focus any subsidy reductions on those PHAs which are operating least efficiently and which therefore have the greatest opportunities to reduce their costs before reducing service levels. In contrast, any system-wide percentage subsidy reductions would affect the well-managed and efficient PHAs as much as the least efficient. In later chapters, we will explore the fair market rent and the housing voucher options, which differ considerably from cost based funding because they define PHA efficiency relative to the opportunity cost of providing housing in the relatively efficient Modified Section 8 Existing Housing Program. However, it is worth noting that all of the systems evaluated in this report attempt to deal with funding constraints by reducing subsidies available to the least efficient housing authorities.

APPENDIX 4-1

DESCRIPTION OF FUNDING FORMULA

UNDER REVISED COST-BASED FUNDING

The elements of the system marked with two asterisks include changes recommended under Revised Cost-Based Funding; elements marked with one asterisk are the subject of proposed changes discussed in other chapters of this report.

Operating Subsidy		Total Predicted Expenses					Total Predicted Income
S_{t+1}	=	$(AEL_t^{**} + Delta_{t+1}^{**}) \cdot I_{t+1}^{*}$	+	U_{t+1}^{*}	+	O_{t+1}	- R_{t+1}^{*}
		Current Allowable Expenses		Delta	Inflation Factor	Utilities Expenses	Other Costs	Dwelling and Non-Dwelling Income

Updated Allowable Expenses: Subject to Appeal**

Partial "Pass-Through" Expenses

Operating Characteristics Adjustment**

where

S_{t+1} = the expected operating subsidy for the next year (t+1), the forward-funded year.

AEL_t^{**} = the current year's allowable expense level. These costs are augmented by the revised Delta and the total is updated (multiplied) by the inflation factor to provide next year's allowable expense level. As under Comparison PFS, a retrospective adjustment for underfunding for inflation has been made to the AELs. (Utility and other costs are not included in allowable costs; they are considered separately.) A one-time adjustment has been made to the AELs of PHAs operating in relatively distressed environments. Further adjustments may be requested by PHAs through a formal appeals process. Finally, AELs may be adjusted on an exceptional basis as a result of a Federal determination that a PHA's costs are excessive.

Delta** = an annual adjustment to allowable costs to reflect the natural aging of PHA buildings. The adjustment is simply one-half of 1 percent of allowable expenses and no longer relies on a cost formula (the prototype cost equation.

I_{t+1}^* = the inflation factor, the estimated inflation rate for the forward-funded year. The derivation of the inflation factor has already been changed to reflect non-labor as well as labor expenses. Chapter 5 will recommend that retrospective adjustments be made for errors in predicting inflation.

U_{t+1}^* = predicted utility expenses for the forward-funded year. Adjustments are made for differences between actual and predicted expenses. Utility rates (but not consumption) are considered as beyond management control; thus, utilities are partially treated as "pass-through" expenses.

O_{t+1} = other costs including the predicted costs of the (biennial) independent public audit, also treated as a "pass-through," costs of deprogrammed units, and other add-ons to the AEL.

R_{t+1}^* = projected dwelling rental income and non-dwelling income for the forward-funded year.

APPENDIX 4-2

ESTIMATION OF STANDARD "DELTA" ADJUSTMENT

An early study of public housing in New York City (Rydell, 1970) found that based on a linear specification, the average annual effect of project aging was 1.1 percent. However, the statistical properties of the equation raised several questions and Rydell therefore tested a number of alternative models; he determined that the effect of aging is greater for younger projects than for older projects. The average age in 1980 of the public housing stock in the current analysis sample was 19.2 years; this translates into an annual aging effect of .52 percent based on Rydell's preferred models. (It should be noted that Rydell is using time series rather than cross section data, which is well suited to testing the effects of changes in costs.)

Eisenstadt (1972) provides another study of operating costs, in this case based on private rental housing in New York City. After controlling for a number of structural and other characteristics of the buildings, the annual effect of project aging on costs was estimated to be .49 percent. (The average age of the buildings in this sample was much higher than for public housing; if the non-linear model posed above is in fact correct, the implied shift for public housing would be higher.)

The evaluation of the PFS (Merrill, 1980, Chapter 5) specifically focused on developing an improved model of PHA operating costs. Unlike previous PFS prototype equations, this equation included all available descriptors of neighborhood conditions, crime, local economic characteristics, and tenant characteristics in order to provide a comprehensive view of the factors affecting costs. Controlling for all these factors, building age was still found to significantly increase costs, approximately .46 percent per year. (Building age was entered in logarithmic form to capture non-linearities; assuming that the average age of PHA projects in 1973 was 12 years, .46 percent is the estimated aging effect.)

Finally, several alternative PHA cost equations have been estimated based on the current analysis sample of 314 PHAs. These data have several important drawbacks (no descriptors of neighborhood or crime and vandalism are available; up-to-date information on tenant characteristics is missing for part of the sample; and, also, the data is "tainted" since costs now reflect what was allowed under the PFS). Nevertheless, the equations yielded estimates of the age effect of between .30 and .60 percent (depending on the included variables and functional form of the age variable). One of these equations is presented in Table 4-4 in the following section of this chapter; this equation indicates the age effect to be .45 percent.

In summary, after review of the available evidence on the effects of aging on operating costs and estimation of equations using current data (despite its shortcomings), .5 percent was selected as the "Delta" adjustment parameter. This figure allows easy calculation of the adjustment to the AEL and appears to be the value around which many estimates of the age effect have clustered.

APPENDIX 4-3

STATISTICAL RELATIONSHIP OF CDBG INDEX AND PHA OPERATING COSTS

The relationship between PHA operating costs and the CDBG index (the CDBG per capita entitlement determined under Formula B) was assessed through a regression equation describing PHA operating costs. This approach was chosen in order to determine how the variables in the CDBG index affected costs while taking many other PHA characteristics into account. The model described PHA per unit costs as a function of PHA building characteristics (average age of the buildings, average height, and average number of bedrooms per unit); PHA size; local cost conditions (represented here by Fair Market Rents) and region of the country (represented by HUD regional indicators). The CDBG index is included in this cost model as an indicator of distressed operating conditions. Previous research in specifying PHA cost models suggests that variations in local neighborhood conditions, blight, and crime have an important impact on PHA costs (Merrill et al., 1980). Thus, the CDBG index, already the subject of extensive analysis as an indicator of community distress, was tested as a proxy for the quality of the PHA's operating environment.

The results of the cost model, shown in Table 4-3-1, are very encouraging. The overall explanatory power is quite good (the R^2 is .67). Note that PHA costs increase with size of PHA, age of the PHA's buildings, the average number of bedrooms per unit, and the level of Fair Market Rents. In addition, considerable variation exists in operating costs in different regions. The CDBG index is a highly significant explanatory variable: the higher the level of the index, the higher are PHA operating costs, after the influence of all the other variables in the equation has been taken into consideration. 1/

1/ It should be emphasized again that the CDBG is serving as a proxy variable for specific variables describing neighborhood conditions, poverty conditions, and crime and vandalism problems that may increase operating costs via increased demands for maintenance and security. Furthermore, the cost model described in Table 4-3 may suffer from omitted variables, for example, those describing tenant mix or additional structural characteristics of PHA buildings. The equation employed all currently available data, however, and appears to be reasonably satisfactory.

Table 4-3-1

PHA COST EQUATION: ANALYSIS OF THE EFFECTS OF PHA STRUCTURE, LOCAL CONDITIONS, AND REGION ON PHA COSTS a/

EXPLANATORY VARIABLE	ESTIMATED PARAMETER	STANDARD ERROR	t-STATISTIC
Extra-large PHA	27.59	5.19	5.32
Large PHA	10.59	2.61	4.05
Medium PHA	3.14	2.47	1.27
Region 1	-7.15	5.58	1.28
Region 2	2.52	5.72	.44
Region 3	-10.95	5.39	2.03
Region 4	-23.68	5.05	4.69
Region 5	-11.81	5.21	2.26
Region 6	-23.29	5.27	4.41
Region 7	-18.62	7.45	2.50
Region 8	-23.60	10.77	2.19
Region 9	22.07	6.39	3.46
Average Building Age	.334	.149	2.24
Average Building Height	.437	.542	.81
Average Bedrooms per Unit	13.95	3.34	4.18
Local Fair Market Rent	.050	.023	2.20
CDBG per Capita Grant (Formula B)	272.52	72.61	3.75
Intercept	29.09	10.07	2.89

R^2 = .67

F Ratio = 27.9

N = 260

SAMPLE: PFS Analysis Sample with non-missing data, N = 260.
DATA SOURCES: PFS Analysis Sample.
NOTES: a/ PHA Costs are defined as total operating costs less utility costs but including utility labor costs.

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CHAPTER V

ADJUSTING FOR INFLATION IN A COST BASED SYSTEM

5.0 INTRODUCTION

One of the serious problems in developing a cost based system for subsidizing the Public Housing Program is determining the proper adjustment that must be made in the Allowable Expense Level (AEL) to compensate for inflation. As we have noted in previous chapters, the AEL is generally equal to the PHAs non-utilities operating expenses.1/ Inflation in utilities expenses are handled under other provisions, discussed in chapter 6, and are not dealt with here.

Although the principle of compensating PHAs for inflation appears to be obvious, in practice the system is controversial and includes several different issues. The controversy arises from the effects of inflation adjustments on the program subsidy. The Federal Government is currently paying public housing operating subsidies of a billion dollars yearly, and the majority of the operating expenses of PHAs comes from Federal subsidies. Thus, any system which allows PHAs to adjust their AELs for inflation has the effect of passing most of that adjustment back to the Federal Government in the form of higher subsidies. In the context of the current tight Federal budget, any demand for increased subsidies must be carefully examined, no matter how well justified.

Accurate compensation of PHAs for inflation is essential for a program which can continue to deliver services adequately. Inflation is an increase in the cost of operating public housing beyond the control of the PHA

1/ HUD-required biennial audits by independent public accountants are paid for separately and are not part of the AEL. They are a minor expense.

and thus there is no way that the PHA can escape its effects. The cost-based system is founded on the premise that AELs are based on the historical expenditure patterns of well managed PHAs which are run efficiently. Therefore, if the Federal Government does not increase the operating subsidy to compensate for cost increases, PHAs must adjust by decreasing services or deferring maintenance.

The AEL inflation adjustment is of considerable importance to PHAs. It is the most important determinate of changes in allowable expense levels, roughly ten times as large as the "Delta" adjustment. In 1980, the inflation adjustment was calculated at an average of 7.1 percent of the previous AEL. Since the previous AEL constitutes a average of 49.2 percent of total predicted PHA expense, the inflation adjustment accounts for 3.5 percent of total predicted expenses. 1/

There are several issues involved in compensating for inflation which we will discuss:

- What is the appropriate cost index to measure the impact of inflation on PHAs?
- Should HUD retrospectively change PHA inflation calculations to adjust for the inaccurate inflation index used for the past several years? We call this "retrospective adjustment."
- Should HUD adjust AELs at the end of the year to compensate PHAs for the difference between inflation rates which were predicted and those which were actually observed? This would have the effect of changing AELs used as a base for subsidy levels in future years. We call this "AEL reconciliation".
- Should HUD pay PHAs additional subsidy (or decrease future subsidy) to compensate them for the difference between the inflation rates which were predicted and the inflation rates actually experienced by PHAs in the previous year? We call this "subsidy reconciliation."

1/ 7.1 % of 49.2 % = 3.5%. Most of the remaining amount, 42.8 percent, is the projected utilities expense.

In the following sections of this report, we will explore the background of the inflation adjustment, the issues listed above, and the financial impact of making the various changes in the system suggested.

5.1 AN APPROPRIATE INDEX FOR PHA EXPENSES

There are dozens of indices calculated by the Federal Government to measure changes in the costs and prices observed in various parts of the U.S. economy. The most familiar of these is the Consumer Price Index which is based on what consumers pay for goods and services. This index is actually available in two forms: one for urban and clerical workers and the other for all workers. Other commonly known indices of inflation include the Producer Price Index (formerly called the Wholesale Price Index) and the G.N.P Implicit Price Delfator. Since about 60 percent of PHA non-utility operating expenditures go toward the wages of employees, and since these wages must be comparable to the wages of other local government employees, the Performance Funding System used yet another index to estimate the impact of inflation on AELs. This index, the Survey of State and Local Government Wages, was used to index AELs from 1975 to 1981.

The choice of an appropriate index for PHA expenditures is far from an academic exercise for economists. It has a great deal of practical impact for PHAs since many of the inflation indicators are only modestly correlated with each other.1/ An evaluation of six candidate inflation index series showed that most of the correlations between the series were in the moderate to low 0.3 to 0.6 range (Struyk, Malpezzi and Wann, 1980). The choice of

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1/ For example, the index of shelter rents, which is a component of the Consumer Price Index, had a correlation of only r=.30 with the index of State and Local Government Wage Rates between 1974 and 1979, and a seemingly appropriate index of net rent from the Annual Housing Survey actually exhibited a slightly negative correlation (r=-0.02) with Local Government Wage Rates during the same period.

an appropriate inflation index has considerable importance for PHAs because various candidate indices vary a great deal from each other. The choice of an inappropriate index could substantially undercompensate or overcompensate PHAs compared with their actual needs.

Index Characteristics

The index selected for use in a cost based funding system should have a number of attributes if chosen as part of the CBF system.

Item Coverage and Weights: The index should include the cost of goods and services used by PHAs as part of their Allowable Operating Expenses. This means that utilities, property taxes and capital costs should be excluded. The index should include the purchase of such supplies as household appliances, building maintenance equipment and wages of maintenance workers. The index should reflect wholesale costs and should weight the items in proportions appropriate to the Public Housing Program.

One difficulty is that we have only a general idea of how PHAs allocate their budgets. However, even if we knew the expenditure allocation down to the last paperclip, we would still have a problem of finding a cost index which best matches these expenditures. It would be too costly to develop an index specifically for PHAs.

Geographic Coverage: Although it would be administratively simple to use a single inflation index for the entire nation, this would be unwise because inflation actually differs a good deal in various parts of the country.

For example, wide differences are seen in State and Local Government Wage Rates in various geographic regions. Areas with relatively low wages tend to have above average wage inflation, while high wage areas tend to have lower average wage inflation. From 1976 to 1981, the two HUD regions facing

the highest amount of inflation in local government wages in these years were region 4 (Southeast) and region 6 (West South Central). Regions 9 and 10 (the West) had the lowest wage inflation factors each year, while they had the highest average wage rates. (Merrill, 1980, p. 185) Since PHAs in various areas do in fact face differing inflation rates, the index used should be available for regions of the country.

Timeliness: The inflation index must be used annually by PHAs in updating their operating budgets. It must also be used by HUD to forecast Public Housing subsidy figures for use by the Office of Management and Budget and by the Congress in determining appropriations needs. For these reasons, the index must be available for use on a timely basis. The longer the period between the data collection for the index and the availability of the results, the more difficult it will be to use for either predicting the coming year's inflation rates or for adjusting the AELs for inflation actually observed in previous years. This would be a reason against using data from the Annual Housing Survey, for example, since this data normally takes at least two years to process and publish.

Predictive Accuracy: The PHA cost index which is chosen must be predicted into the year ahead since subsidy calculations are forward funded. Only by calculating AELs for the forthcoming year can both HUD and the PHAs budget their expenditures and manage their resources effectively. The index that is chosen for PHA expenditures must be capable of being forecast accurately. The importance of forecasting accurately is mitigated if HUD adjusts AELs for errors in inflation predictions at the end of the year. However, even if this is done, PHAs can run into serious cash flow problems if inflation is significantly underpredicted. If no AEL adjustment system is implemented, then it is especially critical that predictions be done accurately and that the PHA expenditure index be chosen to facilitate accurate predictions.

Candidate Indices of Inflation in PHAs Costs

There are several possible candidates that have been considered as appropriate indices for PHA inflation. Not one of the alternatives is ideal. One problem is that none of the indices exhibit appropriate item coverage or the appropriate combination (weighting) of items for PHAs. We are forced to choose among a series of imperfect alternatives. However, several of the series have fairly good timeliness and geographic coverage.

The inflation series candidates which have been evaluated for use in public housing subsidy allocations include the following:

- Local Government Wage Rates. Data collection by U.S. Census. Good timeliness and geographic specificity, but weak item coverage (includes wages only). This is the index actually used from 1975 to 1981.

- Area Wage Rates. Data collected by the Bureau of Labor Statistics Poor timelines, good geographic specificity, weak item coverage.

- Household Furnishings and Operations Component of CPI. Good timelines and geographic coverage, but item coverage is too broad.

- Shelter Rents. Component of CPI. Good timeliness and geographic coverage, weak item coverage. Index double counts utilities and includes capital costs and property taxes.

- Net Rent from the Annual Housing Survey. Not available yet but could be calculated. Good geographic coverage, but item coverage weak. Includes capital costs and property taxes, and does poor job of excluding utility costs. AHS data is not timely.

- State and Local Government Purchases of Goods and Services Component of Implicit Price Deflator. Good timeliness, no geographic coverage.

It will be noted that some of the best known of the inflation indices were not seriously considered as the basis for an inflation index for PHAs. For example, the Consumer Price Index, the Producer Price Index and the G.N.P. Implicit Price Deflator are all excluded from the list of candidate indices, although some of the components of these indices are included.

These three indices, as well as a large number of other possibilities, are excluded because they include item coverage and weights which are entirely inappropriate to measuring PHA non-utility operating costs. All three above indices include sizable effects from utility costs and the cost of capital, both excluded from the Allowable Expense Levels of PHAs. Other examples of the inclusion of inappropriate items in the CPI include food prices, entertainment prices and demand side factors influencing the price of renting apartments rather than the cost of maintaining them.

In previous searches for an appropriate index, several combinations of the above indices were also evaluated for appropriateness (Struyk, Malpezzi and Wann, 1980). HUD policy-makers eventually chose to choose a combination of the Local Government Wage Rates (LGWR) and the State and Local Government Purchases of Goods and Services (SLGPGS) weighted 60 percent LGWR and 40 percent SLGPGS. The 60/40 split approximates the ratio of expenditures by PHAs, which spend about 60 percent of AEL on employee wages and 40 percent on other goods and services. The combined index is imperfect since it includes utility costs for governments, which are handled separately in the PFS, and includes items which are not usually purchased by PHAs such as fire trucks. The SLGPGS Index does not specifically include the cost of operating low-income multifamily housing. Nevertheless, this combination appears to be reasonably good.

Because wage rates are measured in the Local Government Wage Rate Survey, it would be double counting wages to include their effect on inflation as measured by in the State and Local Purchase of Goods and Services as well. Therefore, the "compensation of employees" component of this index is

excluded when inflation rates are calculated. The remaining four components of SLGPGs are durable goods, nondurable goods, services (of nonemployees), and structures. The use of the index could be further improved by refining the weights used in combining the four remaining components. By evaluating PHA year-end statements and/or obtaining further data from a small sample of PHAs, it would be possible to evaluate the percentage of expenditures going into various categories, and the results of the evaluation would be used to weight the index components. Since the purchase of structures is included in PHA capital costs and paid through annual contributions contracts rather than as part of AELs, the use of the structures component of the inflation index is inappropriate and should be discontinued.

The use of the LGWR Index has the advantage of making it possible to continue an inflation index which is localized since the LGWR Index is itself localized. However, the State and Local Purchases index is available only on a national basis, so the whole hybrid index is only partially localized. However, the degree of geographic coverage seems adequate for the purpose. One potential problem is that the LGWR survey may be eliminated by the Bureau of Labor Statistics because of budget cuts. It would be possible to continue the PHA cost hybrid index if the LGWR survey were to have its coverage reduced from the presently reported 423 local inflation calculations to a much smaller number, e.g. 40, but a new PHA inflation index would have to be developed if the entire series were cancelled.

Under the present 60/40 system, an individual PHAs overall inflation factor is estimated by a relatively simple procedure: multiply the predicted State and Local Price Deflator by 0.4; multiply the predicted rate of increase in local government wages by 0.6; add these two numbers together to get the combined inflation rate.

5.2 ACCURATE PREDICTION OF INFLATION

The calculations of allowable expense levels and thus of subsidy levels are

made for the year ahead in order to permit both HUD and the PHAs to budget for the year ahead. Only in this way can PHAs plan their expenditures and can the Federal Government plan its appropriations. This forward funding of the PFS is of considerable importance and must be done accurately if the system is to work well. The accuracy of the predictions is especially important if there is no provision to adjust AELs at the end of the year for errors in the prediction. Serious prediction errors can cause cash flow problems for financially pressed PHAs even if errors are later corrected. Many PHAs have very low cash reserves, and most of the largest PHAs are on the financially troubled list and would find it hard to withstand a serious underprediction of the inflation they face. Failure to accurately predict inflation violates the principles of a cost-based funding system and effectively rewards or punishes PHAs not for their own actions but on the basis of how well HUD was able to predict inflation.

Inflation predictions are actually made two years ahead because of the budget cycle, and the predictions use data which is even older. For example, in 1978 HUD was preparing to submit its 1980 budget using data from 1976 and 1977. Local inflation rates for the change from 1976 to 1977 were calculated and projected forward to 1980. Because inflation rates were increasing in these years, the method underestimated inflation in 1980.

Predicting inflation is difficult to perform accurately in an economy with price changes as dynamic as those seen in the United States during the past decades. The difficulties are compounded when separate inflation rates are required for various regions. Even allowing for some years in which unexpected economic shocks throw predictions off, the evaluation of PFS in 1980 showed that there was a discouragingly low correlation between actual wage inflation and predicted wage inflation in three years observed.1/

1/ Between 1975 and 1976, the simple correlation was only r=.28, from 1976 to 1977 it was r=.13, and between 1977 and 1978 it was -0.02. In general, the PFS system exhibited overprediction in the early years of the system and has shown underprediction in the past few years. (Merrill, 1980, pp.191-198).

The prediction methodology used over the past several years could be improved through greater use of standard economic forecasting techniques. Both Merrill (1980) and Struyk, Malpezzi and Wann (1980) give a number of suggestions in this area. It is important that the predictions be made as objective as possible so as to reduce any tendency to use the inflation factor to assist some PHAs at the expense of others or to reduce subsidy outlays in unrealistic ways. Improvements in prediction methodology are possible and warranted, but errors of prediction remain inevitable. This argues for correction of the inflation adjustments after the year in which they are applied to the allowable expense levels of the PHAs.

5.3 RETROSPECTIVE ADJUSTMENT OF PHA COST INDEX

From the start of the PFS through 1981, the inflation factor was calculated and predicted based solely on the Local Government Wage Rate Survey. Since wages make up about 60 percent of the typical PHAs non-utility operating expenses, it appeared to be the single best index to use. However, there is evidence that local government wages have been rising more slowly than inflation in other parts of the economy. Thus, the LGWR Index was underpredicting the extent of inflation faced by PHAs in their actual purchases of goods and contract services. This undercompensation for inflation was a problem for all types of PHAs, but was a particular problem for PHAs in areas where local government wage rates have grown relatively slowly. These PHAs include large and extra-large PHAs, PHAs in metropolitan areas, and PHAs in the West.

We have previously described how the new PHA cost index was developed using a combination of 60 percent Local Government Wage Rates and 40 percent State and Local Government Purchases of Goods and Services, minus compensation for employees. If this combined index had been used instead of the wage rate index, PHAs would have been more accurately compensated for the effects of inflation.

In order to make up for this error, HUD is giving PHAs a retrospective adjustment of AELs for the years 1977 through 1981. This adjustment will consist of substituting the new combined index for the old wage index. The effect of this adjustment is to increase the Allowable Expense Levels of PHAs for use in 1982 and onward, and thus to increase the subsidy levels because the use of the 60/40 hybrid inflation index would have yielded higher AELs than the LGWR index for the 1977 to 1981 period. The retrospective adjustment was done by retaining the previously predicted wage inflation rates and substituting the actually experienced inflation rates from the SLGPGS. The previously predicted wage inflation rates were retained because the predictions were felt to be relatively close to the actually experience rates. The adjustment changes AELs from now on, but does not pay back PHAs for underestimates of inflation in past years.

The cost of the retrospective adjustment is $55.5 million for the types of PHAs we are evaluating. In Table 5-1, we see that the adjustment increases allowable expense levels from $1127.1 million to $1182.6 million. Most of the increase goes toward adjusting the AELs of extra large PHAs, which obtain $32.3 million more after retrospective adjustments. The extra-large Northeastern PHAs alone obtain $22.7 million. In Table 5-2 we see the effects of the retrospective AEL adjustment in dollars per unit month. On average, the adjustment will increase allowable expense levels by 4.5 percent, from $94.22 p.u.m. to $98.86 p.u.m. The largest percentage increase is experienced by Western, extra-large PHAs, which average a 6.3 percent AEL increase, while the smallest increase is experienced by small Southern PHAs, which have a 2.2 percent increase on average. Every size and regional grouping of PHAs is advantaged by the retrospective adjustment.

5.4 YEAR-END RECONCILIATION OF ALLOWABLE EXPENSE LEVELS AND SUBSIDIES

Under the current PFS, there is no year-end reconciliation of predicted AEL inflation rates with the inflation actually experienced by PHAs during the

Table 5-1

RETROSPECTIVE ADJUSTMENT OF AELs
($ millions)

PHA TYPE	HISTORICAL 1980 AELs a/	COMPARISON AELs b/	DIFFERENCE
Extra-large	563.0	595.3	32.3
Northeast	381.1	403.8	22.7
South	38.0	39.7	1.7
Central	119.0	125.4	6.4
West	24.9	26.5	1.6
Large	279.0	291.3	12.3
Northeast	71.4	74.7	3.3
South	101.2	104.9	3.7
Central	71.8	75.1	3.3
West	34.7	36.6	1.9
Medium	134.2	139.8	5.6
Northeast	44.2	46.1	1.9
South	29.6	30.4	0.8
Central	32.5	33.9	1.4
West	27.9	29.4	1.5
Small	151.0	156.2	5.2
Northeast	43.1	44.7	1.6
South	39.2	40.0	0.8
Central	50.4	52.2	1.8
West	18.4	19.2	0.8
All PHAs	1127.1	1182.6	55.5

SAMPLE: PFS Time Series Analysis Sample, N=127

NOTES: a/ Actual AELs in 1980
b/ AELs in 1980 as if retrospective adjustment had occurred.

Table 5-2

RETROSPECTIVE ADJUSTMENT OF AELs
($ Per Unit Month)

PHA TYPE	HISTORICAL 1980 AELs a/	COMPARISON AELs b/	DIFFERENCE	PERCENTAGE ADJUSTMENT
Extra-large	$124.34	$131.47	$7.13	5.6
Northeast	140.35	148.69	8.34	5.9
South	83.99	87.67	3.68	4.4
Central	101.14	106.59	5.45	5.2
West	135.65	144.17	8.52	6.3
Large	84.16	87.89	3.73	4.4
Northeast	100.35	104.96	4.61	4.6
South	78.10	81.02	2.92	3.7
Central	78.66	82.35	3.69	4.6
West	87.55	92.50	4.95	5.7
Medium	78.45	81.69	3.24	3.9
Northeast	84.52	88.15	3.63	4.3
South	65.61	67.35	1.74	2.6
Central	68.33	71.17	2.84	4.0
West	106.92	112.68	5.76	5.4
Small	62.66	64.84	2.18	3.3
Northeast	68.99	71.60	2.61	3.7
South	53.09	54.28	1.19	2.2
Central	61.34	63.62	2.28	3.6
West	81.18	85.03	3.85	4.6
All PHAs	94.22	98.86	4.64	4.5

SAMPLE: PFS Time Series Data Base, N=127

NOTES: a/ Actual AELs in 1980
b/ AELs in 1980 as if retrospective adjustment had occurred.

year. However, such a procedure is used to reconcile predictions of utilities expenses with actual utilities rates during the year. Rate increases for oil or electricity are beyond the control of the PHA, although consumption levels can be affected by PHA policy, so PHAs are allowed to pass through rate increases to HUD. Using analogous reasoning, PHAs have little control over the costs of such items as cleaning supplies, maintenance tools or office equipment. They cannot insulate themselves from the effects of general economic inflation.

Because there is no year-end reconciliation of predicted inflation with actual inflation, PHAs whose inflation factor is overpredicted are favored compared with others. Because the AEL of a PHA provides a base for the next year's AEL, any error in the AEL is permanent and is compounded yearly by future errors. There are two factors which make this lack of reconciliation inequitable. The first is the size of the errors, which have been large in several recent years. In 1979, for example, there was an error of $3.05 per unit month, a significant amount of money when multiplied over a million units. Secondly, the underprediction is inequitable because it disproportionately affects some types of PHAs. We cannot tell yet which types of PHAs will be most affected by inaccurate prediction using the new 60/40 hybrid index, but there are sure to be some PHA groups which are especially affected. In response to these inequities, HUD should perform year-end adjustments to reconcile for observed inflation rates.

There are two separate steps involved in fully compensating PHAs for errors in prediction of inflation. The first is to reconcile the allowable expense levels with actual inflation. For example, take a typical PHA with projected costs in 1980 calculated at $157 per unit month. Of this cost, $92 p.u.m. is the previous Allowable Expense Level and $7 is an adjustment for inflation in the AEL, for a total AEL of $99 p.u.m. (The remaining $58 primarily consists of projected utilities expenses.) At the end of the year, the

inflation experienced by the PHA is calculated to be $8 p.u.m. rather than $7 p.u.m. Under the current system, the previous AEL would be $99 p.u.m., which would be inflated by whatever new inflation adjustment is predicted for 1981. The proposed change is to reconcile the actual inflation in AELs so that "previous AEL" would be $100 p.u.m (Previous 1979 AEL of $92 p.u.m. plus actual inflation of $8 p.u.m.) rather than $99 p.u.m. calculated at the beginning of 1980 but not actually experienced.

The second step in compensating the PHAs is to reconcile the actual subsidy amounts. In the example shown above, the PHA would obtain an additional payment of $1 p.u.m. in subsidy at the conclusion of the year along with the initial subsidy payments for the coming year. If inflation were overpredicted, the overpayment of subsidy would be deducted from subsidy payments in the next year. (See example)

EXAMPLE OF YEAR END RECONCILIATION FOR INFLATION
(Dollars Per Unit Month)

	Non-Reconciled	Reconciled
1979 AEL	$92	$92
1980 Inflation Adjustment (Predicted)	7	7
Actual 1980 Invlation (Experienced)	8	8
"Previous AEL" Brought Forward to 1981	$92+7=99	92+8=100
Retrospective Adjustment of Subsidy Paid to PHA at end of 1980	$0	$1

One possible drawback to reconciling AELs and subsidies is that there are 426 different geographic areas with local government wage rate calculations. Since the combined 60/40 PHA index uses the LGWR index, it also provides separate predictions for 426 geographic regions. This provides a very good geographic fit of the index, but also is the source of the problem. In any year, there are likely to be some geographic areas which exhibit significant changes in local government wages due to changes in employee mix, sudden economic crises, or other factors which should be extraneous to PHA administration. Thus, the 60/40 index would include several extreme cases which should not be allowed to over-influence the inflation calculation. To some extent, these changes are smoothed out by adding the 40 percent SLPGS index to the total since that index is a single national number. Projections of wage rates can be done in such a way to exclude outliers and to smooth the prediction so the problem is less severe for predictions. However, if year end reconciliation is performed, actual inflation indices would be used for all 426 areas including the extreme cases. The solution to this problem is to reduce the 426 geographic areas to a smaller number, roughly 40 or 50, in order to average outlying cases with others and smooth the calculation of the inflation index.

An important institutional aspect of the proposed change to reconciling AELs and subsidies is that it formalizes preliminary nature of the operating subsidy budget. It makes clear to all involved that HUD's budget request is based on projected conditions and that it must be revised in the light of actual economic events. In the past when HUD underestimated the inflation rate, it had to ask for a supplemental appropriation. Under the proposed system this would be part of the appropriation in the year following the final calculation of the inflation amount. This would require more time until the inflation ajdustment was made, but would avoid the supplemental appropriation process. An advantage of correcting both the AELs and subsidy payments to reflect actual inflation rates is that this will eliminate most of the incentive to policy makers to select forecasts so as to provide certain PHAs with extra help at the expense of others.

5.5 COSTS OF YEAR END RECONCILIATION OF AELs AND SUBSIDIES

In order to estimate the cost of reconciling AELs and subsidy levels, we assumed that the present hybrid inflation index (the mixture of Local Government Wage Rates and the State and Local Purchases of Goods) was used in the past. In order to simulate errors in predicting inflation rates, since we are looking for the cost of adjusting errors, we replicated the predictions that would have been made on the basis of information contemporaneously available. We also used a prediction methodology typical of that actually used by HUD, although there is room for improvement in that methodology. However, we are not attempting to predict either the cost or distribution of prediction errors in the future. Those future errors will depend on presently unknown trends in inflation.

The impact of year end AEL reconciliation is shown in Table 5-3, where we see that the cumulative cost of adjusting AELs for previous errors in inflation would be an average of $4.46 per unit month from 1977 to 1980. Extra-large PHAs in the West and Central regions have been hurt the most by the lack of AEL reconciliation. Those classes of PHAs would gain $12.94 p.u.m. and $9.97 p.u.m. respectively if AELs were to be reconciled in 1980. It is not true, however, that reconciliation would always cost HUD extra subsidies. In 1977, for example, HUD over-predicted inflation on average and the average PHA would have lost $2.45 p.u.m. in the following year from its AELs. Over the four year period presented, however, every size and region class of PHAs would have gained through AEL adjustments.

In table 5-4, we see the cumulative costs of AEL adjustments from 1977 to 1980 would have been $58.9 million, with large PHAs in the South and extra-large PHAs in the Central regions obtaining the largest cumulative AEL reconciliation amounts. In fact, however, there is no way of predicting what kinds of PHAs would benefit from year end AEL reconciliation. The AEL adjustment costs shown are entirely an artifact of errors of forecasting techniques in previous years. We can only surmise the possible effects of adding AEL reconciliation at this time. The following points are suggested:

Table 5-3

CUMULATIVE COST OF YEAR END RECONCILIATION OF AELs
(Dollars Per Unit Month)

PHA TYPE	1977	1978	1979	1980
Extra Large	-6.53	-.62	1.90	1.80
Northeast	-11.25	-3.10	-2.16	-2.34
South	-.75	4.81	6.12	6.92
Central	-2.42	3.67	10.91	9.97
West	1.15	-3.34	8.31	12.94
Large	1.15	2.05	4.69	8.00
Northeast	.32	1.16	5.16	8.65
South	2.10	4.69	5.84	8.71
Central	.20	-.20	2.96	6.86
West	1.68	-.69	3.47	6.61
Medium	-1.18	1.18	4.72	5.83
Northeast	-.40	1.12	5.86	7.09
South	-3.34	-.03	1.66	3.63
Central	.13	1.89	7.13	6.35
West	-1.19	2.21	3.96	7.45
Small	.30	.45	2.36	4.70
Northeast	1.11	.16	.41	3.88
South	-1.73	-1.00	1.45	2.08
Central	.88	1.31	4.91	7.23
West	2.34	2.79	2.18	7.12
Nation	-2.45	.57	3.14	4.46

SAMPLE: PFS Time Series Data Base, N=127

Table 5-4

CUMULATIVE COST OF YEAR END RECONCILIATION OF AELs
(Millions of Dollars)

PHA TYPE	1977	1978	1979	1980
Extra Large	-30.1	-1.1	13.3	12.7
Northeast	-32.6	-6.6	-2.8	-3.6
South	-.3	2.2	2.8	3.2
Central	2.6	4.0	11.9	10.9
West	.2	-.6	1.5	2.4
Large	3.5	6.4	14.8	25.6
Northeast	.2	.8	3.6	6.0
South	2.7	6.0	7.5	10.9
Central	.2	-.1	2.6	5.9
West	.5	-.2	1.1	2.4
Medium	-2.0	2.1	8.0	9.7
Northeast	-.2	.6	3.0	3.6
South	-1.5	0.0	.8	1.7
Central	.1	.9	3.1	2.8
West	-.3	0.7	1.2	1.7
Small	.6	.9	5.3	10.8
Northeast	.7	.1	.3	2.4
South	-1.0	-.5	1.3	1.8
Central	.5	.8	3.4	5.1
West	.4	.5	.4	1.5
Nation	-27.8	8.4	41.5	58.9

SAMPLE: PFS Time Series Data Base, N=127

- The required amounts of AEL reconciliation would probably be lower tnan we have simulated and reported here if the inflation forecasting methods were improved.

- In the next few years, AEL adjustments may actually benefit HUD rather than the PHAs. This is because most forecasting models tend to overpredict inflation when it is decelerating. Many macroeconomic forecasters believe that the inflation rate is declining from the high levels observed at the end of the 1970's.

Year-End Subsidy Reconciliation

Year-end subsidy reconciliation would occur if HUD paid PHAs any additional subsidy calculated or deducted subsidies based on the difference between the projected inflation adjustment and the observed inflation at the end of the year. The subsidy adjustment would be made by either adding it or subtracting it from the operating subsidy paid in the year following the final calculation of the inflation rate.

Like the AEL reconciliation, the subsidy reconciliation would be entirely dependent on the accuracy of the inflation predictions made, and it is difficult to estimate in advance the magnitude, direction or distribution of those errors. We simply know that they will inevitably be made and that they are unfair to PHAs in that they in effect punish the PHAs for macroeconomic conditions beyond their control. In table 5-5, we see that the effects of subsidy reconciliation would have varied a good deal in the four years shown. In 1977, PHAs would have paid HUD back an average of $2.45 per unit month, while in 1978, they would have gained an additional $3.02 per unit month. In the extreme cases shown on the table, we see that extra-large, Northeastern PHAs would have owed HUD an average of $11.25 p.u.m. in 1977, but extra-large Western PHAs would have obtained an extra $11.65 p.u.m. in 1979.

Table 5-5

ANNUAL COST OF YEAR-END SUBSIDY RECONCILIATION
(Dollars Per Unit Month)

PHA TYPE	1977	1978	1979	1980
Extra Large	-6.53	5.91	2.52	-.10
Northeast	-11.25	8.15	.94	-.18
South	-.75	5.56	1.31	.80
Central	-2.42	1.25	7.24	-.94
West	1.15	-4.49	11.65	4.63
Large	1.15	.90	2.64	3.31
Northeast	.32	.84	4.00	3.49
South	2.10	2.59	1.15	2.87
Central	.20	-.40	3.16	3.90
West	1.68	-2.37	4.16	3.14
Medium	-1.18	2.36	3.54	1.11
Northeast	-.40	1.52	4.74	1.23
South	-3.34	3.31	1.69	1.97
Central	.13	1.76	5.24	-.78
West	-1.19	3.40	1.75	3.49
Small	.30	.15	1.91	2.34
Northeast	1.11	-.95	.25	3.47
South	-1.73	.73	2.45	.63
Central	.88	.43	3.60	2.32
West	2.34	.45	-.61	4.94
Nation	-2.45	3.02	2.57	1.32

SAMPLE: PFS Time Series Data Base, N=127

In Table 5-6, we find that the aggregate cost of subsidy reconciliation woud have ranged from a gain to HUD of $27.8 million 1977 to a loss of $36.2 million in 1979. The average size of the subsidy adjustments from 1977 to 1980 would have averaged $1.12 per unit month or $14.7 million per year if retrospective subsidy adjustment had been in effect during that time. This is a modest amount of money compared to the aggregate cost of the PFS subsidy, but it could be important to individual PHAs which are severely impacted by serious forecasting errors. On Table 5-7 we see the number of PHAs in our sample which would have been affected by a year end subsidy reconciliation in 1980. Again, we need to note that the size of change in future years is unknown but may well be smaller than those exhibited here if more sophistocated forecasting techniques are used. In the example shown here, most PHAs (62 percent) showed a modest 1 to 5 percent gain after reconciliation. There are relatively few cases where PHAs would face large changes in subsidy levels: 9 percent would gain between 6 and 10 percent, while only 2 percent of PHAs would lose more than 6 percent of subsidies after subsidy reconciliation as shown in this example.

We have thus far discussed only full reconciliation of subsidies. In fact, there have been proposals for partial reconciliation which assume that it would not be feasible to recover the majority of funds provided by mistake to PHAs whose inflation factor had been overpredicted. In partial reconciliation of subsidies, PHAs which were overfunded would pay back only a portion of the amount overfunded while underfunded PHAs would be paid the entire increased payments calculated on their actual experienced inflation rates. This system would be highly beneficial to PHAs, especially those with a low surplus. However, it is not advocated here because:

- Overfunded PHAs would simply obtain a lower AEL the following year. The overpayment in the previous year would, in effect, be subtracted from the next year's subsidy. PHAs would not actually have to pay cash back to HUD.

Table 5-6

ANNUAL COST OF YEAR-END SUBSIDY RECONCILIATION
(Millions of Dollars)

PHA TYPE	1977	1978	1979	1980
Extra Large	-30.1	29.0	14.4	-.6
Northeast	-32.6	26.0	3.8	-.8
South	-.3	2.5	.6	.4
Central	2.6	1.4	7.9	-1.0
West	.2	-.8	2.1	.9
Large	3.5	2.8	8.4	10.8
Northeast	.2	.6	2.8	2.4
South	2.7	3.3	1.5	3.7
Central	.2	-.3	2.7	3.3
West	.5	-.7	1.3	1.2
Medium	-2.0	4.1	5.9	1.7
Northeast	-.2	.8	2.4	.6
South	-1.5	1.5	.8	.9
Central	.1	.8	2.2	-.3
West	-.3	1.0	.5	.5
Small	.6	.3	4.4	5.5
Northeast	.7	-.6	.2	2.1
South	-1.0	.5	1.8	.5
Central	.5	.3	2.6	1.7
West	.4	.1	-.1	1.1
National	-27.8	36.2	33.1	17.4

SAMPLE: PFS Time Series Data Base, N=127

Table 5-7

DISTRIBUTION OF CHANGE IN 1980 SUBSIDY AFTER YEAR-END RECONCILIATION

Number of PHAs in Sample With Subsidy Change

	PERCENTAGE SIZE OF CHANGE				
PHA TYPE	6% or more	-5% to -1%	0	1% to 5%	5% to 10%
Extra Large	1	7	4	6	2
Northeast	0	2	2	3	0
South	0	2	0	1	1
Central	1	2	2	2	0
West	0	1	0	0	1
Large	0	6	5	23	4
Northeast	0	2	2	11	1
South	0	1	1	5	0
Central	0	2	2	5	2
West	0	1	0	2	0
Medium	1	2	5	25	1
Northeast	0	1	3	7	0
South	0	0	2	9	1
Central	1	1	0	7	0
West	0	0	0	2	0
Small	0	0	7	25	4
Northeast	0	0	0	7	1
South	0	0	6	6	1
Central	0	0	1	9	1
West	0	0	0	3	1
	2	15	21	79	11
Sample Total	2%	12%	16%	62%	9%

SOURCE: PFS Time Series Sample, N=128

- The HUD budget is very tight and is expected to remain so for the forseeable future. It would be difficult to find the funds to provide for a partial reconciliation system.

- A system for partial reconciliation is inequitable. It favors some PHAs simply because of an artifact of the inflation prediction process rather than because of any policy or need determination.

5.6 CONCLUSION

This evaluation of inflation adjustments in PHA operating expenses suggests several opportunities for increasing the accuracy and equity of the inflation adjustments used in the program. These suggestions include:

- Further refine the 60/40 inflation index now in use which combines local government wages with state and local government purchases of goods and services. The further work would obtain information about the actual mix of goods and services purchased by PHAs and would develop an index that better reflects that mix. The number of areas with separate inflation predictions would be reduced from over 400 to about 40 or 50.

- HUD is already implementing a retrospective adjustment of inflation indicies. It is replacing the old index based solely on Local Government Wage Rates with the new 60/40 hybrid index which includes both wages and purchases of goods and services. The new hybrid index will more accurately compensate PHAs for the inflation they face.

- HUD would perform a year-end reconciliation of both AELs and subsidy amounts to adjust subsidies and the AEL base for the coming year for any differences between predicted inflation and actually observed inflation. For budgetary reasons, we would initiate the year-end reconciliation now for future years rather than to attempt to apply it to previous years. The cost of this change depends entirely on the accuracy of future inflation predictions and is, therefore, unknown. If the inflation predictions show the same pattern as they have from 1977 to 1980, reconciliation of AELs and subsidies would cost a modest $1.12 per unit month. If the inflation rate falls, HUD may actually gain money back from the PHAs.

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CHAPTER VI

A COST-BASED FUNDING SYSTEM WITH STRONG MANAGEMENT INCENTIVES

6.0 INTRODUCTION

Chapters 4 and 5 have described the basic ideas behind a cost-based funding system and have outlined certain improvements that could be made to the current version of such a system, the PFS. One of the limitations in the PFS has been features of the system that fail to reward PHAs for high performance, or that even encourage poor performance in certain management areas. This section presents several possibilities for strengthening incentives for good management. However, a danger of raising the rewards for good performance (or the costs of poor performance) in selected areas should be noted at the outset: because of the incentives, PHAs will focus management resources on achieving and sustaining good performance in certain areas but this may come at the cost of neglect in other areas. Hence, overall performance may be unaffected. For this reason, special incentives should be applied only to areas that are of great importance or in which the current system provides perverse incentives.

The changes recommended in this chapter would have varying effects on the costs of subsidies and their distribution to different types of PHAs. In some cases, there is no net cost, but funds may shift slightly among PHAs. In other cases, there will be lower subsidies for some PHAs, while other PHAs will be unaffected. For still others a short-term cost will be offset quicky by the effect of the incentive. Because of this complexity, this chapter, unlike others, does not attempt estimates of program-wide costs and distributional impacts of the changes proposed.

The chapter is organized according to the type of management incentive discussed. The first section is a general discussion of management incentives under the Performance Funding System. We then review specific incentives in several areas of PHA operations. Cost implications are discussed in general terms for each specific incentive proposed.

6.1 PHA EFFICIENCY AND MANAGEMENT INCENTIVES

With the exception of expenditures on utilities, the PFS limits PHAs in the amount they can spend to operate public housing to the per unit month amount established by the PFS allowable expense level or AEL. If the AEL is correctly set reasonably close to the cost of efficient operation, then authorities are under pressure to choose efficient modes of operation or else to reduce levels of service provided. Any savings that results from increased efficiency can be used to improve levels of service (through more rapid response to maintenance calls, for example) or to build up reserves against future needs within a reserve maximum established by HUD.

If a PHA's AEL is much higher than an amount actually needed for efficient operation, the PHA can respond by providing higher levels of service or by returning "excess reserves" to HUD. However, an "overfunded" PHA may also be free to operate inefficiently. Conversely, if the AELs are substantially lower than the amount needed--either because the level originally set was incorrect or because AELs have not been adjusted sufficiently to offset actual inflation in the costs PHAs incur--then the PHAs must draw down reserves and provide lower levels of service. Beyond a certain point lower levels of service will make the housing more difficult to operate and ultimately more costly. For example, deferred maintenance will lead to a need for major repairs and replacements; inadequate maintenance and deterioration of the buildings will discourage tenants, especially those with relatively higher incomes and rent paying potential, from living in public housing.

The last two chapters have addressed the issue of whether the AELs have been correctly set and adjusted over time within the basic premise of a cost-based funding system: that the historical costs of operating public housing, excluding the high costs of PHAs judged to have been "poor performers," are the best available measure of the costs of operating public housing.

This chapter will address that part of PHA expenditures not covered by AELs, namely, expenditures on utilities. It will also deal with the revenue side of cost-based funding. Current incentives to good performance on the revenue side are much less clear than on the cost side, since in many respects the authority does not enjoy the benefit of doing well or bear the pain of doing poorly. This discussion will include incentives to increase revenue through charging and collecting as much rent as possible. It will also discuss incentives to either keep units occupied or else remove them from the program.

Finally, the chapter will examine areas in which explicit funding incentives of a bonus or penalty nature might be used to reward or punish behavior in areas in which preferred management practices are evident.

6.2 UTILITIES EXPENDITURES AND ENERGY CONSERVATION

Utilities are handled somewhat differently from other operating costs under the PFS. Under the current system, PHAs are already reimbursed for actual changes in utility rates. (In Chapter 5 we have recommended extending this principle to non-utilities operating costs by making year end reconciliations in funding after errors in predicting inflation in those costs become known.)

Utilities consumption, as distinct from rates, is handled in such a way that the Federal Government shares in any savings resulting from decreases in consumption and participates in any losses resulting from increased consumption. Instead of a fixed per unit month amount like the AEL, which does not vary

regardless of the amount spent, each PHA gets a utility allowance which is the sum of the products for each utility of a base consumption level (e.g., kilowatts per year) and the current rate. When actual utilities use and expenditures have become known, the allowance is adjusted to take full account of rate changes. Any remaining difference between the allowance and actual expenditures is attributable to differences between the base consumption level and actual consumption. Authorities and the Federal Government split on a 50-50 basis both the cost of "excess consumption"--which might reflect wasteful practices or might be due to unusually severe winter weather--and the savings from consumption being less than the base level assumed in the allowance.

This cost-sharing arrangement has two objectives. It offers PHAs some protection against unusual weather in an era in which utility costs account for up to 40 percent of the total operating costs of some PHAs. It also provides a way for the government to participate in the expected long-term decline in utilities consumption as PHAs, like other suppliers of housing, take energy conservation measures.

There is a particularly strong argument for the government to share in consumption savings, since those savings often result from energy conservation incentives financed with Modernization Program funds. On the other hand, it is important for PHAs to have broad discretion in the use of modernization funds. As is argued elsewhere in this report (Chapter 7), in order to avoid wasteful use of modernization funds, PHAs should be able to follow coherent plans for the treatment of particular projects both in the timing of work on different components of buildings and in making trade-offs between repairs and replacements. The Comprehensive Assistance Improvement Program (CIAP) has already moved in this direction.

Mandating specific energy improvements on a project-by-project basis would be contrary to these objectives relating to efficient use of modernization

funds and could, for example, lead to spending money on buildings the PHA would prefer to dispose of. The continued operation of such buildings, even after modernization, may exceed the limits of a funding system. However, providing authorities with any latitude at all in planning modernization means that it is important to encourage energy improvements through the rules of the funding system.

Thus, a system that continues to permit PHAs to share in the savings brought about by energy conservation makes sense. The present system, however, may be too generous because of the way the base consumption level is handled.

The base consumption level has been changed several times over the short life of the PFS. Presently, it is the average consumption over the 1973-75 period for all utilities except heating fuel. For heating fuel, an adjusted figure for the same period is used that takes into account a longer history of winter conditions. What this means is that year after year a PHA receives 50 percent of any savings that result in a drop in utilities consumption below the 1973-75 level. The goal of permitting the Federal Government to realize a greater share of the savings that result from energy conservation investments could be achieved easily by making the base consumption a rolling average of the most recent four years' consumption. The lower consumption would be reflected automatically in the base, yet the period chosen for averaging would be long enough to provide significant savings to the authority and prevent one or two very warm or cold winters from severely distorting the representative pattern. Table 6-1 illustrates the effects of using a rolling base. For simplicity, we have assumed reductions in in consumption end after the third year. The last column of the table shows the amount reimbursed to the PHA. The amount very quickly reaches the sustained lower level of consumption.

Table 6-1

ILLUSTRATION OF A FOUR-YEAR ROLLING AVERAGE BASE CONSUMPTION LEVEL FOR UTILITIES

(IN HYPOTHETICAL UNITS CONSUMED)

YEAR	PREDICTED CONSUMPTION	ACTUAL CONSUMPTION	PREDICTED MINUS ACTUAL	REIMBURSEMENT TO PHA
1	100 a/	110	- 10	105
2	103	90	13	96.5
3	100	80	20	90
4	95	80	15	87.5
5	90	80	10	85
6	80	80	0	80

NOTE: a/ Actual consumption in each of the four years preceeding year 1 is 100.

The cost or savings of this proposal for the Federal Government depends on the basis of comparison. Compared with the present system, a rolling base would provide savings to the government. The amount saved would depend on the extent of utilities conservation that takes place. Compared with a system that attempted to capture the savings from a consumption decrease immediately (by reimbursing only actual consumption), a rolling base would have short-term costs. It would, however, produce savings over time by providing PHAs with an incentive to continue to reduce utilities consumption.

6.3 RENTAL REVENUE AND VACANT UNITS

It has frequently been argued that PHAs have very weak incentives under the PFS to increase the revenue they generate from their own rental sources. This is because increases in revenue accomplished in one year are "taken away" the next year under a funding system that substracts an estimate of actual revenue from allowable costs.

There are several aspects to charging and collecting rent that need to be examined in a discussion of possibilities for increasing revenue.

First, there is the occupancy factor, or number of units on which rent is collected. A vacant unit does not generate revenue from rents.

Second, there is the rent charged to the tenants living in the occupied units. Until the changes in law enacted in 1981, PHAs had a considerable amount of latitude in charging rents. Although the maximum allowable rent was 25 percent of adjusted income, varying definitions of countable income, adjustments to income and "ceiling rents" meant that many tenants were charged less than the maximum. (See Chapter 2 for more discussion of this point.)

Third, there is the rent collected. Tenants do not necessarily pay the rent due, and PHAs may, therefore, not actually receive all the revenue theoretically available on the basis of rents charged.

Finally, there is the income level of tenants occupying the units for which rent is charged. With rents established as a percent of income, relatively higher income tenants will be charged more than relatively lower income tenants.

The PFS treats these aspects of charging and collecting rent in particular ways when arriving at the rental income figure to be deducted from permitted costs to get the PHA's subsidy amount per unit month.

First, PHAs are permitted to assume there will be some vacancy loss. Average rent charged is multiplied by an occupancy factor which is approved by the area office and generally may not be lower than .97.

Second, the rents charged are estimated for the year in which the subsidy is paid (remember that operating subsidies are forward-funded) by taking the "rent roll" or average rent charged for occupied units at the end of the preceding year and multiplying by 1.03. This is intended to reflect an increase in tenant income of about six percent on a yearly basis. If rents charged increase more than six percent, the PHA keeps the additional revenue, but it is "lost" the following year when the new end-of-year rent roll is used to calculate the subsidy. Rents might increase more than six percent for one of three reasons:

- o the PHA has succeeded in attracting higher income tenants or retaining tenants whose incomes are rising faster than the "norm";
- o the rent charged tenants at the same income level has gone up because of a change in the rent rules; or

- the PHA has done a better or more timely job of recertifying tenant incomes and, thereby, "capturing" more rent based on income increases.

Finally, the PFS assumes 100 percent rent collection. Any rent lost because of non-payment by tenants is simply revenue lost to the authority.

How might the funding system be changed both to provide stronger incentives for PHAs to increase their revenue and to ensure that the government saves money as a result?

In the rent collection area there appears that nothing further should be done, since the incentive is already very strong.

As to the occupancy factor, a few of the very large PHAs are permitted occupancy factors below .97 because they have entire projects that cannot be occupied for one of several reasons: they are "not marketable," they are being modernized, they are uninhabitable and there are no modernization funds with which to rehabilitate them, or they are about to be removed from the program. What is remarkable about the current subsidy system is not just that PHAs are sometimes permitted to make downward adjustments to their rent roll figures to account for the loss of revenue from such units but also that the PFS pays full subsidy for such units. Unless thay have been removed from the program by agreement between HUD and the PHA, they are counted in the unit months available (u.m.a.s) by which average subsidy is multiplied to get the PHA's total subsidy entitlement.

The payment of full subsidies for vacant or substantially vacant projects means that it is sometimes desirable from a cost standpoint for a PHA to keep vacant a project that could be marketed. Table 6-2 gives an example. The hypothetical project in the table is in a PHA with total permitted expenditures of $300 p.u.m. and PHA-wide average rent of $100 p.u.m.,

Table 6-2

COST TRADE-OFFS THAT MIGHT LEAD TO DELIBERATE VACANCIES

HYPOTHETICAL COSTS P.U.M.

	COSTS	REVENUES	DIFFERENCE
If project is occupied:		subsidy $200 a/ tenant-paid rent 100	
Total:	$400	300	- $100
If project is vacant:		subsidy $200 a/ tenant-paid rent 0	
Total:	$100	$200	+ $100
If project is vacant and its expected rental revenue is not counted against subsidy:		subsidy $300 a/ tenant-paid rent 0	
Total:	$100	$300	+ $200

NOTE: a/ Allowable costs (AEL plus utilities) are $300 p.u.m. and PHA-wide average rent is $100.

for a subsidy of $200 p.u.m. The cost of operating this project with tenants in residence is $400 p.u.m., and the rent that can be collected from tenants is $100 p.u.m on average. The cost of operating the project vacant (without heat or rountine maintenance) is $100 p.u.m. (None of these numbers is out of line with actual costs and rents for large PHAs). If the project is totally occupied by rent-paying tenants, the PHA gets $300 p.u.m. (subsidy plus rent), spends $400 p.u.m. and has a $100 deficit. If the project is vacant, the PHA gets $200 p.u.m. (the subsidy), spends $100 p.u.m. and comes out $100 ahead. If, in addition, the PHA is permited to count this project as vacant when calculating its average rental income to determine subsidy, the PHA in effect gets $300 p.u.m. and spends only $100. In this manner, some PHAs have been able to respond to funding constraints in a situation in which Federal policy has rarely permitted them to reduce costs by removing high-cost units from the program altogether. (See Chapter 3 for further discussion of removing costly or unmarketable units from the Public Housing Program).

The desirable policy change in this area is clear. PHAs should be permitted to dispose of substantially vacant and/or high-cost projects, and units with no reasonable prospect of being occupied during a year for which subsidies are being calculated should not be counted either in unit months available or in the permitted occupancy factor for estimating rental revenue. If PHAs are pursuing an active policy of either rehabilitating vacant projects or disposing of them, a cost-based funding system should provide minimum costs for units not counted in the u.m.a.s. These would include costs for protection and preservation of the units and should be determined by the area office on a case by case basis.

In the area of rent charged, the current system that takes the end-of-year rent roll as the basis for the rent estimate for the next year appears to provide an incentive for PHAs to recertify incomes immediately after the

end of the year so that rent increases can be obtained by the PHA for almost the entire year before they are "lost" to a reduction in subsidy.1/ This may result in a loss of rental income to PHAs, if some recertification schedules are delayed and none speeded up. Even it it does not result in lost income to PHAs, this practice prevents the Federal Government from making appropriate reductions in subsidy. Again the desirable change in the system is fairly clear: change from the end of year rent roll to an average rent charge throughout the year (average total rents charged per month divided by the average number of occupied units). The year-long average would then be inflated by 1.06 instead of 1.03 to get to the next year's average for calculating the subsidy.

Finally, we come to the rent area that has received the most attention but that now may be much less important because of the recent legislative changes. This is the area of rents charged to particular tenants. Following the 1981 legislation, PHAs will no longer have discretion over income definitions and deductions and will no longer be permitted to establish ceiling rents for particular units. They will be required to charge 30 percent of adjusted income (with standard deductions) for all new tenants and to phase all current tenants up to 30 percent of adjusted income over a five year period in increments set forth by the law and implementing regulations. Thus a funding incentive to encourage authorities to change their rent rules to charge as much rent as permitted by law is no longer needed. Indeed, an incentive that permitted PHAs to keep additional revenue beyond the year collected during the phase-in of the 1981 rent rules might merely be rewarding authorities for doing what the law requires. Indeed,

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1/ There is evidence that some PHAs follow this practice, and preliminary findings from a current HUD study of the income recertification process suggest that more errors are made by PHAs that certify incomes all at once than by PHAs that stagger recertifications throughout the year (Applied Management Sciences, 1980).

the Federal Government will reap the full savings from the phase-in of the new rent rules only if the rent inflation assumption is increased to reflect year by year changes in the rent rules as well as expected growth in tenant incomes.

However, there remains the area of tenant income levels. Until 1981, law and regulations encouraged PHAs to attempt to increase their numbers of relatively higher income tenants, in part because of the potential savings in subsidy costs. As has been discussed in Chapter 2, changes legislated in 1981 made such a policy more difficult to pursue, by dropping the admission income limit to 50 percent of area family median income and, more importantly, by raising percent-of-income rents to 30 percent of adjusted income. Even before the 1981 changes, only a very few PHAs pursued successful policies of attracting higher income tenants. A funding system that captures rental revenue increases after the first year may have been one of the impeding factors. Chapter 2 has discussed some others. If a better "income mix" is seen as an important objective for cost-savings or other reasons, then eventually it may be desirable to incorporate an incentive to increasing rental revenue into the funding system.

An incentive for increased revenue might be designed as follows: the PHA would be permitted to keep for a second year some fraction of the difference between the rent roll predicted and the rent actually charged (based on incomes) in the second year. Table 6-3 illustrates how the incentive would work. The calculations assume the average rent roll for the previous year, after taking account of allowable vacancy loss, is $100. The PHA gets to keep for a second year 25 percent of any increase above 6 perent. Remember that lower values of the rent roll used in the PFS calculations mean a correspondingly higher subsidy payment. Also note that the authority receives its shared increase only in the second year: to keep sharing in increases, it must keep increasing rents charged. In the example used, a $20 increase in rent charged produces a $5 increase in subsidy per unit month in the second year.

Table 6-3

ILLUSTRATION OF AN INCENTIVE TO INCREASE RENTAL REVENUE

	HYPOTHETICAL DOLLARS PER UNIT MONTH		
	PREDICTED RENT BASED ON LAST YEAR'S RENT ROLL	ACTUAL RENT	RENT FIGURE TO BE USED IN PFS CALCULATIONS IF PHA SECOND YEAR SHARE OF INCREASE = .25
1.	$106	$116	$113.50
2.	106	121	117.55
3.	106	126	121.00
4.	106	131	124.75
5.	106	136	128.50
6.	106	141	132.25
7.	106	146	135.00

NOTE: The average rent charged in the previous year was $103.09, but the PHA is permitted a .9/ occupancy factor, so the rent roll on which the prediction is based is $100 p.u.m.

This incentive presumably would encourage PHAs to recertify incomes as early as possible and to discover all sources of income, as well as attracting higher income tenants.

On the other hand, it may be impossible as a practical matter to distinguish between rent increases that result from higher incomes or better recertification and rent increases that result from the phase-in of the 1981 changes in the rent rules. Therefore, the implementation of an incentive to increase rental revenue should be delayed until the 1981 changes have been fully phased in.

The cost implications of the changes just proposed would be as follows:

- Eliminating vacant projects from u.m.a.s would result in cost savings to the Federal Government.

- Changing to average rather than end of year rent roles as the basis for estimating rental revenue would result in cost savings to the Federal Government.

- Properly timed implementation of an incentive to increase rental revenue could result in cost savings to the Federal Government. It is unlikely that such an incentive could be implemented with the intended effect until after the phase-in of 30 percent of income rent payments for all tenants. Even then, to make certain the incentive was not simply creating a windfall, "normal" increases in rent would have to be accurately predicted in line with past experience for income growth of public housing tenants.

4.4 Preferred Management Practices

The general approach of a cost-based funding system is to permit PHAs to make their own choices concerning the most cost-effective practices in order to operate public housing within the dollars provided by the system. There are, however, some areas in which particular practices are so important to the integrity of the Public Housing Program or to the Federal Government's ability to monitor costs and program outcomes that it may seem worthwhile to build incentives to follow these practices into the funding system.

There are literally a dozen or more incentives for good management one could think of embodying in a cost-based funding system. In sorting through these candidates, three criteria--all dealing with measurement issues--have been applied, in addition to limiting the selection to areas that clearly deserve priority. First, there must be a base against which progress can be measured or it must be possible to construct an absolute scale of performance scores. As an example of the latter, one may want to stress the accuracy with which tenant incomes are certified. If the error rates of PHAs in the past are unknown, one must be able to say on some other basis that 97 percent accuracy is "average" or "outstanding". Second, the monitoring of performance must be practical, both technically and in terms of the additional work load it imposes on HUD's area office staff.

Third, the areas selected should be those that are relatively unaffected by an authority's operating environment. Maintenance of the grounds of the projects is an area that is very heavily influenced by the composition of the tenants (young children and adolescents will use the grounds more heavily) and by the neighborhood in which the projects are located (possibly because of vandals). To include maintenance of grounds as an item to be measured for performance awards would require that some adjustment for the "degree of difficulty" of the operating environment be made. Needless to say, the factors on which to base such an adjustment do not now exist, and a very substantial amount of research would be necessary to develop them.

In the following paragraphs three candidates are discussed. Of these, two seem to be solid candidates for inclusion in a revised cost-based system and one is rejected as infeasible because of the measurement problems.

Income verification and rent calculations. Charging the correct amount of rent based on income to public housing tenants is important, not only because under-payments result in unnecessary cost to the government, but also because the integrity of public programs is threatened when households receive incorrect benefit amounts or benefits for which they are not eligible.

We have discussed the incentive PHAs already have to collect delinquent rents and have suggested the removal of a possible disincentive in the present system for recertification of incomes on schedule. This section proposes (1) to require PHAs to follow known cost-effective practices in the areas of income verification and rent calculations; (2) to monitor such practices carefully; and (3) to provide financial penalties and rewards based on the results of the monitoring.

A current study of the income certification process in HUD programs has found the following for public housing (Applied Management Sciences, 1980):

- o there is no record of any sort of verification for over one-fourth of all income sources for public housing tenants;

- o rent calculations for public housing (the amount charged based on the income reported) are on the whole quite accurate.;

- o about 31 percent of public housing tenants are overdue for recertification by more than three months and the average number of months overdue is 7.9.

There is a an extensive body of information from both housing and other income-tested programs on the importance of income verification and on the cost-effectiveness of different forms of tenant-supplied or third-party documentation for different types of income. (See, for example, Zais, Griffiths, Tebbets). Some of this information has been incorporated into income verification requirements for the Section 8 Program. However, directives to PHAs managing public housing suggest rather than mandate procedures and offer little guidance as to the circumstances in which different procedures should be used. 1/

1/ On verification, the official regulations (24 CFR 860.206) simply say "Adequate procedures shall be developed to obtain and verify income with respect to each applicant." The HUD Occupancy Handbook (7465.1 REV, p. 2-16, 10/78) is more explicit about possible verification procedures but leaves them as optional: "... the PHA must establish adequate methods of verifying income which may include: (1) third-party verification through an employer or public agency, or (2) review of documentation provided by the family such as benefit checks, income tax returns, etc."

This option for adding management incentives to a cost-based funding system would include the incorporation of information on the most cost-effective practices into the public housing occupancy handbook. Clearly superior practices would be required.

Turning to the area of rent calculations, since errors occur in both directions, the net savings in subsidy from correcting error is not as large as the average error. Nonetheless, there is some savings to be gained from increased accuracy, and the integrity of the program and fairness to tenants both argue for attention to this area. 1/

Finally, it is unmistakably clear that timely recertification of income prevents over-payments and saves subsidy costs. Public housing regulations will soon require that incomes of all tenants be recertified annually. There is some evidence that recertifying income as frequently as quarterly more than pays for the administrative cost, 2/ but the frequency with which recertifications are required is in part a policy decision since it affects the size of benefits to households. 3/

HUD already monitors PHA performance in these areas as part of its biennial management reviews of authorities' compliance with regulations in many areas. Basing a funding decision on the results of reviews in these areas might result in less attention to others, but we believe the importance of accurate rent charges is sufficient to justify special incentives. Standards against which to measure performance (average months late in recertifications, for example) will either be available as a result of the HUD study now under way or can be developed from the findings of the monitoring visits themselves.

1/ Error rates were carefully monitored in the Housing Allowance Supply experiment. The net savings in subsidy would have been $5.70 and $13.60 per recipient year in the two sites of that experiment, while the size of the average error was $30.20 (Rand Corporation, 1978, pp. 165-169).

2/ This was found to be the case in the Housing Allowance Administrative Agency Experiment (Zais, 1981, p. 245). An alternative to speeding up recertification schedules where staffing limitations might result in higher error rates is to make additional rent charges retroactive to the date the recertification should have occurred (Applied Management Sciences, 1980).

3/ The 1981 Housing and Community Development Amendments require annual recertification for all tenants. Previously the requirement was for annual examination of families and examination of elderly tenants' incomes every two years.

Monitoring itself results in improved performance, 1/ but this does not mean that standards cannot be developed from the results of monitoring. Rather, up to some reasonable point, standards can be increased as the results of monitoring show improvement for most PHAs.

A funding adjustment based on income verification and rent calculations would work as follows. Standards against which to judge performance in the areas discussed would be converted into a composite adjustment factor. The adjustment factor should not be large and it could be applied symetrically, so that the adjustment would result in a small increase in subsidy costs at most. For example, the factor might range from .98 to 1.02. 2/

If most PHAs (or PHAs with large numbers of units) met or exceeded the standard, there could be a small direct cost to the government. That cost would be easily offset, however, by increased rent changes (and reduced subsidies) induced by the funding incentive.

Project Based Budgeting. It has long been an axiom of good management to make managers accountable but to give them the necessary latitude and resources to carry out the jobs for which they are responsible. The sine qua non of enforcing accountability is a system to monitor performance.

1/ One part of the current study reviewed files, provided guidance to PHAs and then made return visits. Substantial improvement was measured between the two data collection periods. In addition, analysis of factors affecting error rates showed that area office monitoring reduces errors (Applied Management Sciences, 1981).

2/ One potential problem is that PHA files are sometimes in sufficient disorder that measuring performance at all is difficult It might be necessary to start the implementation of the incentive by applying the maximum penalty to such authorities and then moving later to measuring performance in the three areas discussed.

In public housing, in part because some years ago HUD shifted to looking only at authority-wide budgets, most authorities discontinued budgets for individual projects. Thus, they lost the ability to truly hold project managers financially accountable. In the past few years HUD has recognized the value of project-based accounting systems and, more generally, of delegating more responsiblity to the project level and encouraged authorities in this direction. This encouragement has primarily taken the form of providing funds under the Urban Initiatives program to large PHAs to convert their accounting systems from an authority to a project base. The funding was for the acquisition of computer hardware and software. Unfortunately, HUD did not require comparable accounting or report generation systems across these authorities. Thus, HUD denied itself the opportunity of being able to draw comparable project data for a large number of projects.

The idea here is to provide PHAs a cost-sharing incentive for installing or maintaining a project-based budgeting (PBB) system that keeps its accounts on an approved basis and has the capability of producing a set of reports with an approved format. This will help HUD develop a data base for better understanding public housing operations; and the presence of PBB may encourage some PHAs to develop true project-based management, with its attendant incentives for solid performance by project managers. This incentive stops short of providing an extra reward for project-based management mainly because of the difficulty that area office staff would have in judging what management arrangements met that test, i.e., for which functions would the project manager have to be responsible, how would this responsiblity be determined for each function? Another reason for not requiring project-based management as a condition of the incentive is that there are doubtlessly authorities doing a good job of managing 1,000 to 2,000 units on a fairly centralized basis; project-based data would facilitate their management, but requiring the decentralization of management authority might well be seriously disruptive.

Administratively, even monitoring the presence of a true PBB system--as opposed to authorities merely allocating costs to projects on a pro rata basis --may be challenging for area office personnel. Real monitoring will require looking at the origination and manipulation of the data that is entered into the system, as well as the incentives for accuracy of entries.

We have not attempted to set the level of the bonus to be provided to authorities that develop and use PBB systems. Since there are significant economies of scale, it should probably not be set as a straight percent of operating costs. Rather, it should be developed after a brief examination of the costs of such a system at PHAs of different size. (For example, HUD could ask for competitive bids for such systems at a few PHAs in order to ascertain cost relationships).

It should be emphasized that while we are not recommending an offsetting penalty for authorities without PBB (indeed, for many small and medium-sized PHAs, PBB might make no sense), the cost of the "bonus" would be quickly recaptured by the Federal Government because of improved ability to identify high-cost projects that should be removed from the program and to identify PHAs with gross management inefficiency.

Maintenance. A greater degree of dwelling maintenance should mean lower levels of extensive rehabilitation; in short, good maintenance practices are very likely to be cost-effective. One would expect that this being the case, PHAs would follow the economically rational course. They operate, however, in a special circumstances because of the split in the funding of operations and modernization. Because modernization is funded separately, the director of a financially pressed authority can defer maintenance at one or two projects, knowing that if conditions deteriorate sufficiently he will probably be able to acquire modernization funds. Thus, as long as operating and modernization funds are allocated largely independently of each other, some heightened incentive for maintenance may well be in order.

The incentive should be geared to some measure of output, the most obvious being the condition of the projects--the grounds, hallways, lobby, heating plant, and the number, condition, and length of vacancy of vacant units. The area office staff would have to physically inspect the projects, scoring the conditions upon a well-defined scale. Clearly, careful training of the involved staff would be essential.

The stumbling block to the system just sketched is the problem of controlling for differences in the operating environments of the individual projects and, ultimately, authorities. Conceptually, one can see a system in which each project was given a "degree of difficulty" score by which its mantenance performance would be weighted. Realistically, however, there is no basis for constructing such a set of scores. And it is for this reason that it has been indeed judged infeasible to develop a special incentive for maintenance.

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CHAPTER VII

ALTERNATIVE FUNDING SYSTEMS: COST-BASED FUNDING WITH A REPLACEMENT AND IMPROVEMENTS ALLOWANCE

7.0 INTRODUCTION

This chapter presents the design of an alternative funding system for public housing based on PHA operating costs but including funds to cover the replacement needs that arise as buildings age. The system is designated replacement allowance funding to emphasize that it would provide capital as well as operating funds. It is a cost-based system with capital additions.

Under replacement allowance funding, each PHA would be able to establish and maintain a capital reserve for the present or future replacement or improvement of its housing stock. The funding of these reserves would take the place of the existing modernization program. PHAs would assume full responsibility for both the scheduling and the allocation of capital outlays.

The concept and rationale for replacement allowance funding are introduced in the first section of this chapter, which also describes the existing modernization program and the problems addressed by the proposed alternative system. Cost estimates are then presented, in comparison with the separate funding of operating expenditures and modernization based on historical data. Issues concerning the implementation of replacement allowance funding and its implications for PHAs are explored in the closing section.

7.1 CONCEPT AND RATIONALE

Overview

Replacement allowance funding is a system that unifies the federal funding of PHAs' operating expenses and their capital allocations for physical replacement and improvement. It does so by providing an annual sum to each PHA for a capital reserve--that is, a reserve account that would accumulate over time and be drawn down as the authority's dwelling sites, structures, systems, and equipment required replacement or improvement. The system also provides for separate item funding of selected major replacements.

The proposed system has three components. The subsidy under replacement allowance funding can be expressed as follows:

$$\text{SUBSIDY} = \text{OPERATING SUBSIDY} + \text{REPLACEMENT AND IMPROVEMENTS ALLOWANCE} + \text{MAJOR ITEMS FUNDING}$$

This chapter focuses on the replacement allowance and major item funding components. A full discussion of the operating subsidy is found in Chapter IV. Major items funding includes only three items: roofs, heating systems, and utility distribution systems. The allowance for replacements and improvements covers all other items.

The general rationale for funding ongoing capital needs is widely recognized. With an adequate flow of capital, housing is essentially a renewable resource; its utility can be maintained and enhanced by replacing and updating building components as they wear out or become inefficient or obsolete.

Federal funding for public housing capital improvements has long represented an important part of PHA budgets. Between 1969 and 1980 several billion dollars worth of modernization was been funded and levels have increased to about a billion dollars a year in the 1981-1983 period. However, these funds have always been allocated outside the formula funding of operating subsidies (PFS), by a separate administrative mechanism and based upon separate criteria.

The defining feature of replacement allowance funding is the substantially unified funding of operating and capital costs. In contrast to the existing system, a combined subsidy would provide PHAs with funds not only to meet current operating shortfalls but also to use for present or future capital replacements. The proposed system retains only a limited separate flow of funds for specified major replacements.

There are two main arguments for a unified approach. The first concerns the interaction between operating costs and capital replacements: it is often possible to reduce outlays from operating funds by changing the nature or quality of the physical plant. For example, a roof approaching the end of its useful life generates repair costs for patching, plastering and painting

as leaks develop. Replacing the roof eliminates these repairs. Even more important is the relationship between utility costs and heating equipment; here, not only the age of the equipment but also the more efficient design and technology of newer systems means that the payback period in terms of operating savings on fuel, maintenance and repair may be very short despite the size of the capital outlay.

The second argument for combined funding of operating and capital costs is that it would give PHA management the authority to make decisions about these tradeoffs between capital replacements and operating expenditures. More broadly, the responsibility for planning and executing capital projects would lie entirely with the PHA. Management would be able to allocate funds to improve efficiency within the budget constraint. In a sense, replacement allowance funding would impose the discipline of the private market, with housing operators (here PHAs) required to meet operating and capital needs from a single pool of money.

Historical Background

Conceived in this way, a replacement allowance system would address a number of problems that have been identified in the PFS and the existing modernization programs. Over the period 1975-1981, the PFS was supposed to provide the balance of funds sufficient to operate the public housing stock, including routine maintenance. Research has shown that the formula for PFS allocations did not keep pace with the costs faced by many authorities (Merrill et al., 1980). This underfunding has contributed to the backlog of deferred physical maintenance that developed while PHAs sought to meet more immediate needs with shrinking real dollar budgets.

If the PFS was inadequate for funding full maintenance, it was never designed to cover capital improvements. Authorities' operating reserves might accommodate the cash demands of non-routine replacements, but a separate program existed to fund capital replacements. The Modernization Program, begun in 1968, was designed to improve the public housing stock to achieve conformance with standards of health, safety and liveability. Modernization funds could only be spent for capital improvements, defined as:

"...alterations, betterments, additions, replacements or major repairs that appreciably extend the useful life of the property (site, structures or non-expendable equipment), increase its value or utility, or make it more suitable for its intended use." (24 C.F.R. 868.2)

This limitation in theory prevented the PHAs from using modernization money to fill the maintenance gap left by the PFS.

Further, the Modernization Program was discretionary in its administrative design. Allocation of modernization funding among PHAs and among specific improvements was determined by HUD. This central designation of priority items appears to have produced unnecessary replacements at the same time that the greater needs of some PHAs and projects went unmet. A recent survey of the physical condition of the public housing stock provided these examples:

- Premature replacement of toilets or kitchen appliances in a project even though most fixtures were sound. The sound ones were to be replaced, as required by procedure, and stockpiled as a reserve for other projects in the PHA. Since a PHA is more likely to receive modernization money rather than an increased maintenance budget, this system was a solution to the inequity between routine maintenance and modernization funding.

- Wholesale roof replacement even though only a minority had worn out, a result of the uncertainty of receiving funding for the remainder when needed.

- Projects where changes were made without regard to sequence. In one project, the heating plant was replaced in spite of the fact that over 30 percent of the windows were broken (Perkins and Will, 1980, p.16).

The combination of the PFS and the Modernization Program did not provide any incentives for PHA rationalization of maintenance or improvement spending. Appropriation of funds fluctuated, and allocation was discretionary. Indeed, modernization funds awarded to PHAs most squeezed by the PFS may have been used to substitute replacement for less costly maintenance and repair. HUD's system of setting annual modernization objectives made it difficult for PHAs to plan for a sequence of capital improvements and discouraged funding applications based on a careful assessment of priorities by the PHA. On the other hand, the Department was concerned that PHA management weaknesses would lead to wasting the capital funds; evidence of PHA management failure supported the view that some central oversight was required.

Thus, under the PFS and the Modernization Program, capital funding continued even as a backlog of deferred maintenance developed. Modernization monies could not be applied to this problem. The discretionary administration of the program led to inefficient and wasteful capital spending, but PHAs had neither the incentive nor the means to better manage modernization. (The distributional pattern of modernization funding is reviewed in Section 7.2.)

As a result of criticisms of the Modernization Program and research on the capital investment needs of the public housing stock, Congress established the Comprehensive Improvement Assistance Program (CIAP) in the Housing and Community Development Act of 1980. The program was designed to remedy not only the identified physical needs but also the "constantly shifting priorities and...insensitivity to the needs identified by the PHAs themselves" that marked previous modernization efforts (House Report 96-679, 1980, p. 21).

The CIAP design contained four significant departures from previous modernization practice:

- For each project, a comprehensive strategy is to be devised and a unified plan for funding and scheduling the work must be proposed;
- PHAs will be required to plan for future modernization needs by determining the accrued replacement costs for basic equipment systems and structural elements, and to develop a rational schedule for meeting these needs over time;
- Capital replacement reserves will be established to enable PHAs to meet these future needs;
- Funds will be provided for management improvement and for modernization planning.

Through these means, the "pre-eminent role of PHAs" was to be reestablished.

To date, CIAP has had less than one full year in operation. Final regulations appeared in April 1981, and of approximately $927 million in the value of public housing calital improvements budgeted for in 1981, some 78 percent went to the comprehensive modernization of projects. 1/

1/ Of the remainder, 17 percent went to emergency needs, 4 percent for special purpose and 1 percent for homeownership PHAs (unofficial Office of Housing figures).

The requirement of comprehensive funding means that fewer PHAs will receive monies in any year; it has also proven difficult for HUD to evaluate the management plan component. Concern has been expressed that, despite legislative intent to return control to the PHAs, a discretionary approach continues to characterize area office implementation of CIAP since field office judgement is required in making decisions when there are not enough funds to meet all outstanding needs.

One feature of CIAP not yet implemented is the capital reserve. Within the Office of Housing, issues under discussion about it include:

- o The relationship between capital and operating reserves;
- o Means of administration and disbursement;
- o Provisions for emergency funds;
- o The problem of estimating the required annual contribution.

Each of these issues has also arisen in designing an alternative public housing funding system with a replacement allowance feature. While the purpose of such a reserve--to cumulatively set aside funds sufficient to cover replacing building components with differing useful lives--is clear, the appropriate way to design one is less evident.

Design Issues

Much of the discussion of replacement allowance funding for public housing draws on an analogy to private real estate management. However, there is also a body of practice and experience in assisted housing programs. Based on review and comparison of the implementation of replacement reserves in the private and assisted markets, there appears to be a strong tradeoff between administrative simplicity and fiscal predictability in the design of a replacement allowance system.

The key issue is whether a formula system for public housing replacement allowances can be designed without a discretionary component. All the available evidence from assisted housing programs indicates that limited additional fund allocations cannot be avoided. Even private market operators, who do not use the simpler formula approach, assume that major replacements will be financed by another means. It is based on the evidence discussed below that the proposed system includes both a replacements and improvements allowance and separate major item funding.

As the House Committee noted, the concept of replacement reserves is integral to private real estate management. Operators of private multifamily housing typically set aside a portion of cash flow from profitable properties against future replacement needs. Their usual method of calculating reserve requirements is to make useful life projections for each building component, sum them, and smooth them over roughly a ten-year period. With assumptions about the rate of inflation in replacement costs and the potential earnings of a reserve account, it is then possible to solve for the required annual contribution to reserves. 1/ This building-specific approach is the most precise and reliable way to estimate the needed replacement and improvements allowance. In this discussion, it is termed the "component approach."

Capital reserve requirements also exist in various assisted housing programs. Typically, however, they are formula based rather than depending on component life projections. For example, developers of Section 8 New Construction projects must budget to set aside .6 percent of the cost of construction annually, against future replacement needs. For Section 8 Substantial Rehabilitation, the formula is .4 percent of the mortgage amount. Both programs adjust the contribution annually as rents rise. For housing built or rehabilitated with funds from the Massachusetts Housing Finance Agency, the annual contribution is .75 percent of the cost of construction, with an inflation factor also linked to Section 8 Fair Market Rents.

Both procedure and purpose in the private market differ from those of assisted housing and (potentially) public housing managers in three respects. First, the component life calculations require considerable data and building- and project-specific calculations, based on assessment of each component's present condition and remaining life. By contrast, the formula approach used by public programs does not acknowledge the impact either of initial component quality differences or of variation in the wear-and-tear on building and equipment.

The difference between component life calculations and a fixed formula approach to planning a replacement reserve has several important implications.

1/ Howell (1981) describes these calculations in some detail.

Component life estimates require data on initial quality and the cumulative impact of maintenance practices and use over time. They also demand administrative resources for the analysis of the data and the projection of replacement needs timing for each component. But they can provide a significantly more reliable estimate of required reserves than a formula which, although administratively simple, is not building- or project-specific. That is, a formula approach trades off reliability for administrative savings. It may also be the only option if component life data cannot be obtained. Both because of the scale of administrative resources that would be required to take the component approach for public housing, and because the required data on PHA project age and component condition do not exist, the replacement allowance system simulated here adopts a formula approach.

A second salient difference between reserve practices in the private market and those in assisted housing is that private market managers acknowledge that they make capital reserve contributions only within the limits of profitability. And there is a disincentive for them in the fact that interest on accumulating reserves is subject to taxation. Neither of these constraints is relevant to PHAs, if reserve contributions are built into Federal subsidy.

Third, private market managers do not project the annual reserve contributions required to cover all potential capital needs. Typically, replacing or improving items such as carpeting, appliances, lighting and landscaping is covered by accumulated reserves. But for economically viable properties, the appreciation in market value over time enables owners to refinance when major building systems (e.g., roofs, furnaces) need replacement. Equity is freed in this manner and then reinvested. The option of refinancing means that reserves in the private rental market are typically designed to cover only lesser items.

The source of the reserve formulas in assisted housing programs is obscure. It is not known whether they were tested against component calculations or whether they were designed to meet all replacement needs. Whatever the intention, it appears that they may also fall short of covering replacement and improvement of major systems. An analysis of capital needs for the

portfolio of the Massachusetts Housing Finance Agency (MHFA) supports this view (Randolph, 1981). 1/ The analysis compared formula-based accumulated reserves to needs shown by component life calculations. For a group of projects built under Section 236 between 1969 and 1972, projected replacements needs in the 1981 to 1990 period already exceed the reserves accumulated since construction. The reserves will not be sufficient to cover replacements that will be necessary when the buildings are between 12 and 21 years old, such as roofs and hot water tanks.

Unlike private market properties, assisted housing rarely shows appreciation in value sufficient to support refinancing for the purpose of those larger capital replacements and improvements. For public housing, too, it is evident that a formula-based replacement allowance system cannot be guaranteed to prevent future uncovered needs for capital to accomplish major system work. Therefore, separate funding of major items replacement is an explicit part of the proposed replacement allowance system.

The replacement allowance system thus has two formula-based and one discretionary element which will be funded subject to component planning.

SUBSIDY	=	OPERATING SUBSIDY	+	REPLACEMENT AND IMPROVEMENTS ALLOWANCE	+	MAJOR ITEMS FUNDING
BASIS OF ALLOCATION:		FORMULA		FORMULA		COMPONENT PLANNING

As a result, the drawbacks of discretionary funding in the past--changing central office priorities, impedance of PHA planning and fluctuation in Congressional appropriations--must all be considered as design issues. In order to limit uncertainty about major items funding for both HUD and the PHAs, several rules are incorporated in the proposed system:

- Major items funding will apply only to a short and strictly-defined list of items;
- These items will always be separately funded--i.e., HUD cannot question PHAs' use of formula-based replacement reserves nor require PHAs to cover these items from reserves;

1/ No other analyses of this kind have been identified.

- o PHAs must provide information on the condition and expected life of these items to HUD for budget planning purposes.

These rules are reflected in the system design details and simulations presented in Section 7.2. It is likely that research during the transition to a reserve allowance system would enable further reduction of the discretionary feature of this funding element.

Transition

Perhaps the most important assumption in the design of the proposed replacement allowance system concerns transition. The backlog of repair and modernization needs in the public housing stock must be eliminated in order to make a steady-state replacement reserves system work. The concept of reserves for capital replacement and improvements is never applied to catch-up maintenance nor to rehabilitation of severely deteriorated or obsolete stock. Rather, capital funding from reserves begins once a building is brought up to acceptable condition. Alternatively, some deteriorated buildings might be removed from the public housing stock.

Clearly, the level of actual funding of catch-up modernization is a policy decision. The decision to pursue an aggressive policy of catch-up modernization is already implied by modernization funding levels for 1981-1983. This will be discussed below, along with administrative options for the transition. However, a required transition period of catch-up modernization is by no means unique to an alternative funding system with a replacement allowance; it would be required to make any funding option work in the long term. Therefore, transition funding is not part of the cost simulations for replacement allowance funding that are presented below.

To summarize, then, the rationale for and basic features of cost-based funding with a replacement and improvements allowance:

(1) Annual funding of PHAs to create a capital replacement reserve would allow them to make decisions about the tradeoffs between operating costs and capital expenditures;

(2) PHAs would be better able to plan and schedule replacement and/or improvement of building and site components;

(3) A formula approach to setting the annual allowance would provide a reserve for replacement and improvement of most capital components, including appliances, windows, cabinets, lighting;

(4) Separate major items funding would be provided for a short and strictly-defined list of items;

(5) A transition period is required to liquidate the backlog of repair and replacement needs.

With these points in mind, we turn now to simulation of such a system.

7.2 COST ESTIMATES FOR A REPLACEMENT ALLOWANCE SYSTEM

System Design

Probably for reasons of administrative simplicity, capital reserve funding in public programs has typically been formula-based. As Section 7.1 described, the formulas vary both in percentage and in the dollar base for calculations. They are alike, however, in their independence of data about specific building components.

While calculation of replacement costs using information about the condition of each building component would produce more reliable estimates of needed reserves, the potential administrative burden and cost of data collection, as well as the administrative problems of discretionary funding, make it more reasonable to contemplate a largely formula-based system for public housing as well. Nor are data available, even on a sample basis, to compare the proposed formula with component life calculations. 1/

Therefore, to design the replacement allowance system simulated here, prevailing practice and experience were the main source of guidance. Information was gathered on the adequacy of reserves accumulated in assisted housing programs. In addition, the limited available data on annual spending for capital replacements and improvements were examined.

The formula for a replacement allowance can be simply expressed as:

REPLACEMENT AND IMPROVEMENTS ALLOWANCE (ANNUAL) = PERCENTAGE x BASE QUANTITY

1/ Should a replacement allowance system for public housing be implemented, it will be important to test the proposed formula on the basis of research about component conditions and lives.

Thus, two choices are required--the base quantity and the percentage determining annual contributions. Let us first discuss the choice of a base for the formula. The current formulas for assisted housing production programs require that a proportion of construction cost or mortgage amount be set aside annually against replacement needs. These bases may be appropriate for newly constructed housing, especially if the initial quality of the building components is regulated under Minimum Property Standards. Even so, the bases are in fixed dollar terms, and so the reserves may quickly fall behind repair costs in inflationary periods. 1/

For existing housing, including public housing, there is no reason to base a formula upon costs or debt incurred when the buildings were new. Even if the public housing stock is thought of as rehabilitated once the current backlog of repairs and replacements is cleared, the dollar value of the loans that supported the rehabilitation represents only a part of the total capital value of the stock.

Given the purpose of a replacement allowance, it would appear that a more appropriate base for a formula would reflect the maintenance, repair and non-routine replacement expenditures of PHAs.

The base chosen to simulate the replacement reserve in comprehensive cost-based funding is the Revised Allowable Expense Level plus Transition calculated annually by the PHAs. 2/ This measure includes Delta and allowable expenses adjusted for inflation. However, it excludes utility costs, which are highly sensitive to changing fuel prices and have been treated as a partial pass-through in terms of federal subsidy. For 1980, the mean AEL per unit month without utilities was $95, compared to $49 for maintenance and capital outlays 3/ only and $152 for total Allowable Expenses including utilities. 4/

1/ This is an important factor in the reserve shortfall predicted in the MHFA analysis (Randolph, 1981).
2/ Reported on Form 52721A.
3/ Not capital outlays funded by the Modernization Program, but minor capital expenditures made from PHAs' operating reserves.
4/ However, all three of these measures were positively and highly correlated ($r > .76$).

The use of allowable expenses as a formula base, rather than a flat amount per public housing unit, is a striking feature of the proposed system. It is supported by strong evidence that both the cost of replacements and the need for them varies among PHAs. This evidence is found in research on the sources of variation in PHA operating costs. The analysis (Merrill, 1980, pp. 126-36) showed that total operating costs exclusive of nonlabor utility costs were significantly influenced by:

- Local wage rates and PHA union structure;
- Age of buildings;
- Building design;
- Neighborhood conditions;
- Tenant mix.

Wage rates and union structure are also determinants of the cost of making capital replacements and improvements. Building design refers to the configuration of physical components; just as (e.g.) the number of elevators affects operating costs, so also does it affect replacement requirements. Neighborhood conditions may dictate the use of more durable fencing, outdoor furniture and lights, or the installation of more security devices. These capital items would require greater investment by some PHAs (and for some projects) than by others. Finally, tenant mix greatly affects the wear and tear on buildings and grounds; the same interior flooring in an elderly project will last longer than in family housing.

Because these factors affecting the costs of capital replacement and improvement differ among projects and PHAs, it is desirable that the annual replacement allowance amount also vary. A flat amount per unit for all public housing would be a windfall for some authorities while leaving others short. Linking the annual capital reserve contribution to operating costs instead takes important differences into account. Furthermore, since the AEL is updated annually for inflation, the contributions are made in cur rent (rather than constant) dollars.

Because this base for the replacement allowance in the proposed system differs from those in use by other housing suppliers, it is necessary to translate the reserve experience of other suppliers into comparable figures. Therefore, in order to choose a percentage for the allowance formula, two questions were examined within the limits of available data. First, individuals with reserve experience in assisted housing were asked about the magnitude of annual contributions relative to operating costs (rather than construction costs or mortgage) and the adequacy of the reserves. Second, an analysis of capital spending in relation to operating costs was performed for private multifamily housing.

For assisted housing, experts' estimates on the reserve contribution as a proportion of operating costs ranged from 8 to 17 percent. 1/ Part of the variation resulted from the program formulas--.6 percent of construction cost in Section 8 New, .75 percent for the Massachusetts Housing Finance Agency, .4 percent of the mortgage amount for Section 8 Substantial Rehabilitation. Another source of variation was the type of project; operating costs for elderly projects were estimated at only 50 to 60 percent of those for family projects. Finally, the lowest estimates (8 to 9.5 percent) did not exclude utilities from the base. Several respondents also pointed out that building design would influence both reserve needs and operating costs. None felt that the reserve contributions (even at 12 to 15 percent of annual budgets) would be adequate to fully cover major future capital items.

For private rental housing, the standard sources of operating cost data (the Institute for Real Estate Management and the HUD Office of Loan Management System 2/) do not publish information on capital additions or replacements. 3/

1/ Seven housing management experts were interviewed, including representatives of HUD, State Agencies, IREM and private housing management consultants.
2/ This system collects data on private rental housing with insured mortgage financing.
3/ The application of private market operating costs to public housing is discussed in Chapter 10.

Previous analyses of operating costs have had data from a limited and unusual segment of the stock. 1/ As a result, the Supply component of the Experimental Housing Allowance Program appears to be the only source of cost information on an unassisted and unregulated portion of the rental stock. The data are from a sample of the multifamily rental housing in Brown County (Green Bay), Wisconsin and St. Joseph County (South Bend), Indiana. They include capital additions as well as maintenance, taxes, insurance, utilities and management outlays on an annual basis. 2/ Landlords were the data source for most items. Tenants' outlays and non-cash inputs are also included, although these are relatively small amounts in multifamily buildings.

In each site, data were collected for four years. Between 1974 and 1977, capital additions as a percent of operating costs (with utilities excluded) ranged from 3 to 14 percent annually in South Bend; in Green Bay, from 1973 to 1976 they ranged from 5 to 15 percent. In both locations, the highest ratios were observed in the earliest year, with a sharp decline thereafter. The downward trend reflects the generally low and declining profitability of these properties as investments. In constant dollars, Brown County landlords saw a 14 percent drop in real income over the four years; those in St. Joseph County realized only a 6 percent increase. Therefore, the higher figures are likely to reflect a more normal ratio of capital additions under conditions of adequate profitability.

On the basis of the combined information from these assisted housing and private market sources, the figure of 15 percent of allowable expenses has been chosen to simulate reserve contributions under the proposed replacement allowance system. The choice is intended to reflect the range of expert opinion, the consensus on the inadequacy of lower reserve proportions in assisted housing, and the very limited data on privately operated rental properties. The formula for the second component of annual subsidy under the proposed system is thus:

1/ For example, Eisenstadt (1972) analyzed data provided in hardship applications under New York City's rent control law.
2/ The Housing Allowance Supply Experiment data are available as a set of revenue and expense accounts for rental properties (Neel, 1981). They are discussed and interpreted in Barnett and Lowry (1981).

REPLACEMENT AND IMPROVEMENTS ALLOWANCE = .15 (REVISED ALLOWABLE EXPENSE LEVEL PLUS TRANSITION)

The system's third component is major items funding. As Section 7.1 discussed, this is the remaining discretionary element of the system. It would need to be appropriated by Congress annually and allocated by HUD to PHAs encountering replacement needs on selected major items. 1/

The necessity of this third element derives from widespread experience of reserve inadequacy under formula-based systems. For example, in the Massachusetts Housing Finance Agency analysis cited previously (Randolph, 1981), reserve balances were projected for the period 1981 to 1990. For a group of 77 projects, built under Section 236 and ranging in age from 3 to 11 years, the balance of the replacement reserve account (assumed to accrue interest at 12 percent) was compared to the replacement costs for 28 site and building components. An average and range of useful life was specified for each component, and inflation in replacement costs was assumed to be 10 percent. Negative balances were projected for all ten years from 1981 to 1990 for the group as a whole, with 41 of the projects (53 percent) showing individual negative balances. That is, the reserves accumulated since construction, particularly on earlier projects, already appeared insufficient to cover replacement needs. This was in part because the reserve requirement under Section 236 was expressed in constant dollar terms, but more importantly because replacement of roofs and certain heating components (electric baseboards, hot water tanks, and gas heat circulators) would occur in this period. These are the major elements that are typically replaced in the private market out of refinancing proceeds and not out of reserves.

Using this evidence in combination with data from the Modernization Program, we have designed major items funding to include three elements:

- o Roofs;
- o Heating systems; and
- o Utility distribution systems.

Between fiscal 1975 and fiscal 1979, these three items accounted for 20 to 30 percent of annual approved loan authority for modernization. They were the

1/ Chapter 11 discusses an alternative way of funding major items--from resources under the control of local governments.

largest individual items in most years. 1/ Table 7-1 shows dollar commitments for these replacements (in current and 1980 dollars) and the proportion they represented of each year's totals. These are the only items falling under the discretionary part of the proposed system.

An accurate estimate of the 1980 cost of major items funding requires information on the current condition of roofs and heating and utility distribution systems in public housing. However, the Perkins and Will study provides neither condition ratings nor cost estimates by building component. Even data on (e.g.) the number of roofs already replaced under the Modernization Program and the number remaining to be replaced would afford some basis for estimating the number to be replaced in 1980. But no such records were kept in conjunction with administering modernization.

Therefore, we can do no more than convert historical modernization funding levels into 1980 dollars. The adjusted figures range from $93 million to $160 million, with an annual mean of $132,990,640. There is no way to determine the adequacy of this allocation or its relation to the cycle of replacement needs; however, until research can be conducted to better estimate actual need, the historical average (expressed in 1980 dollars) will be used to estimate the cost of major item funding in the proposed system.

Note that it will not be possible to examine the distributional features of major item funding, since there is no information on which PHAs face these replacements in the near term. Such effects must also be examined via transition period research. It may even be possible, after adequate analysis, to add major item funding into a reserve allowance formula, removing the necessity of separate funding of major items.

The replacement allowance formula and major item funding estimate have been added to the Comparison Performance Funding System for purposes of simulating system costs and distributional effects. Thus, annual subsidy under the proposed replacement allowance funding system is represented as:

1/ Other large composite items include building exteriors, kitchens, grounds improvements, and electrical work.

Table 7-1

APPROVED MODERNIZATION FOR THREE MAJOR CAPITAL ITEMS
(Thousands)

	ROOFS	HEATING SYSTEMS	UTILITY DISTRIBUTION SYSTEMS	THREE ITEM TOTAL
Loan Authority in Current Dollars:				
Fiscal Year 75	$24,004.4	$46,103.7	$33,530.0	$103,638.1
76	19,310.4	24,084.0	21,427.2	64,821.6
77	33,778.1	44,117.4	25,724.5	103,620.0
78	52,195.8	44,670.8	22,287.5	119,154.1
79	49,149.0	46,312.4	19,365.0	114,826.4
Percent of all Approved Modernization:				
Fiscal Year 75	5.67	10.89	7.92	24.48
76	8.94	11.15	9.92	30.01
77	8.64	11.30	6.58	26.52
78	10.89	9.32	4.65	24.86
79	9.01	8.49	3.55	21.05
Loan Authority in 1980 Dollars: a/				
Fiscal Year 75	37,048.9	71,157.5	51,750.9	159,957.3
76	27,822.0	34,699.7	30,871.8	93,393.5
77	45,384.1	59,275.9	34,563.3	139,223.3
78	63,673.3	54,493.6	27,188.4	145,355.3
79	54,369.8	51,231.9	21,422.0	127,023.8

SOURCE: Office of Housing.
NOTES: a/ Dollars are adjusted by the rise in the Consumer Price Index for Maintenance and Repairs, (All Urban Consumers) from December to December.

$$\text{SUBSIDY} = \underbrace{\text{COMPARISON PERFORMANCE FUNDING SYSTEM}}_{\text{OPERATING SUBSIDY}} + \underbrace{.15\ \text{REVISED ALLOWABLE EXPENSE LEVEL PLUS TRANSITION}}_{\text{REPLACEMENT RESERVE CONTRIBUTION}}$$

$$+ \underbrace{\text{AVERAGE HISTORICAL MAJOR ITEM FUNDING}}_{\text{MAJOR ITEM FUNDING}}$$

in the analysis that follows.

Comparison Case: Comparison Performance Funding System with Modernization Funding

Because cost-based funding with a replacement and improvements allowance is designed to replace the year-by-year application for modernization funds, 1/ the appropriate base of comparison for its budget and distributional effects is a funding system that reflects the flow of modernization monies. The simulations reported in previous chapters have compared new systems to a Comparison Performance Funding System (see especially Chapter I for a description of that system). Here, data on modernization funding from 1969 through 1980 are added to the Comparison Performance Funding System to derive a base case that recognizes the broader flow of Federal monies to the PHAs. This Comparison Performance Funding System with modernization funding will appear again as the basis for comparison when funding systems based on Fair Market Rents are discussed in Chapters 8 and 9 of this report.

This section introduces the comparison case based on the historical Modernization Program. It shows how funding under that program was allocated among authorities in different size groups and locations. The data used are an approximation of a long-term modernization average in 1980 dollars; approximation was desirable to reduce variability in the data, adjust for the absence of annual records by PHA, and fill data gaps among sample authorities. 2/

1/ It assumes that all catch-up modernization the Government chooses to fund is completed in a transition period.

2/ Due to a change in data recording procedures by HUD, modernization data are not available as a single time series for 1969 to 1980. Prior to 1978, only cumulative obligations are recorded by PHA; they represent a sum of

(footnote continued next page)

In 1980 dollars, the total national cost of modernization on an annual basis was $375 million. This total does not include modernization funding for PHAs that are not part of the PFS operating subsidy system, such as Puerto Rico and authorities that were able to cover operating costs with rents.

This estimate of annual modernization costs is also extremely sensitive to assumptions about the proper basis for expressing past year amounts in 1980 dollars. The estimate of $375 million used in this chapter does not relate the funding level to the number of units in the operating subsidy system during the 1969-1980 time period. The national number of units in the Public Housing Program has increased 57 percent during this period, from 741,000 to 1,164,000 units and the number of units receiving operating subsidies has increased as well. Since the level of modernization funding was spread over a smaller number of units, the modernization expenditure per unit was about 29 percent higher (since the mid point of the 57 percent growth is 29 percent). This would yield an estimate of $484 million. On the other hand, a good deal of the modernization funds which are included in these estimates include catch-up modernization, which we have proposed to fund separately during a transition period. Thus, we have retained the estimate of $375 million in annual modernization amounts as the basis for comparison between a replacement allowance intended to provide for "normal" capital improvements over time and funding for such improvements in the past. Historical modernization funding had a mean value of $32 per unit month with a standard deviation of $25 over the 13-year period. About 5 percent of the sample PHAs showed no such funding; at the other extreme, 5 percent received over $80 per unit month on average.

(footnote continued from previous page)
current dollars unadjusted for inflation. In addition, pre-1978 data could not be located for nearly 10 percent of the sample. Data for 1978-80, while more complete, show extreme variability. A best approximation to a long-term average was derived by (1) adjusting the 1969-78 cumulative figure for inflation using half of the change in the CPI for maintenance and repairs between 1969 and 1978; (2) combining the result with post-1978 modernization data; (3) converting to a per unit month figure for each authority; (4) performing a regression analysis of the relationship between PHA characteristics (location, size, building height, unit size, local population and rent levels) to this figure; and (5) filling in with the regression estimates where modernization records were missing.

Table 7-2

ALLOCATION OF FUNDS TO DIFFERENT TYPES OF PHAs
UNDER THE HISTORICAL MODERNIZATION PROGRAM

PHA TYPE	MODERNIZATION FUNDS a/ P.U.M. (1980 DOLLARS) MEAN	STANDARD DEVIATION	SAMPLE SIZE
Extra Large	$26.13	$ 15.22	21
Northeast	19.80	14.47	7
South	24.88	3.24	4
Central	37.06	10.81	8
West	45.15	10.65	2
Large	40.52	21.13	107
Northeast	47.25	24.71	42
South	33.04	15.32	24
Central	36.87	18.78	30
West	45.94	18.60	11
Medium	32.28	23.00	86
Northeast	31.58	22.19	26
South	31.81	26.47	27
Central	25.54	14.35	24
West	57.00	19.98	9
Small	33.35	38.50	100
Northeast	42.30	59.75	27
South	24.63	20.25	27
Central	26.09	24.43	40
West	60.83	26.68	6
All (Weighted Average)	32.35	24.70	314

SAMPLE: PFS Cross Section Analysis Sample.
DATA SOURCE: PFS Cross Section Analytic Data Base.
NOTES: a/ See text for derivation.

Table 7-2 shows the distribution of historical modernization funding by PHA size group and region of the country. For each group, a mean and standard deviation are given. Around the overall mean of $32, there is considerable variation; among the 16 PHA categories, the range is from $20 per unit month for extra-large authorities in the Northeast to $61 per unit month for small Western PHAs. As a group, extra-large PHAs benefitted least per unit from the Modernization Program, while large authorities received the most on average. However, in each size category, there are considerable differences.

Table 7-2 also reveals the degree of variation in modernization funding in the years 1968 to 1981. The figures for medium and small PHAs have large standard deviations relative to their means. A number of PHAs in these categories received no modernization monies at all.

There has been considerable criticism of funding allocations under the Modernization Program. The information in Table 7-2 shows a limited relationship between funding and PHA size, yet we know that operating costs do increase with the number of dwellings managed by an authority. By examining modernization allocation using multiple regression techniques, it is possible to identify the PHA characteristics significantly related to levels of funding. Such analysis reveals that:

- Small PHAs received significantly greater funding per unit month than each of the other size groups;
- Holding size constant, the Southern authorities received less funding than those in other regions;
- Modernization funding was greater, all else equal, for PHAs with older stock and higher buildings.

According to the regression analysis, PHA size, average building age, and unit size were the most significant factors associated with variations in modernization allocation. Extra-large PHAs were least favored among the size groups, averaging nearly $20 less per unit month, all else equal. Older stock tended to receive greater funding, this effect adding about $25 per decade. Evidently, certain patterns in Modernization Program funding, such as age of stock versus size of authority, were substantially offsetting in effect.

In turning to the simulation of cost-based funding with a replacement allowance, one caveat about the comparison with Modernization is in order. The modernization funding just described does not reflect either policy or budget decisions under the Comprehensive Improvement Assistance Program (CIAP) begun in April 1981. It is possible that some of the distributional effects of the older Modernization Program would change were CIAP to operate for a sustained period of time.

Simulation of Replacement Allowance Funding

Cost-based funding with a replacement allowance is a system that combines the Comparison Performance Funding System with a federal subsidy designed to create and build a reserve against capital needs plus component planning of major items replacement. As detailed previously in this section, the simulation of this system incorporates a formula-based annual capital allowance pegged to the PHA's allowable expense level excluding utilities costs. The resulting reserves would be expected to cover all replacements and improvements except for the three large building components (roofs, heating and utility distribution systems) separately funded.

The two systems compared here are not entirely parallel in concept, for two reasons. First, modernization funding represents the historical experience of the Modernization Program; at least in part, this funding is likely to have reflected the backlog of repair and replacement needs known to exist. On the other hand, replacement allowance funding is defined as a system providing capital reserve funds after a transition in which the backlog is met. (Issues about the transition and its costs will be discussed further in the next section.) Therefore, it may be anticipated that replacement allowance funding will require lower dollar allocations. The simulations indicate the magnitude of the cost difference for the Federal Government and the distributional differences between the two systems.

Second, as indicated above, the comparison carried out on a PHA-by-PHA basis cannot include the funding required for replacement of major items. No PHA-level data exist to support inferences about the distribution of major item needs. Therefore, only the national cost estimates reflect all three parts of the reserve allowance system.

Table 7-3

NATIONAL COSTS OF ALTERNATIVE FUNDING SYSTEMS:
COST-BASED FUNDING WITH A REPLACEMENT AND
IMPROVEMENTS ALLOWANCE (1980 DOLLARS)

	COST-BASED FUNDING WITH REPLACEMENT ALLOWANCE	COMPARISON PERFORMANCE FUNDING SYSTEM WITH MODERNIZATION FUNDING
Subsidy:		
Operating Subsidy	$ 711,996,156	$ 711,996,156
Capital Funding	163,047,804 a/	374,439,600 c/
Major Item Funding	132,990,640 b/	
Rental and Other PHA-Generated Revenue	1,218,902,705	1,218,902,705
Total Operating and Modernization Cost	2,221,324,383	2,303,371,833
Total Funds Available d/	2,226,937,305	2,305,338,458
Transition Costs e/	1,505,676,978	1,505,676,970

SAMPLE: PFS Cross Section Analysis Sample.
DATA SOURCE: PFS Cross Section Analytic Data Base.
NOTES: a/ Includes funding for future capital replacements and improvements, after completion of catch-up modernization during a transition period.
b/ Approximated from Modernization Program data. See text and Table 7-1.
c/ Reflects actual funding for modernization over the period 1969-81; funding was estimated where data were missing.
d/ Total Funds Available, the sum of subsidy and PHA revenue, differ slightly from total costs; PHAs that would receive negative subsidy under a formula where Subsidy = Costs - Revenue are recorded as receiving zero subsidy.
e/ Level II costs from Perkins and Will (1980); see Section 7.3 for discussion.

Table 7-4

CHANGE IN SUBSIDY TO DIFFERENT TYPES OF PHAs
UNDER COST-BASED FUNDING WITH A REPLACEMENT ALLOWANCE

PHA TYPE	SUBSIDY P.U.M. (1980 DOLLARS) COST-BASED FUNDING WITH REPLACEMENT ALLOWANCE a/	COMPARISON PERFORMANCE FUNDING SYSTEM WITH MODERNIZATION	AVERAGE DIFFERENCE	STANDARD DEVIATION OF DIFFERENCE	SAMPLE SIZE
Extra Large	$114.43	$121.92	$ -7.49	$18.16	21
Northeast	130.65	129.39	1.26	17.33	7
South	79.95	92.23	-12.28	2.97	4
Central	96.86	118.44	-21.58	11.33	8
West	84.55	109.35	-24.80	9.50	2
Large	63.96	91.77	-27.81	20.40	107
Northeast	93.10	125.88	-32.78	24.34	42
South	59.97	81.98	-22.02	15.00	24
Central	41.50	67.05	-25.55	18.45	30
West	42.35	73.70	-31.35	18.36	11
Medium	41.51	62.27	-20.77	22.22	86
Northeast	65.41	84.64	-19.23	20.99	26
South	25.72	27.02	-21.30	26.67	27
Central	27.79	42.80	-15.02	14.69	24
West	48.92	91.34	-42.40	17.92	8
Small	28.47	50.92	-22.45	38.35	100
Northeast	56.08	87.91	-31.03	59.91	27
South	17.21	32.45	-15.24	20.50	27
Central	18.67	35.02	-16.35	24.11	49
West	18.87	61.05	-42.18	32.77	6
All (Weighted Average)	$ 73.79	$ 91.61	$-17.82	$25.97	314

SAMPLE: PFS Cross Section Analysis Sample.
DATA SOURCES: PFS Cross Section Analytic Data Base.
NOTES: a/ The costs of Major Item Funding are excluded since no data are available to estimate distributional effects. See Table 7-3 for a national estimate of Major Item Funding.

Table 7-3 shows the relative national costs of the two funding approaches. Whereas the combination of modernization with the comparison PFS costs close to $1.09 billion annually, the total figure for the replacement allowance system (including major items) is $1.01 billion, or some 7 percent less. The subsidy amount for capital reserves and major items would be about 21 percent lower under the proposed system than modernization funding. In terms of the aggregate funds available to the PHAs, the system with modernization totals $2.3 billion, while that with a capital reserve comes to $2.2 billion (about 3 percent less).

It should be noted that the capital reserves component of replacement allowance system would be reflected differently in the Federal budget from current modernization funding. The capital funding amount would be reflected in outlays in the year it was allocated, whereas the current modernization program is financed by the sale of bonds and only the replacement of that debt appears as an outlay. On the other hand, the total amount of funds borrowed in the credit market would be the same and the Federally-induced spending by the PHA's would be the same as well.

Of course, the differences between these two systems do not affect all PHAs uniformly. A previous section of this chapter, which examined the allocation of modernization funds, indicated that that program (through 1980) tended to favor small authorities, all else equal. The extra-large PHAs as a group showed the smallest dollar receipts (see Table 7-2).

The corresponding figures are provided in Table 7-4 for the contrast in subsidy between reserve allowance funding and the comparison PFS with modernization. 1/ For all PHAs together, the combination of operating subsidy with replacement reserve contribution would cost $18 less per unit month. Extra-large authorities would average $7.49 less, while large PHAs' subsidies would be reduced by $27.81 on average. Western PHAs would, as a group, see greater reductions that those in other regions. Only one group of PHAs--extra-large authorities located in the Northeast--shows an average gain under the reserve system (although the large standard deviation indicates substantial differences within the group). The reason is that the formula for the replacement allowance is far more sensitive to PHA size and urban location, since it is linked to allowable expense level.

1/ Again, major item funding is excluded since no data are available to estimate distributional effects.

Table 7-5

DISTRIBUTION OF CHANGE IN FEDERAL SUBSIDY FOR PHA SIZE GROUPS
UNDER COST-BASED FUNDING WITH A REPLACEMENT ALLOWANCE a/
(RELATIVE TO COMPARISON PERFORMANCE FUNDING SYSTEM
WITH MODERNIZATION FUNDING)

PHA SIZE GROUP	PERCENT CHANGE IN SUBSIDY b/									
	LOSS OF 50% OR MORE		LOSS OF 25-50%		LOSS OF UP TO 25%		GAIN OF UP TO 25%		GAIN OF 25% OR MORE		TOTAL	
	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS
Extra-large	4.8 (1)	2.1 (8,052)	9.6 (2)	4.4 (17,242)	76.2 (16)	51.5 (199,995)	9.5 (2)	42.0 (162,931)	0	0	100 (21)	100 (388,220)
Large	15.1 (16)	13.4 (36,280)	36.8 (39)	39.5 (106,987)	43.4 (46)	44.0 (119,354)	4.7 (5)	3.1 (8,516)	0	0	100 (106)	100 (271,136)
Medium	27.7 (23)	25.0 (32,584)	34.9 (29)	36.5 (47,583)	22.9 (19)	23.1 (30,172)	7.2 (6)	7.9 (10,355)	7.2 (6)	7.4 (9,675)	100 (83)	100 (130,369)
Small	41.9 (39)	44.8 (82,367)	19.4 (18)	18.2 (33,384)	15.1 (14)	15.0 (27,655)	8.6 (8)	8.2 (14,982)	15.0 (14)	13.9 (25,493)	100 (93)	100 (183,882)
All PHAs c/	26.1 (79)	16.4 (159,283)	29.0 (88)	21.1 (205,196)	31.4 (95)	38.7 (337,176)	6.9 (21)	20.2 (196,784)	6.6 (20)	3.6 (35,168)	100 (303)	100 (973,607)

SAMPLE: PFS Cross Section Analysis Sample.
DATA SOURCES: PFS Cross Section Analytic Data Base.
NOTES: a/ The costs of Major Item Funding are excluded since no data are available to estimate distributional effects. See Table 7-3 for a national estimate of Major Item Funding.
b/ Percent change not calculated for PHAs receiving no subsidy under Comparison PFS with Modernization Funding. Eleven sample PHAs are missing for this reason (Extra-large: none; Large: 1 PHA, 1,407 units; Medium: 3 PHAs, 3,194 units; Small: 7 PHAs, 10,105 units).
c/ Percent change in sample PHAs is unweighted; percent change for total dwelling units is weighted.

Table 7-6

CHANGE IN FUNDS AVAILABLE TO DIFFERENT TYPES OF PHAs
UNDER COST-BASED FUNDING WITH A REPLACEMENT ALLOWANCE

PHA TYPE	FUNDS AVAILABLE P.U.M. (1980 DOLLARS) COST-BASED FUNDING WITH REPLACEMENT ALLOWANCE a/	COMPARISON PERFORMANCE FUNDING SYSTEM WITH MODERNIZATION	AVERAGE DIFFERENCE	STANDARD DEVIATION OF DIFFERENCE	SAMPLE SIZE
Extra Large	$229.10	$236.59	$ -7.49	$18.16	21
Northeast	264.18	262.93	1.26	17.33	7
South	155.15	167.43	-12.28	2.97	4
Central	185.66	207.23	-21.58	11.33	8
West	201.73	226.53	-24.80	9.50	2
Large	157.57	185.37	-27.81	20.40	107
Northeast	196.83	229.61	-32.78	24.34	42
South	138.76	160.77	-22.02	15.00	24
Central	127.92	153.47	-25.55	18.45	30
West	155.58	186.93	-31.35	18.36	11
Medium	140.68	161.45	-20.77	22.22	86
Northeast	169.65	188.88	-19.23	20.99	26
South	123.79	145.09	-21.30	26.67	27
Central	122.12	137.14	-15.02	14.69	24
West	149.07	191.47	-42.40	17.92	8
Small	122.80	145.25	-22.45	38.35	100
Northeast	161.44	192.48	-31.03	59.91	27
South	104.05	119.29	-15.24	20.50	27
Central	110.21	126.56	-16.35	24.11	49
West	118.51	160.70	-42.18	32.77	6
All (Weighted Average)	$176.56	$194.39	$-17.82	$25.97	314

SAMPLE: PFS Cross Section Analysis Sample
DATA SOURCES: PFS Cross Section Analytic Data Base.
NOTES: a/ The costs of Major Item Funding are excluded since no data are available to estimate distributional effects. See Table 7-3 for a national estimate of Major Item Funding.

To enable further investigation of the distributional effects of comprehensive cost-based funding, Table 7-5 displays percent changes in subsidy by PHA size. The magnitude of these changes relative to subsidy under the comparison PFS with modernization ranged from loss of the entire subsidy (for PHAs with sufficient revenues to make the replacement fund contributions themselves) to gains over 100 percent. However, very few authorities fell at either of these extremes. Taking all PHAs together, just 7 percent stood to increase their subsidy by more than 25 percent. About a fourth stood to lose 50 percent or more compared to modernization, but the latter group contained just 16 percent of all PHA dwelling units.

The four PHA size groups would be affected quite differently by implementation of a replacement allowance system instead of modernization. Among extra-large authorities, PHAs containing some 42 percent of the units in this group would gain; by contrast, gains would accrue to only 3 percent of the units in large PHAs and to 15 and 22 percent of the units in medium and small authorities, respectively. The greatest concentration of large percentage losses is in the smallest size groups, where authorities with nearly half the units would lose 50 percent or more of their subsidy relative to comparison PFS with modernization.

Under replacement allowance funding, there would also be a different configuration of total funds available to PHAs. 1/ Table 7-6 compares funds available between this system and comparison PFS with modernization, showing the changes according to PHA size and location. The average differences parallel those of subsidy exactly (see Table 7-4). 2/ Thus, extra-large authorities would receive $229.10 per unit month to cover both operations and a capital replacement allowance; the sum with historical modernization would be $236.59 instead. Extra-large authorities in the Northeast would gain very slightly, while the largest dollar losses (from $191 down to $149 per unit month) would be sustained by Western medium-sized authorities.

1/ I.e., subsidy plus PHA-generated revenue.
2/ This is because neither system includes negative subsidies. Where PHA revenue would more than cover both operations and tne replacement allowance contribution, the subsidy is set to zero, but no funds are collected by HUD.

Table 7-7

DISTRIBUTION OF CHANGE IN FUNDS AVAILABLE FOR PHA SIZE GROUPS UNDER COST-BASED FUNDING WITH REPLACEMENT ALLOWANCE a/ (RELATIVE TO COMPARISON PERFORMANCE FUNDING SYSTEM WITH MODERNIZATION FUNDING)

PHA SIZE GROUP	PERCENT CHANGE IN FUNDS AVAILABLE b/															
	LOSS OF 25% OR MORE		LOSS OF 15-25%		LOSS OF 10-15%		LOSS OF 5-10%		LOSS OF UP TO 5%		GAIN OF UP TO 5%		GAIN OF 5% OR MORE		TOTAL	
	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS	% SAMPLE PHAs	% TOTAL UNITS
Extra-large	4.8 (1)	2.1 (8,052)	0	0	42.9 (9)	24.5 (95,269)	33.3 (7)	27.8 (107,950)	9.5 (2)	3.6 (14,018)	4.8 (1)	5.9 (23,028)	4.8 (1)	36.0 (139,903)	100 (21)	100 (388,220)
Large	13.1 (14)	11.9 (32,531)	26.2 (28)	27.0 (73,667)	26.2 (28)	31.3 (85,230)	15.9 (17)	13.5 (36,825)	13.1 (14)	12.6 (34,367)	4.7 (5)	2.7 (7,460)	.9 (1)	.9 (2,464)	100 (107)	100 (272,543)
Medium	9.3 (8)	8.9 (11,944)	25.6 (22)	24.5 (32,733)	19.8 (17)	21.0 (28,031)	17.4 (15)	17.5 (23,422)	10.5 (9)	10.6 (14,209)	8.1 (7)	8.2 (10,906)	9.3 (8)	9.2 (12,319)	100 (86)	100 (133,563)
Small	18.0 (18)	19.6 (38,052)	19.0 (19)	21.0 (40,672)	10.0 (10)	9.2 (17,823)	10.0 (10)	9.3 (18,033)	14.0 (14)	14.9 (28,826)	14.0 (14)	13.2 (25,507)	15.0 (15)	12.9 (25,075)	100 (100)	100 (193,987)
All PHAs c/	13.1 (41)	9.2 (90,579)	22.0 (69)	14.9 (147,072)	20.4 (64)	22.9 (226,353)	15.6 (49)	18.8 (186,230)	12.4 (39)	9.3 (91,419)	8.6 (27)	6.8 (66,900)	8.0 (25)	18.2 (179,760)	100 (314)	100 (988,314)

SAMPLE: PFS Cross Section Analysis Sample.
DATA SOURCES: PFS Cross Section Analytic Data Base.
NOTES: a/ The costs of Major Item Funding are excluded since no data are available to estimate distributional effects. See Table 7-3 for a national estimate of Major Item Funding.
b/ Percent change not calculated for PHAs receiving no subsidy under Comparison PFS with Modernization Funding. Eleven sample PHAs are missing for this reason (Extra-large: none; Large: 1 PHA, 1,407 units; Medium: 3 PHAs, 3,194 units; Small: 7 PHAs, 10,105 units.)
c/ Percent change in sample PHAs is unweighted; percent change for total dwelling units is weighted.

In percentage terms, replacement allowance funding would create changes in funds available ranging from a 77 percent loss to an 11 percent gain. Table 7-7 shows how gains and losses are distributed among PHAs and their dwelling units. Although only two extra-large PHAs would gain, they contain over 40 percent of the units in this group. As a result, for all the PHAs combined, the system would provide increased funding for nearly a fourth of all units. On the other hand, losses up to 15 percent would affect half of all units, and the remaining fourth would sustain even larger losses in percentage terms.

In summary, this simulation of cost-based funding with a replacement allowance shows that, in comparison with modernization:

- National costs on an annual basis would be about $1.01 billion, some 7 percent lower;
- The replacement allowance funding would be greater for PHAs with higher maintenance and repair costs;
- The distribution of subsidy changes would allocate larger losses to Western PHAs and some large authorities, small gains to Northeastern extra-large authorities;
- The largest percentage losses would be concentrated among small PHAs for both subsidy and funds available.

Of course, these findings depend on some significant assumptions about how and when replacement allowance funding would be introduced. In the concluding section of this chapter, issues of implementation and impact are examined.

7.3 IMPLICATIONS OF REPLACEMENT ALLOWANCE FUNDING

Administration and Implementation

Some of the most attractive features of replacement allowance funding lie in the area of administration and implementation. The formula-based portions of the design that was simulated above offer great simplicity both at the central Federal funding level and for PHA planning. Since they are set as a percent of allowable expense levels exclusive of utilities, the annual replacement reserve contributions would be readily calculable for appropriation and budgeting purposes. PHAs would be able to rationalize their capital replacement outlays; accrued interest on accumulating reserves would help keep the value of the fund in line with rising costs.

Replacement allowance funding offers not only simplicity but also flexibility. In place of a modernization program funded in response to applications that were project- and task-specific, this system could give authorities broad control over use of the reserves among projects, among items, and over time. Indeed, this flexibility could conceivably extend to the allocation of operating as against capital monies. At the least, it would afford PHAs the means to reduce operating costs by making capital replacements whenever the payback period calculations were favorable.

The primary administrative drawback to the proposed system is its major item funding component, which requires annual appropriations and non-formula allocation. If the potential flexibility and management incentives of a reserve system are to be realized, the mechanism for awarding those major item funds must avoid requiring PHA justification of its use of the separate reserve funds. (Otherwise, detailed administrative oversight, which has proven harmful under the old Modernization Program, would develop again.) Yet, the volume and timing of requests for these additional funds could prove difficult to predict at the Federal level. Thus, research aimed at predicting major item needs (and possible incorporating them into a formula) should be vigorously pursued.

A similar problem arises from one suggestion about the implementation of a replacement allowance system. In discussing this issue, the Office of Housing has considered a system whereby PHAs would receive annual letters of credit from the Treasury rather than actual funds for the capital reserve. Arguments in favor of this approach involve lower annual Treasury outlays and less fear of PHAs "misusing" or "wasting" the reserves. But it is clear that drawdowns would be even more unpredictable than under annual funding with additional requests for major systems only. Further, any mechanism to regulate the drawdown would have some effect on PHA flexibility in the use of the reserves.

A final and decisive disadvantage of this administrative approach is that it will not keep up with inflation. In essence, all reserve systems gamble on:

- o The potential earnings of accumulated reserves;
- o The rate of increase in repair and replacement costs;
- o The actual remaining life of capital components; and
- o The difference in capital needs timing across buildings and projects.

The reserves must be able to earn interest if they are to cover future costs; dollar-denominated letters of credit would erode reserve adequacy over time.

Another administrative issue regarding the proposal is budgetary. If the replacement allowance is added to the annual Public Housing subsidy, instead of funded through ACC debt payments like the Modernization and CIAP programs, the replacement allowance would have a significant yearly impact on the outlay budget, as already noted in the discussion above of comparative national costs.

The Transition to Replacement Allowance Funding

The primary issue in thinking about the transition to replacement allowance funding is the backlog of repair and modernization needs in the public housing stock. The system proposed here, and all other long-term funding options for public housing, explicitly assume that the required work has been completed. Both the replacement allowance formula and major item funding estimates depend on this assumption.

A recent study of the physical condition of public housing provides some guidance on the magnitude of the catch-up task (Perkins and Will, 1980). The study's estimates are based on actual inspections of public housing buildings and projects (including a sample of unit interiors); detailed repair cost calculations based on the inspections were combined and weighted to give national figures in 1980 dollars.

Three levels of modernization were defined for purposes of distinguishing the scale of capital needs in the housing stock. They were:

> Level I, which required the correction of all violations of basic health and safety standards;
>
> Level II, which included the cost of correcting all Level I deficiencies as well as those which do not comply with HUD Minium Property Standards modified to reflect the special conditions of modernization; and
>
> Level III, which covered the cost of selected modernization improvements to make projects more habitable, easier to maintain, or more attractive. Additional amenities, elements of good design, and above-standard materials were included (Perkins and Will, 1980, pp. 3 and 31).

The physical inspections revealed that the vast majority of the public housing stock is in good condition. While some of it is not attractive, these units appear to successfully comply with the MPS physical standards. Rehabilitation is required largely due to the aging of structures and systems, to the normal wear and tear of building components, minor vandalism and changes in state and local codes. It was estimated that 89.9 percent of public housing projects and 87.5 percent of their dwelling units are in basically sound condition.

In the majority of the basically sound projects, the typical substandard conditions found were roofs which were functionally obsolete or poorly maintained, graffiti and minor vandalism in the public areas, site erosion, broken doors, in-unit features such as open cabinets that no longer meet current MPS, and a small number of poorly maintained units due to poor tenant housekeeping.

Public housing with "chronic problems" totaled 6.1 percent and 7.4 percent of the projects and units, respectively. The nature of these problems varies from constant vandalism of the public areas in otherwise relatively sound projects, to projects suffering from massive vandalism and/or deterioration in both public areas and in the units. Vacant units were rapidly vandalized, site furniture (playgrounds, street lamps, etc.) were repeatedly broken, and public areas constantly vandalized. Hardware, gutters, fire hoses and extinguishers, mailboxes, exterior doors, windows and other vulnerable features

were repeatedly damaged, destroyed or stolen. Elevators were often inoperable as well.

The estimated costs (in 1980 dollars) to bring the public housing stock up to these three levels of modernization were as follows:

Level I: $259.2 million;
Level II: $1,505.7 million (includes Level I);
Level III: $6,790.7 million.

The Level II figure, which is probably most relevant to keeping public housing a viable option for those of lowest income, while maintaining typical differences between assisted and private housing, is some five times the annual aggregate contribution for replacement allowance and major item funding under the proposed system and four times the annual average of modernization funding in the 1969-1980 period.

However, since the completion of the Perkins and Will study and in part as a result of its findings, the CIAP Program has been budgeted at dollar amounts that should make it possible to reach Level II as defined by Perkins and Will. The value of capital improvements funded in 1981 and proposed for 1982 and 1983 approaches $1 billion per year. Even if a sizeable portion of these funds are used for energy conservation improvements rather than for correcting the physical deficiencies included in the Level II estimate, there should be enough funds-if allocated and used carefully-to accomplish the "catch-up" modernization tasks. Of course, the total level of catch-up funding is a policy decision since it is difficult to say that Level II or any other level provides the appropriate starting points for a new public housing funding system.

The choice of an administrative mechanism for the transition is another issue. Given the magnitude of the transition task, one option is to continue with the implementation of the Comprehensive Improvement Assistance Program (CIAP), even if a replacement allowance system is the longer-term goal. Many agree that the CIAP provisions encouraging management improvement are needed, as is the kind of project-level planning the program requires. But if CIAP is to function as a transition to the flexibility of replacement allowance funding, it must be administered in such a way as to meet the legislative intent of returning control to the PHAs.

An alternative administrative option for transition would simply allocate the full amount of funds (whether Level II or some other amount) among the PHAs on the basis of estimated repair and rehabilitation needs. This "block-granting" approach, more consistent with the replacement allowance proposal, would leave the authorities full discretion in planning and using the catch-up funds. While the administrative simplicity and flexibility of this proposal are evident, it would provide no transition in PHA management capacity. In addition, measurement of needs would be no small task.

This summary of transition issues should serve to emphasize that the ultimate feasibility of a replacement allowance system depends critically on separate liquidation of the modernization backlog through careful use of the funds currently being provided under the CIAP Program. Several assisted housing managers and analysts noted that it is more difficult to build a sound capital reserve fund for rehabilitated housing than for new construction. Even so, public housing must at least achieve rehabilitated condition before a reserve system can be effective.

The Impact of Replacement Allowance Funding

The implications of adopting a replacement allowance system for public housing, once the required catch-up work is completed, are straightforward. The overall quality of the housing could be improved if better planning and steadier funding of repairs and improvements resulted from PHAs' uses of system flexibility. Given the means to contain operating costs by selected capital replacements, more funds could become available for maintenance, security, and other tenant services. Of course, the quality of PHA management would determine how far housing improvements and cost savings were realized.

Any impact on the availability of public housing dwellings would largely be a function of the transition. Decisions about modernization involving changing densities, or possibly demolition, would occur in that period. They would be carried out within the constraints of Federal funding decisions and according to any regulatory revisions concerning disposition of the public housing stock. Replacement allowance funding would then provide the means to better maintain the remaining stock in the long run. Replacement allowance funding is a system that, in its defining characteristic (the replacement reserve), is targeted to the standing stock. It would not itself change the population benefited by federal subsidies for public housing, but it has the potential for substantially improving the quality of life available to public housing tenants.

As discussed in the previous section, major item funding was not included in the analysis of distribution of funds under replacement allowance funding because of lack of appropriate PHA-level data. Looking at the national costs of replacement allowance funding (Table 7-4) as compared with Comparison PFS plus Modernization suggests that the proportion of units losing funding would be far lower than the level suggested in Table 7-6 (where about 75 percent of all dwelling units received less subsidy under replacement allowance funding). Assuming, then, that (1) fewer "losers" exist when all funds are included; (2) that major item funding is based on individual PHA component life planning and that its distributional implications are neutral; and (3) that transition has been a success, what are the implications of the new system for different types of PHAs? Since the major portion of the replacement allowance system is tied via formula to the AEL, this depends in large part on future shifts in AELs relative to their current levels.

The cost-based funding proposal represents some fairly substantial revisions to the PFS, particularly with regard to AELs and the manner in which they are adjusted over time. 1/ In the first instance, an adjustment would be made to the AELs of large, urban authorities facing distressed operating environments. These authorities were underfunded relative to other authorities by the PFS, and the adjustment should place both the operating subsidy and the replacement reserve on the proper level. The adjustments tend to assist extra-large authorities in all regions of the country and large and medium authorities in the Northeast. Secondly, AELs would be automatically adjusted over time for aging of the stock under cost-based funding; therefore, the deterioration due to aging would also be properly reflected in the replacement allowance. Finally, the cost-based funding system adjusts AELs for the cost implications of additions to or deletions from the public housing stock. Particularly important here are reductions in AELs following elimination from service of the least cost-effective units. Again, it follows that reducing average operating costs per unit due to lesser need for security or extra maintenance due to vandalism, for example, would also imply lesser need for replacements and improvements. In summary, to the extent that AELs and adjustments to AELs would be rationalized under cost-based funding, the distributional implications of replacement allowance funding are also sound and equitable.

1/ Refer to Chapters IV, V, and VI for a discussion of the major elements of a cost-based funding, the revised inflation adjustment, and management incentives under a cost-based system.

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CHAPTER VIII

THE FAIR MARKET RENT SYSTEM

The Fair Market Rent (FMR) system examined in this chapter has been designed to overcome three perceived weaknesses of the Performance Funding System. The first weakness is the way in which PFS relates the subsidy received by a PHA to its actual operating environment and to a standard of efficient operation. The PFS attempts to do this on a statistical basis, by limiting allowable expenditures to the actual expenditures of authorities classified as "high performing" and by its "prototype cost equation." Because of weaknesses in the methodology and data base this classification was imperfect at the outset, and the way in which the PFS has been administered has gradually eroded the distinction between authorities initially classified as high or low performing. The FMR system, by contrast, assumes that the development of realistic and comprehensive standards against which to measure each PHA's performance would require a very large expenditure of research resources and may not in the end produce realistic results. Hence, the FMR system takes as its payment standard the rents charged for good housing in the local market. The second weakness is the lack of proper management incentives embodied in the current PFS system. Stronger incentives are embodied in the FMR system, most arising from a single payment for operating and modernization subsidies. The third weakness is the administrative complexity of the present system, a corollary of the attempt to hand-tailor the size of the subsidy payment made to each authority to fit its operating circumstances. By avoiding the tailoring, the FMR system eliminates much of the present complexity.

Another consideration key to the development of the FMR system is the lack of reliable information on the acutal expenditures of authorities in providing housing services. One problem is "partial" bookkeeping. Many sources of

assistance--CDBG modernization funds, CETA workers--are excluded from budgets submitted to HUD. Moreover, the amount of in-kind services provided by cities to their authorities varies dramatically and its value is excluded from budgets. Finally, the PFS has been a kind of self-fulfilling prophecy: subsidies at some authorties have declined in real terms because of the problems with the inflation adjustment. It is possible, as a consequence, that the expenditures for operating public housing, used as the based for PFS calculations, today are less then that needed even for a well-managed authority. Alternatively, it is possible that base funding levels established for the PFS using historical spending levels in 1975 were too high and that, as a result, PFS funding continues to be too high for some authorities.

Those factors together have led some observers to the conclusion that an alternative approach for determining the cost of authorities providing housing services might be to use the cost of providing these services in the market. Because HUD has already estimated the rent of adequate housing in every SMSA as part of the operation of the Section 8 Existing Housing program, these rents--the Fair Market Rents--could be used with a simple payment formula to calculate subsidy levels.

Because the FMRs are used to determine subsidies in the lowest cost alternative housing assistance program, the FMR system ensures that the subsidies for public housing represent the lowest possible cost to the Government. However, the FMRs do not necessarily show that it would be possible for the PHA to operate the projects it currently owns for that amount.

The remainder of this chapter describes the FMR system in considerable detail. The first section describes the funding formula, management incentives, administrative feasibility, and transition problems. The second section outlines what the system would cost and how various types of PHAs would fare. The third section discusses the implications of the funding system for the size of the public housing stock and the composition of the tenants living in public housing. The final section describes a FMR system that would represent a less radical alternaitive to the current subsidy system by continuing a separate modernization program.

8.1 GENERAL DESCRIPTION

Funding Formula

The heart of the system analysed in this chapter is the replacement of the present methods of allocating operating and modernization subsidies with a single payment which is based on the household income, size of tenant families, and the cost of providing housing services in existing structures in the area, the FMR. The most important feature is the use of the FMR as the payment standard. The PHA would receive the subsidy payments computed for each family occupying a unit managed by the PHA. This is the type of formula used to calculate the maximum allowable subsidies in the Section 8 Existing program. In that program, the subsidy paid to the landlord by the local agency (ultimately using Federal funds) is computed by deducting a percent of adjusted household income from the Fair Market Rent for the appropriate sized dwelling unit in the particular geographic area. Because of the way Section 8 is administered, including a system of exceptions to the maximum FMR, subsidies vary around FMR minus a fraction of income, but on average reflect that formula. (The proposed modified Section 8 Existing or housing voucher program will differ from current Section 8 in that subsidy will always be equal to FMR minus 30 percent of income.)

Under the FMR system for funding public housing, income adjusted for work expenses and other items is the same as that used in the Section 8 program. As noted elsewhere, 1981 law will utlimately require PHAs to collect the same rent from public housing and Section 8 tenants, and the cost estimates for all systems assume this change.

The PHA is allocated the sum of the payments applicable to the occupied units it manages. However, it receives the aggregate subsidy payments less the funds for providing payments on the outstanding Annual Contribution Contracts (ACCs), which are made directly to the bondholders. This has a significant impact on the subsidy amount since some PHAs have much higher ACC payments than others. 1/

1/ We have not included the administrative fee used in the Section 8 Existing Housing Program as part of the amount received by the PHA because the PHA functions are different in the two programs.

Because the FMR is the cost of renting adequate housing in the market place, it offers an objective, if imperfect, measure of the cost of providing public housing. Separate FMR schedules are produced by HUD central for existing dwellings and for dwellings built or substantially rehabilitated under the Section 8 program. Beginning in 1979, the FMRs for existing units were set using data from the Annual Housing Survey, a large survey conducted yearly for the nation as a whole and on a rotating four-year cycle for 60 metropolitan areas. These data are, in fact, quite reliable for the SMSAs surveyed and offer a realistic measure of rents in different market areas and of changes in rents over time. The data are somewhat less accurate for other markets outside of the 60 SMSAs but are still reasonably accurate for the purpose of estimating market rents.

The PHA would use the subsidy payments for two purposes: operating and maintaining the project, and funding necessary modernization activities, either by accumulating reserves or making expenditure out of current budget accounts. (For our exposition, we assume that reserves are accumulated.) The modernization program would cease to exist, at least after a transition period during which the current backlog of past modernization needs was taken care of. This transitional modernization would be required for any of the subsidy systems examined in this report, and is estimated at $1.5 billion in 1980 dollars (see Chapter 7). Overall, authorities would be given much more latitude for the management of the funds available to them.

While the "reasonableness" of the payment level must be judged in part on how authorities actually would fare under this system (discussed below), it can also be analyzed conceptually. Two questions in particular arise. One stems from the fact that the FMRs are market-determined, that is, they depend on both the cost of providing services and the demand for them. Over the long run, rents should be close to costs under competitive market conditions. In the short run, however, considerable deviations can exist--with the market setting either excessive or insufficient profit rates. Moreover, extra- market factors--especially rent controls--can yield situations in which rents are

sustained at a level below that necessary to make housing a profitable investment. The response to this situation under a market-oriented system is to say that publicly assisted housing should not be insulated from the market. If some public housing projects are the marginal housing in an excess supply siutuation, they should be those withdrawn from the stock. (Under the FMR system, authorities would have the right to remove units.) Stated alternatively, if households can be assisted more cheaply by leasing units in the private market rather than leasing public housing units, this is the avenue that should be followed. Such a policy would mean that private owners of rental housing would not have to bear the entire burden of adjusting to excess supply or rent control. It might also increase local pressure to drop rent controls. At the same time, since FMRs are set on an SMSA-wide basis, some relief for PHAs in jurisdictions with rent controls will be available. 1/

Note that the claim is not made that public housing units are similar in age and structure type to private rental units in any particular housing market. What is asserted is that the private rental alternative represented by the FMR should provide the test for whether or not public housing costs are reasonable.

A second issue concerning the use of FMRs as a test of the reasonableness of public housing costs stems from differences in the cost of capital and property taxes confronted by private owners and PHAs. On the one hand, PHAs have received favorable treatment under the income tax system because they have been able to finance their capital cost through bonds whose return is exempt from Federal income taxes. Additionally, PHAs pay no Federal or local income taxes or local property taxes; instead, they make payments in lieu of local

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1/ One might expect this policy to push for rent deregulation, especially where sustained rent control has had the effect of restricting housing supply so that the loss of public housing units would work a serous hardship on the community.

property taxes (PILOT), which are substantially less than the rates applicable to private owners of rental property. On the other hand, private owners enjoy significant breaks in the Federal tax code. These have traditionally included accelerated depreciation, the expensing of construction period expenses, and the deduction of operating expenses--including mortgage interest and property taxes--from income in computing their tax liability.

Another issue is whether it is reasonable to assume that the FMR should cover ACC debt payments as well as operating and replacement costs, given the wide variation in ACC amounts among PHAs. (Table 3-2 in Chapter 3 shows the wide ranges of debt service for all size and regional categories of PHAs). The logic is that private owners of rental housing must use the rent levels in their locality to cover debt service on past captial expenditures as well as current operating costs and future replacements. Public housing projects that have high debt service because they are new or have recently been extensively modernized should have lower operating costs and small replacement needs during the period in which their debt for past capital expenditures remains high. Finally, if new or rehabilitated public housing projects must, in effect, change rents higher than existing housing FMRs to cover costs, subsidizing households in these projects may not be the most efficient use of Federal housing subsidy funds.

Some of the provisions are quite complicated and a full analysis of the comparative advantage of PHAs and private owners requires an analysis of the cumulative effect of those advantages over time. Also, to isolate the effect of those tax factors requires strong assumptions about the similarity of other conditions found by members of the two groups. Our comparison involves use of a dynamic model of rental housing developed by Hendershott and Shilling (1980). In particular, their model can be solved for the real user cost of capital, which is defined as the real (i.e., net of inflation) rental rate that one would pay to rent a unit of captial. In a world without taxes and inflation and with perfect capital markets, the user cost would be "the" rate of interest plus the depreciation rate.

Our approach has been to solve the Hendershott-Shilling model twice, once for the values of the parameters appropriate to public housing and once for the values appropriate to private owners. These calculations assume the Fedeal income tax regime in place in 1980.

The results show public housing on net to be in an advantageous position compared to private owners, even under assumption about the spread in interest rates and the share of applicable property taxes made in PILOT payments that are somewhat unfavorable to the PHA. 1/ In brief, there appears to be no justification for increasing the payments in the FMR system because PHAs have been disadvantaged in their cost of capital compared to private owners. At the same time, it would be extremely difficult to accurately compute any appropriate decrease. Overall, simply using the FMR unadjusted for captial cost differences is arguably the wisest course.

1/ The basic results can be illustrated for the following case: a 7 percent rate of inflation, a market mortgage interest rate of 9.86 percent and the public housing borrowing rate of 70 percent of the private rate, public housing making PILOT payments equal to 30 percent of full property tax payments, and private properties being held for 13 years (with a 20-year mortgage) and public housing 40 years, private owners are in the 50 percent tax bracket and are able to shelter other income with excess tax deductions. All costs are expressed on a discounted present-value basis. The annual cost of capital, expressed as a percentage of the purchase price of structure, is 11.9 percent for a private unit and 4.5 percent for public housing. (It is the discounting procedure that drives the real cost below the nominal interest rate in the case of public housing; note also that the real rate of interest paid by PHAs in this scenario, based on historic data, is approximately zero.) Much of the divergence between the two housing producers stems from differences in the length of the holding period. The real cost of capital (on a present-value basis) for private owners falls to 7.5 percent on a 40-year mortgage and holding period, due in part to lower real interest cost in the out years and growth in the resale value of the property since inflation rate is greater than depreciation rate. Of course, the best holding period for the investor

Exact rules for determining funds received by each PHA are stated in Appendix 1 to this chapter. These rules limit the increase in subsidies received by any authority under the FMR system to 120 percent of that under the PFS plus an allowance for replacements and improvements, making the accuracy of that allowance a critical element in the design of the FMR system. 1/ This rule limits the extent to which PHAs obtain windfalls under the FMR system in order to avoid unnecessary expenditures. The rules also provide for transition funding for authorities that would receive less, as described below.

Management Incentives

The FMR funding system contains several incentives for the PHA to conduct its operations efficiently. Some stem from the joint funding of operating and modernization activities, and some from other features of the funding formula. These management incentives are inherent in the FMR system, but are not excluded from incorporation into cost-based funding systems. Chapters 6 and 7 explain how this could be done. The incentive for linking the funding of operations and replacements or modernization is clear: any savings from day-to-day operations are clearly available for modernization. 1/ Furthermore, the value of keeping current with routine mantenance rises sharply--and hence the amount of rehabilitation and replacements required falls--because there is no additional funding source available for this purpose. If the principles just enunciated for the authority were effectively transmitted directly to individual projects through a capital-and-operations project-based budgeting system, very careful strategic economic decisions could be made at this key level.

1/ See Chapter 7 for discussion of the basis for the replacement allowance.

2/ In theory, modernization funds cannot now be used to handle deferred maintenance but in practice these are often the only funds available and they are used for this purpose.

An additional incentive for efficiency arises by replacing the current modernization system that generates annual funding levels to the individual PHAs in accordance with poorly articulated principles which consequently are only dimly understood by the authorities, if at all. (See Chapter 7 for more discussion of ths point.) The FMR system has no separate provision for moedernization funding, so the PHA must allocate the total funds received under the system in such a way as to provide for modernization. This would give the authority a stronger incentive to analyze relative needs and allocate its funds accordingly.

The incentive for conserving on utilities is also strengthened as the authority must pay for 100 percent of any increase in consumption, compared with 50 percent in the current PFS system. Of course, it also retains all savings from reduced consumption.

Another incentive for good management concerns the speed with which vacancies are filled. The FMR system would not make payments on vacant units, paralleling the situation in the market. 1/ Payments are resumed when the unit is reoccupied. This treatment contrasts sharply with that under the PFS, where in some cases subsidies are paid on vacant units. 2/, 3/

1/ This treatment is les generous than that under Section 8 Existing, in which partial payments are made for 60 days. These payments are contingent upon the unit not being vacant because the owner has violated the lease; also the owner must be taking "all feasible action" to fill the vacancy. For details, see 24 C.F.R. S.882.105.

2/ This is described more fully below. Note that costs of all systems analyzed in this report in effect assume revenue charged and deducted from subsidy for 100 percent of the units, so this difference between the FMR system and PFS is not picked up in the cost figures (see Chapter 1). Also note that an additional incentive for attracting tenants with higher incomes could be built into this formula. It would essentially be the same as the incentive for this purpose described in the section on a PFS with additional management incentives (see Chapter 6).

3/ Also, paralleling the treatment in the PFS, the tenant's contribution to rent used in the formula is calculated assuming full collection efficiency; if the authority has poor collection performance it has correspondingly fewer resources at its disposal.

Administrative Simplicity

In a steady state operation the FMR system would be comparatively simple to operate. A good deal of the simplification stems from the fact that the FMR system does not require elaborate up-dating procedures, such as those used to calculate the allowable expense level of the PFS. Rather, one starts "fresh" each period. The computation of the aggregate subsidy requirement for use by HUD in proposing forward-year budgets would require projections of only the FMRs and public housing tenant incomes. The FMR projection is already done for the Section 8 Existing program as part of the budget process. 1/

The projection of incomes is more difficult. First, for the aggregate budget request, HUD central would have to make an informed assumption about the increase in tenant incomes over the next two years. Second, the individual PHA would have to forecast ahead one year. This should not be too difficult, if PHAs routinely monitor their tenant income patterns. More importnatly, the FMR system would reconcile any differences between the projected and actual values in the subsequent funding year. Thus there is a strong incentive to the authorities to make these predictions as accurately as possible, in order to avoid unexpected shifts in subsidies.

To the extent that the projections of the FMRs or tenant incomes caused the subsidy requirements to be understated, a supplemental approprition might be required or it might be possible to incorporate the reconciliation into the next year's appropriation at PHA funding. This, of course, applies to any system, because of the advanced planning of the Federal budget process.

The role of the area offices in this system is minimal: checking over the calculations in the budgets proposed by the PHAs and monitoring the authorities' income data. While these same tasks are required under the PFS, checking over the subidy calculations is a major task because of the extensiveness

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1/ One minor complication in both predicting and allocating subsidies is that the approximate FMRs to be used would be lower at the beginning of the fiscal year, as the FMRs are published in October for comment and in the following March for effect. Thus, some adjustment (almost always upward) in the subsidies received by those PHAs which begin their fiscal years in January and March could occur in the second half of their fiscal years. Those beginning their fiscal years in July and September could use the "effective" FMRs in computing their budgets.

of the materials to be reviewed and the need to check the validity of dozens of figures. Shifting to the FMR means that the field staff would be free to spend a greater share of its time identifying management problems and working with authorities to develop solutions to them, or field staff could be reallocated or reduced.

The overall burden on the PHA in obtaining funding is reduced. The time now spent seeking modernization funding would be available for other purposes. Likewise, the amount of work going into applying for the operating subsidies would be reduced, as the paper work on the PHAs' part falls. On the other hand, PHAs would be likely to spend more time appealing the FMRs for their market area.

The Transition

Two significant transition problems must be addressed. The first is how to treat those authorities whose total financial resources, including subsidies, under PFS (plus an allowance for replacements) differ substantially from those provided under the FMR system. The second major issue (in common with other systems) is the deferred maintenance and modernization backlog.

One approach to dealing with the modernization backlog would be to provide funding at levels sufficient to bring all projects up to a common minimum physical standard. This amount of upgrading is consistent with the idea of placing the authorities in a competitive positon before cutting them free from a more hand-tailored system of support. This standard could be the Level II standard defined in a HUD-sponsored study of the investment needs of the public housing system and currently used in the CIAP Program, with a total cost of $1,506 million. Note that the funds needed to accomplish repairs to the Level II standard would be provided, but not every project must be brought up to this standard. The authority itself would decide on the actual expenditure pattern, with some projects being brought up to a higher standard and others implicitly being prepared for retirement by not improving them at all. Or, it might, for example, choose to bring some of its projects up to

a higher standard immediately and defer action on some others for a time. There would be a strong incentive to expend these funds as soon as possible, limited by the desirability of comprehensive planning, because of the erosive effects of inflation.

The amount of catch-up modernization to be provided as part of a transition into the new system is essentially a policy decision. Clearly funding should not be at levels so high as to make possible the rehabilitation of inherently inefficient projects. But very low levels of transition modernization funding would necessarily make it difficult for PHAs with projects in poor repair to adjust to the new system in those cases where they would also be required to adjust their costs downward to meet the FMR constraint. As we have already noted in Chapter 7, the funding levels for the Comprehensive Assistance Improvement Program (CIAP) in the 1981-1983 period are high enough to accomplish a catch-up to the Level II standard. What is less clear is that the current allocations of funds or the planning for their use by the PHAs and HUD area offices are consistent with transition to a new funding system without a discretionary modernization program.

The second major problem of the transition is determining both the first-year subsidy level and the permanent subsidy levels under the FMR system for the PHAs whose FMR-based total resources are substantially larger or smaller than their resources under the PFS. Two principles guide the rules set forth below on establishing subsidies. First, there would need to be an orderly transition for PHAs that would have fewer resources under the FMR system than under the PFS, if the affected PHAs were to have a reasonable chance of continued operations. The objective here is to insure that the shock of the switch-over is not so severe as to cause some PHAs to cease operations or close projects when the authorities could have become competitive with a longer lead time. The second principle is that no PHA should receive a massive increase in funding over funding presently provided by the PFS plus an annual allowance for replacements and reserves. Some authorities have been efficient compared to their private market counterparts or lucky in the type of public housing they have ended up managing. This rule in essence says: let them keep some of the rewards of an FMR system, but only to a reasonable extent.

The transition rules are stated here in prose; at the end of the chapter they are repeated more precisely in mathematical terms. There are four cases that are considered; two involve PHAs having more resources under the FMR system than under the PFS, while two are for the "losers".

Beginning with the "winners," which rule is applied depends on whether the increase in resources is greater than 20 percent. (The 20 percent dividing point is arbitrary but consistent with the principle stated earlier; the exact point is definitely policy parameter.) If the increase is less than 20 percent, the first year's subsidy is set at the level calculated for the PHA under the FMR system. If the increase in total resources (including PHA-generated revenue) is 20 percent or greater, the subsidy is set at 120 percent of the PFS subsidy. In later years this level is indexed upward by changes in FMRs that reflect the cost of the alternative of subsidizing low income households to rent private housing.

Turning now to the "losers," the critical point is whether the authority has at least 90 percent of the resources with which to work that it had under the PFS plus the replacement reserve. Those authorities suffering a substantial shortfall (more than 10 percent of the base) are given a several-year transition period, during which their subsidy levels are reduced from their former level under the PFS by a fraction of the difference each year. For example, if the transition period is four years long, the subsidy drops by one-fourth of the difference between the old and new system each year. After the transition the authority's payment consists only of the subsidy computed by the formula; none of the transition funding is built into the base. The length of the transition period is clearly a key policy decision. In general one suspects that it is probably prudent to err on the side of a longer transition period, to give those "overbudget" authorities ample time to make the necessary changes in their operations--including the expenditure of the modernization funds allocated as part of the transition and the disposition of high-cost projects should that be necessary.

Those PHAs that would have resources under the first year of the FMR system of more than 90 percent of the PFS plus replacement but less than 100 percent would have a one-year transition. During this year they would receive half of the "shortfall" in funds in addition to the amount calculated by the FMR system.

Disadvantages of the Proposal

Although there are a number of advantages to the FMR proposal, it should be noted that there are also features of the system that may be viewed as fundamental disadvantages. The crux of the matter is that the system is not based on an estimate fo what it costs to run the current stock of public housing projects. Rather, it is based on the cost of an altenative program. The market rents used as a proxy for legitimate costs do not necessarily reflect the inherent costs of, for example, running older multifamily structures, paying high wages required by Federal statute, or serving large poverty-level families.

Thus, it is possible that some PHAs would be unable, even through a carefully managed transition and stringent economies, to reduce their costs to the levels provided by a FMR-based funding system. If these PHAs could not obtain funding elsewhere, they would be forced to close down the more expensive part of their stock in an attempt to reduce average costs. Some PHAs might go out of business altogether.

Thus, the FMR system may represent too radical an alternative to the present system to be acceptable to many policy-makers.

8.2 COST

The National cost of the FMR system in 1980 and the funding received by the sample of PHAs used in these simulations have been computed under a number of scenarios. The scenarios differ in the specification of three key parameters:

- o Funding limitations on some PHAs. Two cases are presented. Under the first, the subsidy received by the Authority is calculated strictly on the basis of the funding formula; there is no limit of the increase in funding it could receive. Under the second, no Authority can receive an increase greater than 120 percent of its PFS level for the same year plus an allowance for replacements and improvements. These two cases are called the unconstrained and constrained scenarios and permit the reader to see the effect of the constraint on funding increases.

- o FMR levels. Three versions of the FMR are considered: setting the FMR at the 50th percentile of rents for recently occupied units meeting the Section 8 Existing program's physical standards, at the 40th percentile rent of recently occupied standard units, and at the 40th percentile rent of all standard units (regardless of when occupied) except for newly built units. FMRs have been set at the 50th percentile through 1981 but HUD has proposed shifting to the 40th percentile of standard movers' units for the Section 8 program in 1982 and the 40th percentile of all but newly built standard units in the Modified Section 8 Existing Program in 1983.

- o Transition. While the steady-state, i.e., post transition period, program costs are primary interest, it is also important to know the added cost of transition period funding. The system-wide cost of the first (and most expensive) year of the transition is calculated to provide this information. The transition rules stated in the last section are used, assuming a four-year phase-in period.

To facilitate understanding the cost of the FMR system computed for various combinations of these features, we compare FMR-system scenarios with three base cases. The first is the 1980 funding received by sample PHAs under the PFS if it continued unchanged after 1981. This is the Comparison PFS that has been used in earlier chapters. The second base is needed because the FMR system is to provide funding for operating expenses, outstanding ACCs, and replacements and improvements. The second base, therefore, is the adjusted 1980 PFS funding plus the average modernization funds received by an Authority over the 1969-1981 period, converted to an average per unit month basis in 1980 dollars. This case is called Comparison PFS with Historical Modernization Funding. The comparisons made are between these bases and the payments under the FMR system net of ACC payments.

To fully appreciate the effects of the changes in subsidies on the health of an authority or groups of authorties, one must consider how the change in subsidies affects the total resources available for operations and modernization. The effect will differ among authorities accordng to their relative dependence on subsidies for their operations. Hence the same $20 p.u.m. change in operating subsidies is very different between two authorities, one of whom has other revenues of $60 and the other revenues of $15. To cast light on this critical aspect of the meaning of subsidy changes, figures on the total operating and replacement funds available to authorities are relied upon heavily.

Since the "funds available" concept under the FMR system includes funds for both operations and modernization we always compare funds available with an alternative syste that incudes modernization. Since historical modernization levels for particular PHAs do not necessarily reflect future needs, we have added a third base case. This the PFS plus an allowance for replacements and improvements based on investments in the private sector. 1/ This is very similar to the system proposed in Chapter 7 but, to make its use in relation to the FMR system clear, we are calling it Comparison PFS plus Replacement Allowance here. It should be noted that the comparisons of funds available to PHAs under the FMR system and the PFS are very sensitive to the accuracy of this estimate of funds needed for on-going capital improvements. The reader is referred to Chapter 7 for discussion of the derivation of the replacement allowance. We make the comparison with PFS plus historical modernization funding as well, since it shows funds actually expended for capital improvements during a period of "normal" modernization funding (as contrasted with the current intensive effort to address deferred modernization needs through the CIAP Program).

There are an overwhelming number of relationships for which data could be presented, depending on the rules of the FMR system, the FMR levels and the

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1/ For purposes of analysis, the value of these funds for each PHA was defined as 15 percent of the authority's allowable expense level.

comparisons made. Only a few possibilities are tested, but even these can be difficult to follow fully. The best way to begin may be to describe the mean values system-wide, on a per unit month basis, of a few key variables for 1980.

FMR: defined at the 50th percentile of the rent distribution of recent movers' standard units	$295
defined at the 40th percentile of the rent distribtuion of recent movers' standard units	$273
defined at the 40th percentile of the rent distribution of all standard units except newly built units	$248
Subsidy received under Comparison PFS (adjusted for higher tenant rents and the changes in the inflation factor)	$ 60
Subsidy received under Comparison PFS with Historical Modernization Funding	$ 91
Subsidy receive dunder an unconstrained FMR System 1/	
FMR defined at the 50th percentile of movers' units	$109
FMR defined at the 40th percentile of movers' units	87
FMR defined at the 40th percentile ofall but new units	$ 63
Funds available (including PHA revenues) under an unconstrained FMR system:	
FMR defined at the 50th percentile of movers' units	$212
FMR defined at the 40th percentile of movers' units	$189
FMR defined at the 40th percentile ofall but new units	$164
Funds available under Comparison PFS with Historical Modernization Funding	$200

These simple figures tell us quite a bit. The mean subsidy received under an unconstrained FMR system, when the FMR is set at the 40th percentile of all but new units, is $28 below Comparison PFS with Historical Modernization Funding. An unconstrained FMR system provides approximately the same average funding when the FMR is the 40th percentile of movers' rents and substantially more on average than Comparison PFS with Historical Modernization Funding when the FMR is set at the 50th percentile of movers' rents. In terms of funds available to PHAs for operations and modernization, as for subsidy, the high and low FMR values bracket the value under the PFS with Modernization,

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1/ Net of ACC payments.

while the middle of the three FMRs provides a similar level of funds. When the FMR is set at the 40th percentile of movers' rents, funds available are about 6 percent below the PFS with Modernization level.

The data in Tables 8-1 and 8-2 show how funding levels under a FMR-based system change when increases permitted PHAs are limited by the rules of the system to 120 percent of funding levels under the PFS. The total subsidy cost of the system drops substantially under constrained systems. At any of the three FMR levels shown, the total subsidy cost is lower than the total subsidy cost of the PFS with a separate modernization program.

Table 8-2 shows changes on an average per unit month basis. When funding increases are constrained, PHAs have, on average, about as many funds to operate with as under the PFS plus an estimate of modernization needs only when FMRs are set at the 50th percentile.

Note that the administrative fee paid to PHAs in the Section 8 Existing program is not included in these estimates of subsidy costs or funds obtained by PHAs. PHAs would not need to perform all of the functions when managing their own housing that they perform when placing households in private market units. For example, inspections of units to see if they pass housing quality standards, assistance to households in finding units, and negotiations with landlords would not be necessary. However, PHAs perform some functions in managing public housing that are not performed by private landlords and, therefore, not reflected in FMRs. Examples are income verification and consultation with tenants on policy changes. If under a FMR system PHAs were given additional funds for functions not performed by private landlords, the cost of the system could increase by up to $8 per unit month. 1/

1/ Based on studies of administrative costs in the Section 8 Existing Program.

Table 8-1

COMPARISON OF CONSTRAINED AND UNCONSTRAINED FMR SYSTEMS:
NATIONAL COSTS

MILLIONS OF 1980 DOLLARS

	COMPARISON PFS	UNCONSTRAINED FMR			CONSTRAINED FMR		
		50th percentile movers' rents	40th percentile movers' rents	40th percentile all but new units' rents	50th percentile movers' rents	40th percentile movers' rents	40th percentile all but new units' rents
Operating Subsidy	712	1,246	1,002	724	887	766	571
Additional need for on-going modernization	375 a/	133 b/	133	133	133	133	133
Total Subsidy	1,087	1,379	1,135	857	1,020	899	704

SOURCE: PFS Cross-sectional analysis sample

NOTES: a/ Average loan authority for modernization, 1959-1981, in 1980 dollars.
b/ Estimate of major captial improvements not covered by a replacement allowance of 15 percent of the AEL under the PFS.

Table 8-2

COMPARISON OF CONSTRAINED AND UNCONSTRAINED FMR SYSTEMS:
PER UNIT MONTH DIFFERENCES FROM CURRENT PFS

1980 DOLLARS PER UNIT MONTH

	UNCONSTRAINED FMR			CONSTRAINED FMR		
	50th percentile movers' rents	40th percentile movers' rents	40th percentile all but new units' rents	50th percentile movers' rents	40th percentile movers' rents	40th percentile all but new units' rents
Subsidy	$109	$ 87	$ 63	$ 77	$ 67	$ 50
Difference in subsidy from comparison PFS a/	48	26	2	16	6	-11
Funds available b/	212	189	164	184	173	156
Difference in funds available from comparison PFS plus replacements c/	28	6	-19	0 e/	-10	-27
Difference in subsidy from comparison PFS with modernization d/	10	-12	-37	-4	-18	-38

NOTES: a/ Comparison PFS is the subsidy that would have been received under the PFS had the new inflation adjustment and income rules been in effect. These are weighted average differences and thus differ slightly from figures arrived at by simply subtracting the mean values of variables presented in the text.

b/ Funds available includes income from tenant-paid rent.

c/ Comparison PFS plus Replacements includes an allowance for replacements and improvements.

d/ Comparison PFS with Modernization adds average modernization funds received by the PHA over the past 12 years.

e/ Loss of less than $1.

Table 8-3 shows the cost of transition funding and its effect on the subsidies and funds available to PHAs in the first and most expensive year of a four-year transition. The national cost of the first year of a transition would range from $23 million if FMRs were 50th percentile movers' rents to $177 million if FMRs were 40th percentile rents of all but newly built units. The effect of the transition at 40th percentile rents of all but newly built units would be to hold average losses in funds available to 15 percent instead of the ultimate 27 percent.

While figures on average subsidies and average changes in funds provide a solid overview, it is essential to go behind these general indicators to see the effects on different types of PHAs, as classified by the number of units the PHA manages, i.e., its "size," and the region of the country in which it operates. The figures presented for the groups of authorities are weighted averages of the experience of the authorities in each group. For some groups the number of observations is small (2 at the smallest, for the greatest degree of disaggregation), so the figures presented should be taken more as suggestive than definitive.

As a first step we consider the pattern of current system funding among authorities. Table 8-4 shows Comparison PFS subsidies without and with modernization funding and the ratio of the two for PHAs classified by size and region. A couple of patterns are worth noting. First, the operating subsidies of the largest PHAs are the highest, and these subsidies decline steadily by authority size. Likewise, operating subsidies are a large share of operating and modernization subsidies for the largest authorities; and the relative importance of operating subsidies compared with modernization declines with size. The ratio of operating subsidies to those for operations plus modernization declines from about .67 for the extra large authorities to about .35 for the small PHAs.

The second general pattern is that the Northeastern PHAs receive substantially higher subsidies than those in other parts of the country, owing mainly to

Table 8-3

CONSTRAINED FMR SYSTEM WITH TRANSITION FUNDING:
FIRST YEAR OF FOUR-YEAR TRANSITION

1980 DOLLARS

	50th percentile movers' rents	40th percentile movers' rents	40th percentile all but new units' rents
Subsidy without transition p.u.m.	$77	$67	$50
Subsidy with transition p.u.m.	79	70	62
National subsidy cost without transition	887 million	766 million	571 million
Additional national cost of transition	23 million	39 million	177 million
Difference in funds available p.u.m. from comparison PFS plus replacements without transition	0 a/	-10	-27
Difference in funds available p.u.m. from comparison PFS plus replacements with transition	2	-7	-15

SOURCE: PFS Cross-sectional analysis sample.

NOTES: a/ Loss of less than $1.

Table 8-4

SUBSIDIES UNDER COMPARISON PFS AND COMPARISON PFS WITH MODERNIZATION FUNDING

DOLLARS PER UNIT MONTH

	Comparison PFS	Comparison PFS with Modernization	Ratio 1:2
Extra-large			
Northeast	109	129	.84
South	67	92	.73
Central	81	118	.69
West	64	109	.59
Large			
Northeast	79	126	.63
South	48	82	.59
Central	31	87	.46
West	28	74	.38
Medium			
Northeast	53	85	.63
South	17	47	.36
Central	18	42	.43
West	34	91	.37
Small			
Northeast	46	88	.52
South	32	48	.67
Central	11	35	.31
West	10	61	.16

SOURCE: PFS Cross-sectional analysis sample.

higher operating subsidies. Given this pattern, it is clear that large and Northeastern PHAs will be relatively disadvantaged by the FMR system to the degree that market rents vary by geographic area to a smaller extent than current public housing subsidies.

In examining the PHA size class and regional patterns of changes from funding under the PFS, we concentrate on changes in funds available for two reasons. First, in many ways it is more important to understand the effects on the resources available to PHAs than to simply know the subsidy levels; the change in subsidies will be more or less important to a PHA depending on the other funds it generates. Second, under the adjusted PFS many authorities received small funding levels, especially given our Comparison PFS case, which assumes increased rental revenue. Thus, moderate changes in the subsidies a PHA receives under the FMR system translate into large percentage changes. By contrast, the funds available figure provides a stable base from which to measure change.

Tables 8-5 and 8-6 show the percentage change in funds available to various types of PHAs under a constrained FMR system with FMRs at three different levels. The two tables contrast FMR finding with Comparison PFS plus a Replacment Allowance (Table 8-5) and Comparison PFS with Historical Modernization Funding (Table 8-6). The two cases are quite similar. there are only a few types of PHAs (notably small Northeastern PHAs) that have fared much better under a discretionary modernization program than they would under the assumption that they need 15 percent of non-utilities operating costs for on-going capital improvements.

As anticipated, Northeastern PHAs lose more funding on average than PHAs in other regions. There are notable differences among the FMR levels, however. The drop from the 50th to the 40th percentile movers' rents affects the Northeast more than other regions and setting the FMR levels at the 40th percentile rents of all but newly built units, regardless of when they were occupied, pushes the distribution of losses still farther towards the Northeast. Apparently the distribution of rent levels is less tight in the Northeast than

in other parts of the country, perhaps because of the greater variety in age of construction of the stock, or perhaps because of weaker overall demand for rental housing. Less surprisingly, lower mobility rates in the Northeast mean that there is a larger difference than in other parts of the country between FMRs based on all units and FMRs based on recently occupied units.

The size of a PHA appears to have little effect on whether the PHA would lose funding as a result of a change from the PFS to a constrained FMR system. There is one exception: small PHAs in the West are particularly likely to gain in funds, especially when the constrained FMR system is compared with PFS plus a Replacement Allowance.

8.3 IMPLICATIONS

Effects on Tenant Profiles

One anticipates relatively little direct effect on the composition of public housing tenantry, although this does not imply that the ultimate effects will be small. The allocation of subsidies under the FMR system does nothing to encourage PHAs to attract higher or lower income households. On the other hand, changes in project conditions will likely affect the type of family to whom an authority is able to market its units.

There are two distinct elements to this story. First, the amount of modernization funds that have been made available to take care of deferred modernization needs as of the time of the change over to the FMR system will largely determine the extent of upgrading of the public housing stock. The second element is the amount of funds the authority will have available for on-going operations, after the transition is over. This will partially determine the PHA's ability to maintain its units or upgrade their condition to facilitate marketing.

To the extent greater funding and/or improved management--including the wise use of the funds available for improvements--leads to more housing services

being provided by the PHA, it will be more competitive in attracting easy-to-manage households. On the negative side, authorities suffering major losses will have an extremely difficult time maintaining services, and hence attracting the more desirable tenants. In short, the major effects on occupancy will be via project upkeep, to which we now turn.

Effects on the Public Housing Stock

Table 8-7 gives distributions of the percentage change in the funds available to PHAs under the constrained FMRs system, with FMRs set at the 40th percentile of movers' rents, and for the first year of the transition period. 1/ Note that these distributions are for the PHAs in our sample weighted by the number of units under management; hence they show the percentage of units rather than PHAs in each interval. It is informative to consider the share of units in authorities suffering a deduction in funds available of greater than 20 percent, as it seems very likely that these would have to curtail services significantly, at least until they were able to effect very substantial management improvements. Twelve percent of the public housing stock is in PHAs in which funds available would be reduced by 20 percent or more as compared with Comparison PFS Plus Replacements, while 22 percent of the public housing stock is in PHAs in which funds available would be reduced by over 20 percent as compared with Comparison PFS Plus Modernization. (Recall that Comparison PFS plus Replacements gives authorities an allowance for replacements and improvements while Comparison PFS with Modernization uses average modernization funds received in the past.) Thus, a significant share of the public housing stock is "at risk."

Interestingly, as shown in Table 8-8, a smaller share of units in extra large PHAs are "at risk" by the 20 percent-reduction-in-funds-available criterion than units in other PHA size categories. Using the figures for Comparison PFS with Modernization (panel B), one sees that large and small PHAs are at the greatest risk with 30 and 27 percent of the units in those authorities, respectively, standing to experience reductions of 20 percent or more.

1/ Appendix 2-2 presents similar tables for FMRs at 40th percentile rents of all but newly built units and for 50th percentile movers' FMRs.

Table 8-7

DISTRIBUTION OF PERCENTAGE CHANGES IN FUNDS AVAILABLE UNDER A CONSTRAINED FMR SYSTEM WITH FMRs SET AT 40TH PERCENTILE MOVERS' RENTS

	PERCENT OF UNITS IN PHAs IN GAIN/LOSS: CATEGORIES			
	CONSTRAINED		CONSTRAINED W/TRANSITION a/	
PERCENTAGE CHANGE INTERVALS	COMPARISON PFS PLUS REPLACEMENTS	COMPARISON PFS WITH MODERNIZATION	COMPARISON PFS PLUS REPLACEMENTS	COMPARISON PFS WITH MODERNIZATION
-50+	1	2	--	--
-40 to -50	1	3	--	--
-30 to -40	2	9	--	--
-20 to -30	8	7	1	--
-10 to -20	13	14	17	6
0 to -10	43	26	50	54
0 to 10	19	30	19	31
10 to 20	12	9	12	9
20 to 30	1	1	1	1
30 to 40	--	--	--	--
40 to 50	--	--	--	--
50+	--	--	--	--

SOURCE: PFS Cross-sectional analysis sample.

NOTE: a/ First year of transition period.

A critical determinant of the ultimate outome is whether a transition period is incorporated in the implementation of the FMR system. In the first year of the transition period only 1 percent of public housing units would be in authorities losing 20 percent of the funds they have available. This emphasizes the importance of the transition period for making management improvements and other changes. 1/

The effects of reduced service levels on the viability of public housing caused by lower levels of funds being available depends on at least two distinct factors: the extent of competition from the private market, and the strategy followed by the authority in making the cutbacks. Serious competition from the private market will occur where dwellings of a size and quality acceptable to public housing tenants are available at rents comparable to those tenants are paying for public housing. Thus, higher income tenants will be the most likely to move out, other things equal. Also, authorities operating in soft markets, characterized by high vacancy rates and/or durations and depressed rents will be at a disadvantage. Unfortunately, we have not analyzed the types of markets in which the "at risk" authorities are located.

In coping with a sharp cutback in funding (without the benefit of a transition period) the authority has two broad options: spreading the reductions in services as evenly as possible over all the projects it manages, or a more selective approach in which services are maintained at higher levels at projects whose long-term economic viability is more assured. While it may see logical that the second course would be followed, this is far from certain. The decision on strategy will rest with the authority's Board of Commssioners, and it may elect on equity grounds to spread the service reductions. It may also decide to provide a disproportionate share of the available resources to projects housing the neeediest families. The behavior of authorities in the face of recent funding reductions yields very limited guidance here because under the FMR system they would have greater latitude to deprogram units that they have had under the current funding and HUD management systems.

1/ Appendix 2-2 presents similar tables for the other two FMR levels.

Overall, it is very difficult to conjecture about the responses of PHAs to major reductions in the funds available. One point does seem clear, however. In the absence of a transition period and funding from other sources, such authorities that spread service reductions widely stand a good chance of ultimately being driven out of existence.

8.4 ANOTHER ALTERNATIVE: A FMR SYSTEM THAT FUNDS ONLY OPERATING COSTS

In addition to providing for a transition during which PHAs would be able to modify their operations, another way of making a change to a FMR-based funding system less radical would be to maintain a separate on-going modernization program. This would be in addition to the transition or catch-up modernization funding that, as noted in Chapter 7, is already basically provided for by the funding levels for the CIAP Program appropriated for 1981 and 1982 and proposed for 1983. For all the cost comparisons in this report, we have assumed that an on-going, post catch-up, modernization program would cost about $375 million per year in loan authority in 1980 dollars. Table 8-9 shows the national cost implications of a constrained FMR system in which PHAs use their FMR-based subsidy, together with tenant rents, to pay for operating costs alone. Total operating subsidies would be 7 percent higher than total PFS subsidies under a constrained FMR system at 40th percentile movers' rents and 20 percent lower than the PFS at 40th percentile rents of all but new units.

Table 8-10 shows the percentage change in funds available to different types of PHAs under a constrained FMR system intended to pay only for operating costs. Comparing this table with Tables 8-5 and 8-6, above, shows how much lower any drop in total resources would be on average if the subsidies provided at the same FMR levels did not have to be used in part for capital improvements expenditures. For example, at 40th percentile movers' FMRs large PHAs in the Northeast would on average lose only 2 percent of their funding, compared with 12 percent if they must pay for replacements and improvements. Table 8-11 compares with Table 8-8 in showing how the distribution of percentage

Table 8-9

NATIONAL COSTS OF A CONSTRAINED FMR SYSTEM FOR FUNDING OPERATING COSTS ONLY

	Current PFS	50th percentile movers' rents	40th percentile movers' rents	40th percentile all but new units' rents
Operating subsidy	712	887	765	571
Funding for on-going moderniza-tion	375	375	375	375
Total funding for operations and modernization	1,087	1,262	1,140	946

SOURCE: PFS Cross-sectional analysis sample.

Table 8-10

PERCENTAGE CHANGE IN FUNDS AVAILABLE COMPARED WITH PFS
FOR A CONSTRAINED FMR SYSTEM COVERING OPERATING COSTS ONLY

Type of PHA	50th percentile movers' rents	40th percentile movers' rents	40th percentile all but new units' rents
Extra-large			
Northeast	15	3	-15
South	18	14	13
Central	16	11	6
West	18	12	10
Large			
Northeast	3	-2	-11
South	10	8	2
Central	16	12	5
West	11	11	10
Medium			
Northeast	1	5	-9
South	8	5	2
Central	17	12	10
West	18	20	15
Small			
Northeast	1	-5	-9
South	8	9	7
Central	8	7	4
West	21	19	18

SOURCE: PFS Cross-sectional analysis sample.

changes in funds available would change under a FMR system with modernization kept separate, with both cases assuming FMRs are 40th percentile movers' rents. Instead of 20 to 22 percent of program units being in PHAs that would lose at least 20 percent of their funding, only 10 percent of the program would fall into that category.

In addition, the retention of a separate modernization program would provide the Federal Government with a discretionary tool that could be used in effect as a system of appeals to subsidies based on FMRs. For example, a PHA with difficulty operating within the FMR constraint might be able to persuade HUD that further modernization of its projects would soon bring costs down or that the alternative use of Federal funds represented by the FMRs was not in fact realistic in that locality for the numbers of current public housing tenants that would be involved. To some extent the modernization program has already been used in a similar way in connection with the PFS, as modernization funds have been directed toward PHAs perceived to have high project maintenance needs not fully accounted for by the PFS cost equation.

What is lost, of course, in retaining a completely separate modernization program are the incentives for efficient management of funds discussed earlier in this chapter and in Chapter 7.

8.5 SUMMARY

A funding system based on private market rents appears to offer several advantages compared with other systems for determining the level of assistance to provide to Public Housing Authorities. It takes as the payment standard the rent charged in the local market for good housing, on the grounds that this is a reasonable measure of cost over the long term and public authorities should bear part of the adjustment to short-term deviations from this standard. The system incorporates strong management incentives through combining Federal assistance for operations and modernization into single payment and through strong incentives for energy conservation and reduced vacancies. Administratively, the system is quite simple because of its straight forward formula-funding approach.

Table 8-11

DISTRIBUTION OF PERCENT CHANGES IN FUNDS AVAILABLE UNDER A CONSTRAINED FMR SYSTEM COVERING OPERATING COSTS ONLY COMPARED WITH PFS: 40TH PERCENTILE MOVERS' RENTS

	PERCENT OF UNITS IN GAIN/LOSS CATEGORIES:				
	ALL AUTHORITIES	EXTRA LARGE	LARGE	MEDIUM	SMALL
-50+	2	--	6	4	2
-40 to -50	2	3	--	1	1
-30 to -40	4	6	2	--	5
-20 to -30	2	--	4	1	4
-10 to -20	4	--	7	6	5
0 to -10	7	8	6	6	9
0 to 10	20	4	23	34	39
10 to 20	33	52	26	16	16
20 to 30	11	5	13	15	17
30 to 40	8	12	5	7	3
40 to 50	7	11	5	7	--
50+	1	--	4	3	--

SOURCE: PFS Cross-sectional analysis sample.

At the same time, a FMR-based system would represent a radial alternative to the current funding system. Because the basis for funding is not current cost patterns in the public housing program, the new funding system would not protect the PHAs and public housing projects that now make up the program. It is likely that some projects and even entire PHAs would drop out of the program. This result is sensitive to several factors: the level of FMRs used, the generosity and duration of a transition period and whether a separate modernization program is maintained after the transition.

The version of the FMR system that has the most to commend to it is one which limits the increase in the funds under the FMR system compared to the PFS available for operations and improvements; in the simulations reported above the "cap" was placed at 20 percent. The FMR system so constrained would cost $40 million more than the Comparison PFS in 1980 but $122 million less than Comparison PFS plus Modernization, with the FMR set at the 40th percentile of the rent distribution for recent movers. Under this system, authorities operating 15 percent of all public housing units would suffer losses greater than 20 percent in the funds they have available for operations and improvements. The majority of units (60 percent), however, would be in PHAs experiencing increases or losses in resources of no more than 10 percent.

To insure an orderly switch-over from the PFS to the FMR system, a three-to-five year transition period should be implemented during which those authorities losing funds under the FMR system would receive a declining share of the difference during the period. Also during this period, authorities would use the funds currently being provided to cover the outstanding backlog of modernization to prepare for the constraints of the new funding system. This period would give those PHAs losing funds ample opportunity to upgrade projects and to make the management improvements essential to operating competitively with fewer resources.

REFERENCES

Hendershott, P.H. and J.D. Shilling (1980), The Economics of Tenure Choice, 1955-79, Lafayette, Indiana, Department of Economics, Purdue University.

APPENDIX 8-1

FUNDING RULES FOR THE CONSTRAINED FMR SYSTEM

Rules for four cases requiring different treatment are stated below. To begin however, define the following:

$S_{P'}$ = the resources available to the PHA under the PFS, plus the allowance for replacements and improvement; equals operating subsidy plus tenant contributions plus other revenues plus the replacement allowance.

S_F = the resources available to the PHA under the FMR; equals the FMR plus other revenues less ACC payments.

S_R = the subsidy payment under the FMR system, as calculated by the formula.

$S_{R'}$ = the adjusted subsidy payment under the FMR system.

S_{PFS} = subsidy under PFS.

The first two cases concern PHA with $S_F > S_{P'}$.

Case 1: $S_F > S_{P'}$, and $S_F > 1.2 S_{P'}$.

Then, $S_{R'} = 1.2\ S_{PFS}$.

PHAs who would receive more than a 20 percent increase in resources in the first year under the FMR system are limited to a 20 percent increase in their subsidy; and this figure becomes the base for future years, i.e., in year two $S_{R'2} = S_{R'1}, *\Delta FMR$. Obviously the 20 percent figure is a policy parameter and other values could be employed.

The third and fourth cases deal with Authorities that "lose" under the FMR system, and are distinguished by the size of the shortfall.

Case 3: $S_F < S_{P'}$, and $S_F < .9S_{P'}$.

Let $D = S_R - S_{PFS}$

n = the number of years in the transition period, e.g., 3 or 5.

i = an index of the years in the transition period, defined from 1...n.

Then,

$$S_{R'} = S_R + \frac{(n-i)}{(n)} D$$

Case 4: $S_F < S_{P'}$ and, $S_F > .9\ S_{P'}$

In year 1, $S_{F'} = S_F + .5D$

thereafter, $S_{F'} = S_F$.

For Authorities with shortfalls of 10 percent or less, there is a one-year transition period, during that year they receive extra "transition funding" equal to one-half of the shortfall.

APPENDIX 8-2

Table 8-2-1

DISTRIBUTION OF PERCENTAGE CHANGES IN FUNDS AVAILABLE UNDER A CONSTRAINED FMR SYSTEM WITH FMRs SET AT THE 40TH PERCENTILE RENTS OF ALL BUT NEW UNITS

	PERCENT OF UNITS IN PHAs IN GAIN/LOSS CATEGORIES			
	CONSTRAINED		CONSTRATINED W/TRANSITION	
PERCENTAGE CHANGE INTERVALS	COMPARISON PFS PLUS REPLACEMENTS	COMPARISON PFS WITH MOD	COMPARISON PFS PLUS REPLACEMENTS	COMPARISON PFS WITH MOD
-50+	1	3	--	--
-40 to -50	1	8	--	--
-30 to -40	7	9	--	--
-20 to -30	25	29	1	--
-10 to -20	13	14	41	13
0 to -10	35	14	40	63
0 to 10	11	15	11	16
10 to 20	6	6	6	6
20 to 30	1	1	1	1
30 to 40	--	--	--	--
40 to 50	--	--	--	--
50+	--	--	--	--

SOURCE: PFS Cross-sectional analysis sample.

NOTES: a/ First year of transition period.

Table 8-2-2

DISTRIBUTION OF PERCENTAGE CHANGES IN FUNDS AVAILABLE UNDER A CONSTRAINED FMR SYSTEM WITH FMRs SET AT THE 40TH PERCENTILE RENTS OF ALL BUT NEW UNITS

	PERCENT OF UNITS IN PHAs IN GAIN/LOSS CATEGORIES				
	ALL AUTHORITIES	EXTRA LARGE	LARGE	MEDIUM	SMALL
A. COMPARISON PFS PLUS REPLACEMENTS					
-50+	1	--	4	2	--
-40 to -50	1	--	1	3	2
-30 to -40	7	6	8	4	7
-20 to -30	25	47	11	9	11
-10 to -20	13	3	20	26	19
0 to -10	35	34	40	32	31
0 to 10	11	4	14	17	18
10 to 20	6	7	3	6	7
20 to 30	1	--	--	1	3
30 to 40	--	--	--	--	--
40 to 50	--	--	--	--	--
50+	--	--	--	1	2
B. COMPARISON PFS WITH MODERNIZATION					
-50+	3	--	7	5	3
-40 to -50	8	6	10	7	9
-30 to -40	9	5	13	7	15
-20 to -30	29	45	21	18	10
-10 to -20	14	15	10	19	16
0 to -10	14	16	13	15	12
0 to 10	15	8	18	13	27
10 to 20	6	4	8	13	5
20 to 30	1	--	--	1	2
30 to 40	--	--	--	--	--
40 to 50	--	--	--	--	--
50+	--	--	--	1	--

SOURCE: PFS Cross-sectional analysis sample.

Table 8-2-3

DISTRIBUTION OF PERCENTAGE CHANGE IN FUNDS AVAILABLE UNDER AN FMR SYSTEM WITH FMRs SET AT 50TH PERCENTILE MOVERS' RENTS

PERCENTAGE CHANGE INTERVALS	PERCENT OF UNITS IN PHAs IN GAIN/LOSS CATEGORIES			
	CONSTRAINED		CONSTRATINED W/TRANSITION	
	COMPARISON PFS PLUS REPLACEMENTS	COMPARISON PFS WITH MOD	COMPARISON PFS PLUS REPLACEMENTS	COMPARISON PFS WITH MOD
-50+	--	1	--	--
-40 to -50	1	2	--	--
-30 to -40	1	3	--	--
-20 to -30	2	10	--	--
-10 to -20	12	8	11	4
0 to -10	37	13	42	32
0 to 10	27	45	27	46
10 to 20	19	18	19	18
20 to 30	1	1	1	1
30 to 40	--	--	--	--
40 to 50	--	--	--	--
50+	--	--	--	--

SOURCE: PFS Cross-sectional analysis sample.

NOTES: a/ First year of transition period.

Table 8-2-4

DISTRIBUTION OF PERCNTAGE CHANGE IN FUNDS AVAILABLE UNDER A COSNTRAINED FMR SYSTEM WITH FMRs SET AT 50TH PERCENTILE MOVERS" RENTS

PERCENTAGE CHANGE INTERVALS	PERCENT OF UNITS IN PHAs IN GAIN/LOSS CATEGORIES				
	ALL AUTHORITIES	EXTRA LARGE	LARGE	MEDIUM	SMALL
A. COMPARISON PFS PLUS REPLACEMENTS					
-50+	--	--	1	2	--
-40 to -50	1	--	2	1	1
-30 to -40	1	--	2	--	3
-20 to -30	2	--	3	3	6
-10 to -20	12	9	12	16	16
0 to -10	37	25	53	40	35
0 to 10	27	39	15	21	23
10 to 20	19	27	14	15	12
20 to 30	1	--	--	1	3
30 to 40	--	--	--	--	--
40 to 50	--	--	--	--	--
50+	--	--	--	1	2
B. COMPARISON PFS WITH MODERNIZATION					
-50+	1	--	2	2	2
-40 to -50	2	--	3	3	3
-30 to -40	3	--	4	1	8
-20 to -30	10	9	9	9	11
-10 to -20	8	3	15	11	7
0 to -10	13	11	16	15	14
0 to 10	45	54	39	43	36
10 to 20	18	23	12	14	17
20 to 30	2	--	--	1	2
30 to 40	--	--	--	--	--
40 to 50	--	--	--	--	--
50+	--	--	--	1	--

SOURCE: PFS Cross-Sectional analysis sample.

CHAPTER IX

HOUSING VOUCHERS

9.0 INTRODUCTION

The major distinction between the FMR and housing voucher systems for funding public housing is that under the voucher approach the subsidy payment-based on the Fair Market Rent--is made in such a way that the household is at liberty to use its subsidy to rent a unit managed by the housing authority or to move to a unit that is privately owned and managed.1/ Clearly, the voucher system provides the strictest test of PHAs' ability to compete with the private sector of any of the subsidy systems described in this report.

There are two clear objectives to the voucher approach. The first is to limit Federal outlays to assist a household to no more than the amount needed to purchase private rental housing. A voucher program subsidy is based on an estimate of the rent of a modest but standard quality housing unit in the area. This estimate is called a "payment standard" or Fair Market Rent (FMR). The subsidy to each household, regardless of the particular history of the unit it occupies, is set at this level minus the percent of income low-income households ar considered able to pay for housing. This "tenant contribution" was set at 30 percent of adjusted income for all assisted housing programs by 1981 law. If the subsidy enables households to afford a number of rental housing units, some marginal

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1/ The major distinction between a modified Section 8 Existing certificate or "voucher" and the subsidy under the current Section 8 Existing Housing program is that in the voucher program, if the unit rents for less than the FMR the household keeps the difference, while if the unit rents for more than FMR the tenant pays the entire extra cost. In Section 8 any savings go to the Government, and units with rents above FMR are not permitted at all.

units, including some public housing projects, may leave the market. Needless to say, setting the FMRs and, therefore, the subsidies, is a critical element under this approach. In any event, the first objective of the voucher system for funding public housing is cost containment through competition.

The second objective is to increase the housing choices available to program participants. A widely accepted economic axiom is that a subsidy is worth more to the recipient, and hence is more efficient, the more closely the recipient can match what he is able to purchase with the subsidy to what he wants to purchase. Opening private dwellings to public housing tenants (and in many cases public housing to other households) will expand their choices and should lead to a better match of opportunities and aspirations. In particular, subsidized households should be able to live in a wider variety of neighborhoods and avoid being grouped together with poor people only. This should bring advantages to PHAs as well, if they can compete successfully. Under the voucher system, authorities will not be limited to housing the very poor and their management and investment decisions will be much like those of private landlords.

The balance of this chapter consists of three sections. The first describes how funding under the voucher system would work and discusses administrative and transition issues. The second section provides estimates of what the system would cost and how various types of PHAs would fare. The last section examines the broader implications for public housing of a shift to vouchers. The key issues are 1) would public housing authorities be able to compete for tenants successfully when tenants have the option to rent private market units; and 2) would PHAs be able to charge high enough rents to cover current costs; or would they be required to make radical changes in their current operations including the stock of units they operate, in order to stay in business.

These are complex questions and not much evidence is available currently to address them. However, because of the importance of these issues, we will review available evidence and analysis done for this report on these issues in some detail.

9.1 GENERAL DESCRIPTION

Funding System

Under a voucher system the basis for estimating the allowable cost of operating public housing would be the payment standards (Fair Market Rents) estimated by HUD for the housing voucher program, as in the Fair Market Rent system. The two systems differ, however, in the payments process. Under the FMR system the PHA receives a subsidy payment equal to the payment standard for each of its units minus (1) the ACC payment and (2) the PHA's estimated rental income. Under the voucher system the PHA charges whatever rent it determines its units can command to its tenants, some of whom are voucher holders. The voucher holders are free to use their voucher subsidies in any private market unit that meets the voucher program's housing quality standards, if they do not wish to remain in public housing.

If the household remains in public housing, the PHA receives the amount of the voucher (FMR for the appropriate-sized unit minus 30 percent of the household's adjusted income) plus the remainder of the total rent, which is paid by the tenant. If the household moves out of public housing, the voucher subsidy on behalf of the tenant is paid to the private market landlord.

The PHA, using its rental collections from all units (those occupied by a voucher holder and those not), pays the ACCs for the outstanding debt, operates the projects and makes such replacements and improvements as it deems appropriate and can fund. 1/ While the Federal Government retains a legal obligation to pay the holders of public housing bonds and notes,

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1/ The mechanics of the voucher system are stated algebraically in the Appendix at the end of this chapter.

the PHA must agree to reimburse the Government the debt service amounts for projects it continues to operate. In return, the authority receives a voucher allocation for those units and a release from Federal restrictions on tenant incomes and rents charged for public housing units. 1/

Alternative Designs. It may seem implausible that the PHAs will agree to be responsible for reimbursing the Federal Government for the debt service on past capital costs of public housing - even if the only alternative open to the authority is no operating subsidies at all. Therefore, we considered alternative designs for the voucher system.

Under one such alternative, the authority would receive HUD support from two distinct sources. The debt service payments would continue to be made by HUD, without PHA reimbursement. The face value of the voucher to the public housing tenant would be calculated as the difference between (a) the FMR reduced by the amount of the average per unit month ACC debt payment and (b) 30 percent of the tenant's income. The authority would use its rental collections to fund operating expenses and replacements and improvements.

This would not be true voucher system for public housing for two reasons. First, the public housing vouchers would not really be "portable". The public housing tenants would not be able to rent private market units at a reasonable fraction of their income, so the goal of expanding their housing choices would not be met. In fact, for public housing authorities with very high debt service, the voucher subsidy to the tenant would often be zero and could, in theory, be negative. 2/

1/ If the PHA disposes of a project and cannot sell the project for at least the outstanding debt, the remaining debt service is paid by HUD. If the project is sold for more than the outstanding debt, it might be desirable to permit the PHA to retain the excess sales proceeds to help pay the costs of projects it retains. The President's Housing Commission has proposed that PHAs be given such an option under a plan which would continue operating subsidy payments to PHAs for some projects. See Chapter 11 for more discussions of the Commission's proposal.

2/ Here is an example based on numbers that are not unusual for FMR, ACCs and tenant incomes: FMR=$300 per unit month, ACC= $175 p.u.m., and tenant contribution=$150 (30 percent of $6,000 annual income). The voucher subsidy is $300-325= -$25.

Second, PHAs would still be able to charge whatever rent they could get tenants to pay. Because this rent would not have to cover debt service, they would not really be required to compete with private market rental housing. Both voucher holders and market-rate tenants would be comparing a subsidized public housing rent with rents of unsubsidized market units. The value of the debt service subsidy would vary greatly with the age of a project. PHAs with relatively new projects would find it easy to fill their projects at rents higher than necessary to cover only operating and replacement costs, while PHAs with older stock (and trivial debt service) would compete for tenants with private suppliers of housing with the constraint of having to cover almost all their cost out of rents.

The objective of expanding public housing tenants' choice of housing through a truly portable voucher could be met by issuing a "full value" voucher to those tenants who wanted to leave public housing. However, this would greatly increase the cost of the public housing subsidy system, since the government would end up making debt service payments and full voucher payments for the same units. Even if only 20 percent of public housing tenants used their vouchers to leave public housing, the double cost of debt service and full voucher payments would be $200 million per year in 1980 dollars. In addition, public housing projects, especially those with high debt service, would still not be subjected to a true market test in competing with private housing for tenants.

Therefore, we have chosen to analyze in detail only a voucher system in which the voucher subsidy for public housing tenants covers debt service as well as operating and replacement costs. The next section gives further details of the rules of such a system.

Additional Design Details. Under a housing voucher system for public housing, PHAs will establish rent schedules for their units. Rents may vary by project and/or unit in whatever way the PHA sees fit and there will be no upper or

lower limit. At the start of the new system the PHA will receive an allocation of housing vouchers sufficient to cover the number and (bedroom) size of public housing units it has available for occupancy, whether occupied or not. The PHA will provide each household occupying a public housing unit at the time the voucher system is implemented a subsidy equal to the payment standard for the appropriate size unit minus the household contribution established by current law and regulations for HUD's assisted housing programs (e.g., 30 percent of adjusted income). This will take the form of a reduction in the rent established by the PHA for that household's unit. However, since the rent may be higher or lower than the payment standard, the household usually will pay either more or less than 30 percent of income for the unit.

The household must be informed, however, of the amount of the subsidy (not just the net rent of the public housing unit) and must be told that it can use that subsidy to reduce the rent of any private market rental housing unit that passes the voucher program's housing quality standards. If the household uses its voucher subsidy to move out of public housing, the PHA does not receive an additional voucher allocation.

The PHA may use its voucher allocation for public housing units that are vacant at the time the voucher system is implemented to subsidize any household of the appropriate size which meets the income and household type eligibility tests for the general housing voucher program. Or it may hold aside part or all of its voucher allocation which applies to currently vacant units to use for units which become vacant when households move out of other units taking their subsidy with them.

Housing vouchers from other allocations of housing voucher units under the control of that PHA (as the administering agent for the Modified Section 8 Existing program) or another agency may be used by eligible households to rent either public or private housing. The jurisdiction's general housing voucher allocation will include those vouchers which become available

because former public housing tenants use their vouchers to leave public housing and subsequently leave the voucher program altogether. Note that these vouchers do not revert for use for renting public housing only.

Administrative Issues

Under a voucher system, public housing would be substantially deregulated, with much of the detailed Federal oversight removed in such areas as admission, lease and eviction policies, and planning and implementation of modernization programs. These would still need to be some monitoring of the rules of the voucher program (e.g., income verification and calculation of the subsidy) as they applied to voucher holders living in public housing. This could be accomplished as part of the general modified Section 8 Existing program, whether administered by the same PHA that owns and manages the public housing units or by a different state or local agency. An interesting issue, raised here but not resolved, is whether public housing units occupied by voucher holders should be presumed in standard condition or should be inspected against the Section 8 Existing housing quality standards. If the PHA runs both programs, can it inspect its own units or would HUD inspectors be required? Another area that might require Federal oversight is whether public housing tenants are being adequately informed of their opportunity to use their voucher subsidy outside of public housing.

As in the FMR system, the calculation of the subsidy is greatly simplified under the voucher system. There are no complex formulas and adjustments, utilities are no longer funded separately and the inflation factor is simply the year to year change in the voucher payment standard. Indeed, the voucher calculations are simpler than those under the FMR system described in Chapter 8 since there is no comparison with former subsidies under the PFS for purposes of "capping" increases in subsidy.

Other administrative issues have to do with the changed funding relationships under a voucher system. Assuming that Federal and State laws concerning income limits and rents for public housing can be changed, a mechanism for making PHAs reponsible for the debt service payments for units they continue to operate would need to be set up, and annual contributions contracts between HUD and the PHAs revised accordingly.

Management Incentives and Advantages for PHAs

The overwhelming management incentive under the voucher system will be the presence of private competition. In addition to the removal of some of the the cushions of the current funding system (e.g., the partial pass-through of utilities expenses), which the voucher system has in common with the FMR system, the voucher system guarantees no Federal payments at all to support the continued operation of the public housing units as distinct from the households currently occupying them. On the other hand, under the voucher system the authority's latitude of action is dramatically increased.

Turning first to tenant selection, vacant units may be rented to households at any income level, whether or not they have a voucher subsidy. Households will pay the PHA-established fixed dollar rent. This rent will not be any particular percentage of income but will in virtually all cases be higher or lower than the percent-of-income rent required by HUD statues for subsidized households. This is true even for voucher-holders, unless the PHA's rent schedules are exactly the same as the FMRs. The PHA is free to refuse to rent a unit to a prospective tenant, whether or not a voucher-holder, as long as it does not violate fair housing laws. It is exactly like a private landlord in this respect.

The authority also has much more power for property disposition. Previously, PHAs have had to go through a long and tortuous route to demolish or deprogram units. Thus, projects that are uneconomical to operate and extremely difficult to market remain in the active stock. Under the voucher system,

the PHA can choose to sell some or all of its units, demolish them or convert them to other use. The only basis for HUD disapproval of that action will be failure to make voucher subsidies available to currently subsidized occupants of those units. Any proceeds from the sale or from revenue generated by an alternative use of the units would first be used to pay off the remaining debt on the units. 1/

Finally, as under the other systems proposed in this report that combine funding for operating public housing with funding for replacements and improvements (see Chapters 7 and 8), the PHAs under a voucher system are given greatly increased latitude for investment decisions for that part of the stock of public housing they do not dispose of. Again in this area, the authority becomes much more like a private market owner.

The risks that may offset these advantages are obvious. Some PHAs will not be able to compete for tenants with private market housing suppliers, either because they are poorly managed and unable to make necessary management improvements or because the projects they own are basically too unattractive in design or location to command rents that cover their costs. These risks can be mitigated somewhat by a well-designed transition into the voucher system.

Transition to the Voucher System

While the voucher program may be designed to force authorities to become competitive by getting rid of projects with costs that cannot be brought into line with their rental value and by managing their remaining stock well, a sudden switch to the voucher system may result in the loss of some

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1/ If proceeds are insufficient to cover the debt, the remaining ACCs will be paid directly by HUD. Note that we are recommending that increased latitude for disposing of projects be provided to PHAs under any funding system proposed by this report. (See Chapter 3).

projects and even whole authorities that have the potential for becoming competitive. This would be undesirable, especially in areas with already tight housing markets. In short, some adjustment period seems advisable, as even the installation of a crack management team at the time of change-over would require a year or so to effect broad changes; and this short time depends on the availability of discretionary resources to finance the changes.

Obviously, the authorities at greatest risk of large-scale move-outs as a result of a sudden switch to the voucher system are those that would have to charge more than FMR to cover their costs. Tenants in these authorities would be given vouchers, but would have to pay more than 30 percent of adjusted income to remain in public housing. FMRs set at reasonable levels would give thee tenants many options in the private housing market without paying more than 30 percent.

Such authorities should be given a transition period of, say, five years. In each year the authority would receive the allocation of vouchers for its tenants plus a declining percentage of the difference in the aggregate funds available under the PFS (plus ACCs) and the rents that could be charged from the initial allocation of vouchers, if rents were set at the FMR. For example, in the first year of a five-year transition, the authority receives eighty percent and in the second year 60 percent of the difference between the costs covered by the PFS and the FMRs for its units. The transition period would be used by the authority to upgrade management practices and to make improvements to the projects to make them competitive with those in the private market.

This brings us to the question of the treatment of the backlog of modernization needs. As suggested when the Cost-based System with a Replacement Allowance and the FMR system were discussed (Chapters 7 and 8), a block of funds, based on the cost of bringing all projects up to the same modest standard, should be given to each authority to spend on improvements and

replacements as it sees fit. These funds would be distributed to all PHAs with modernization backlogs, not just those given transition funding because costs are above FMRs. Without providing these modernization funds and the time to employ them, some authorities will suddenly be told to be competitive without a chance to "put their house in order." The result might be the loss not just of inherently uncompetitive projects but also of projects that could be made competitive through modest expenditures of money.

As noted in Chapters 7 and 8, funding levels for the Comprehensive Improvement Assistance Program (CIAP) for the 1981-1983 period are high enough to bring the entire public housing stock to a level approximating HUD's Minimum Property Standards. If focussed on preparing PHAs to compete for tenants under a voucher system, these funds might be targetted to projects the PHA believes can be made competitive.

On balance the transition time might last several years and the change-over process may be fairly complex. At least this would be the situation for those PHAs with total costs significantly greater than the revenues afforded by voucher payments (using the FMR as the rent level) and those that badly need to upgrade their projects before "going competitive." Some PHAs--possibly the majority--could be converted immediately; but the PHAs that would need a transition period may account for a majority of the units in the program and may be those that receive the bulk of current operating subsidies.

9.2 COST

The cost of a voucher system is quite straightforward. Since the voucher is intended to permit the purchase of private market housing, it would not make sense to design the kind of capping applied to the FMR system described in Chapter 8. Therefore, the cost of the voucher system is identical to the cost of the unconstrained FMR system, which has been reported in Chapter 8. Table 9-1 presents some basic figures on a per unit month basis for voucher systems in which the Fair Market Rent is set at three FMR levels.

TABLE 9-1

COMPARISON OF SUBSIDIES AND FUNDS AVAILABLE UNDER VOUCHER SYSTEM AT THREE FMR LEVELS AND PFS

1980 DOLLARS PER UNIT MONTH

DIFFERENCE FROM	50th Percentile Movers' Rents	40th Percentile Movers' Rents	40th Percentile All But New Unit's Rents
Subsidy under Comparison PFS a/	$ 48	$26	$2
Funds available under comparison PFS with Modernization b/, c/	10	-12	-37
Funds Available under Comparison PFS Plus Replacements c/, d/	28	6	-19

DATA SOURCE: PRS Cross Section Analytic Data Base.

NOTES:

a/ Comparison PFS is the subsidy that would have been received under the PFS in 1980 had the new inflation adjustment and income rules been in effect. (See Chapter 1).

b/ Comparison PFS with Modernization adds to Comparison PFS the average Modernization funds received by the PHA over the past 12 years. (See Chapter 7).

c/ Funds available includes income from tenant paid rents.

d/ Comparison PFS plus replacements includes an estimate of funds needed for on-going replacements and improvements (See Chapter 7).

The reader will recall that the three FMR levels are 50th percentile rents for recently occupied units meeting the Section 8 Existing or voucher program's physical standards, the 40th percentile rent of such units, and the 40th percentile rent of all standard units (regardless of when occupied) except for newly built units.

Table 9-1 shows the dollar difference between an average voucher subsidy at each of the three FMR levels and average subsidies under the Comparison PFS. As elsewhere in this report, Comparison PFS expresses in 1980 dollars the funding levels that would exist if the current PFS continued into the future. 1/ Table 9-1 also shows the difference in average total funds potentially available to operate public housing under a voucher system and under two comparison cases that include an estimate of modernization funding. Comparison PFS with Modernization includes an estimate of average modernization funding actually recieved by each PHA in the 1969-1981 period, in 1980 dollars. In addition to funds available under the PFS plus recent modernization funding, we compare vouchers to funds available under the PFS plus an estimate of funds needed for replacements and improvements based on an analysis of such expenditures in the private sector. This is called Comparison PFS plus Replacements. 2/

Once again, we should note the importance of the size of the estimate of funds needed for replacements to the comparisons of funds available to PHAs under the PFS and under a voucher system. In part because of the sensitivity of this assumption, we include the comparison with actual pre-CIAP modernization funding as well.

In the voucher system, however, "funds available" is a somewhat misleading term, since funds are available to PHAs at the levels indicated only if the PHA is able to charge rents equivalent to the FMRs for its units.

1/ This includes the effect on AELs of the new inflation factor (see Chapter 5) and the effect on subsidy levels of full phase-in of rents at 30 percent of adjusted tenant income.

2/ See Chapter 7 for more details.

With FMRs set at 50th percentile movers' rents, a voucher system provides much larger subsidies to households than average PFS subsidies and potentially greater resources to PHAs than funds available under either of the comparison cases that include a modernization estimate.

At 40th percentile movers' rents, funds potentially available are greater if PFS plus Replacements is used as the comparison, but smaller than funds available under the PFS plus historical modernizatin funding. At the lower 40th percentile rents, average funds potentially available drop under a voucher system regardless of the comparison case used.

Table 9-2 shows the program-wide cost of providing vouchers to public housing tenants in place of operating subsidies and the bulk of modernization funding. Vouchers with FMRs at the 50th percentile would cost $292 million more than the Comparison PFS. Vouchers with the FMR set at the 40th percentile rent of movers' would cost $48 million more than the PFS, while vouchers at the lower 40th percentile FMRs would cost $230 million less than the current PFS plus an estimate of on-going modernization funding.

While the average changes in funding levels P.U.M. shown in Table 9-1 are suggestive, there are two types of variance around these mean values that can give us a more complete picture: (a) differences among PHAs by size and region of the country, and (b) the extent of dispersion in the differences in potential funding levels for PHAs within these categories. Turning first to variation among types of authorities, the data in Tables 9-3 and 9-4 show the percentage change in funds available under vouchers compared to the two comparison cases for sixteen size group and regional categories. The overall pattern for the two comparison cases is quite similar, since the comparison cases both include funds for replacements and improvements, although they estimate them differently. 1/

The figures in the table shows PHAs in the Northeast consistently having fewer funds available under all but the highest FMR level, and the differ-

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1/ Note that these tables differ from Tables 8-5 and 8-6 in Chapter 8, which show percentage changes in funds available under a constrained FMR system.

TABLE 9-2

NATIONAL COSTS OF VOUCHER SYSTEM COMPARED
WITH PFS AND MODERNIZATION FUNDING

	MILLIONS OF 1980 DOLLARS			
	Comparison PFS	50th Percentile Movers' Rents	40th Percentile Movers' Rents	40th Percentile all but new units' rents
Operating Subsidy	$712	1,246	1,002	724
Additional needs for on-going modernization	375	133	133	133
Total Subsidy	$1,087	1,379	1,135	857

SOURCE: PFS Cross-sectional analysis sample.

NOTES: a/ Average loan authority for modernization, 1969-1981, in 1980 dollars.
b/ Estimate of major capital improvements not covered by a replacement allowance of 15 percent of the AELs under the PFS, per unit month.

TABLE 9-3

PERCENTAGE CHANGE IN FUNDS AVAILABLE UNDER A VOUCHER SYSTEM COMPARED WITH PFS WITH A REPLACEMENT ALLOWANCE BY TYPE OF PHA

TYPE OF PHA	50 percentile movers' rents	40 percentile movers' rents	40 percentile all but new units' rents
Extra-large			
Northeast	3	- 8	- 23
South	49	36	27
Central	25	15	1
West	43	29	21
Large			
Northeast	3	- 7	- 21
South	30	14	4
Central	27	15	4
West	60	47	39
Medium			
Noreast	6	7	- 23
South	20	2	- 14
Central	26	12	1
West	49	36	26
Small			
Northeast	- 22	- 34	- 44
South	56	36	17
Central	29	15	1
West	96	78	56

SOURCE: PFS cross-sectional analysis sample

TABLE 9-4

PERCENTAGE CHANGE IN FUNDS AVAILABLE UNDER A VOUCHER SYSTEM
COMPARED WITH PFS WITH HISTORICAL MODERNIATION FUNDING BY TYPE OF PHA

TYPE OF PHA	50 percentile movers' rents	40 percentile movers' rents	40 percentile all but new units' rents
Extra-large			
Northeast	4	- 7	- 23
South	37	26	17
Central	12	3	- 10
West	29	16	9
Large			
Northeast	- 10	- 20	- 31
South	14	1	- 8
Central	7	- 3	- 12
West	33	22	16
Medium			
Noreast	- 3	- 15	- 29
South	5	- 11	- 24
Central	13	1	- 10
West	19	9	9
Small			
Northeast	- 22	- 32	- 41
South	38	20	3
Central	13	1	- 12
West	39	26	10

SOURCE: PFS cross-sectional analysis sample

ence from current funding is largest for the small PHAs. By contrast, authorities in the West in all size groups would have considerably more resources potentially available if they were able to charge rents equivalent to FMRs. The situation for the South and Central regions is more varied, but they do well under all but the lowest FMR level. It is also worth observing that the extra large PHAs do quite well compared with other size groups. Overall, the range of change exhibited among the PHA size and region categories is striking, and, it might be noted, substantially greater than the range under a constrained FMR system. 1/

A more precise idea of the range of experience under vouchers is available from Table 9-5, which gives the distribution of the percentage changes in funds available to authorities under a voucher system at 40th percentile movers' FMRs compared to the PFS with replacement or modernization funding. These figures have been weighted by the number of units managed by each authority and, hence, indicate the percentage of the public housing stock in each category. One can appreciate the extent of dispersion in outcomes by concentrating on the extremes. The tabulation below, which consolidates some of the categories from Table 9-5, shows the percentage of public housing units in each size group gaining more than 20 or more than 40 percent of the funds available compared to funding under PFS plus an allowance for replacements and improvements:

	All Authorities	Extra Large	Large	Medium	Small
Gains more than 20 percent	30	20	30	34	43
Gains more than 40 percent	18	6	21	18	35
Total		(100)	(100)	(100)	(100)

1/ Of course, the unconstrained FMR system is exactly the same in subsidy costs and in funds potentially available to PHAs as the vouchers system. See Tables 8-3 and 8-4 in Chapter 8.

Table 9-5

DISTRIBUTION OF PERCENTAGE CHANGE IN FUNDS AVAILABLE
IN A VOUCHER SYSTEM WITH FMRs SET AT
40TH PERCENTILE MOVERS' RENTS

COMPARISON AND INTERVALS	PERCENT OF UNITS IN PHAs IN GAIN/LOSS CATEGORIES				
	ALL AUTHORITIES	EXTRA LARGE	LARGE	MEDIUM	SMALL
Comparison PFS Plus Replacements a/					
-50+	2	--	2	6	5
-40 to -50	2	--	2	2	5
-30 to -40	2	--	1	4	8
-20 to -30	8	9	8	7	5
-10 to -20	10	8	14	10	7
0 to -10	21	36	14	10	9
0 to 10	14	16	16	13	9
10 to 20	11	11	12	14	9
20 to 30	7	10	5	6	4
30 to 40	5	4	4	10	4
40 to 50	5	--	5	5	9
50+	14	6	16	13	26

Table 9-5 (Continued)

DISTRIBUTION OF PERCENTAGE CHANGE IN FUNDS AVAILABLE
IN A VOUCHER SYSTEM WITH FMRs SET AT
40TH PERCENTILE MOVERS' RENTS

COMPARISON AND INTERVALS	PERCENT OF UNITS IN PHAs IN GAIN/LOSS CATEGORIES				
	ALL AUTHORITIES	EXTRA LARGE	LARGE	MEDIUM	SMALL
Comparison PFS With Modernization					
-50+	4	--	3	8	11
-40 to -50	3	--	4	4	7
-30 to -40	8	6	9	8	8
-20 to -30	7	3	13	8	5
-10 to -20	14	12	19	13	10
0 to -10	24	40	14	12	15
0 to 10	15	23	10	12	5
10 to 20	7	6	6	8	13
20 to 30	5	2	6	13	4
30 to 40	5	6	8	--	3
40 to 50	3	--	4	6	7
50+	6	2	4	7	14

DATA SOURCE: PFS Cross Sectional analysis sample.

NOTES:

a/ See Table 9-1 for definitions of comparion cases.

b/ The reader may notice some differences in the percent of units in various loss categories between this table and Table 8-8. There are two reasons for this anomaly: 1) the operation of the constraint in a constrained FMR system produces very small losses of funds compared with the PFS for some PHAs that would gain funds in the absense of the constraint. 2) PHAs that would have negative subsidies (rental revenue greater than allowable costs) have been treated differently in the modelling of constrained and unconstrained FMR systems.

Thirty percent of the units are in PHAs that experience increases in resources of over 20 percent; and 18 percent of the units--or 167,300 units--are in PHAs that have increases of over 40 percent. Over one-third of the units in small authorities would experience gains over 40 percent, and nearly 20 percent of the units in large and medium PHAs would experience gains in funding of this size.

These gains are inherent in the voucher system. It seems infeasible to design a "constrained voucher" system like the constrained FMR system when the vouchers are to be portable: vouchers set well below the FMR would not be of much help in the market. Valuing vouchers differently within the PHA and in the market could be done, but, as discussed above, this would destroy the conceptual base of the voucher system. Once again, however, it should be noted that these gains would be in the form of benefits to households receiving vouchers and could be experienced by PHAs only if they were able to charge rents as high as the FMR for their units.

Table 9-6 repeats Tables 9-5, but shows the distribution of percentage changes in funds available if FMRs were set at 40th percentile rents of all but newly constructed units--the lowest of the FMR levels under review. Under this option, only 20 percent of all units would be in PHAs gaining 20 percent or more of potential funding, compared to PFS plus a replacement need estimate, but almost 40 percent would be in PHAs that would lose at least 20 percent of their funds even if they charged the FMR. Strikingly, over half the units in extra large PHAs would lose at least 20 percent of their total funds unless these PHAs were able to charge more than this lower FMR.

Table 9-6

DISTRIBUTION OF PERCENTAGE CHANGES IN FUNDS AVAILABLE UNDER A VOUCHER SYSTEM WITH FMRs SET AT 40TH PERCENTILE RENTS OF ALL BUT NEW UNITS

	PERCENT OF UNITS IN PHAs IN GAIN/LOSS CATEGORIES:				
	ALL AUTHORITIES	EXTRA LARGE	LARGE	MEDIUM	SMALL
COMPARISON PFS PLUS REPLACEMENTS					
-50+	5	-	4	7	13
-40 to -50	2	-	2	3	4
-30 to -40	7	6	8	9	4
-20 to -30	25	47	11	8	11
-10 to -20	10	3	19	15	11
0 to -10	17	24	14	15	9
0 to 10	8	4	14	10	9
10 to 20	5	7	3	6	6
20 to 30	5	2	6	12	7
40 to 40	4	4	4	2	7
40 to 50	5	2	8	6	5
50+	6	2	7	7	14
COMPARISON PFS WITH MODERNIATION					
-50+	7	-	7	12	17
-40 to -50	8	6	11	10	7
-30 to -40	8	6	13	7	9
-20 to -30	28	45	20	16	10
-10 to -20	13	15	10	14	12
0 to -10	13	16	13	10	10
0 to 10	4	-	2	7	10
10 to 20	6	4	8	12	3
20 to 30	5	6	7	1	4
30 to 40	4	-	6	5	8
40 to 50	2	-	3	1	3
50+	3	2	1	4	6

SOURCE: PFS cross-sectional analysis sample.

9.3 IMPLICATIONS

The voucher system provides no guaranteed Federal payments to support the continued operation of public housing units. PHAs will only be able to stay in business - or to avoid making radical changes in the scope and manner of their operation - if they can cover their current costs through rents collected from voucher recipients and/or other households.

The discussion in the last section of "funds available" to PHAs under a voucher program assumed that authorities would be able to charge the FMR for their units and to keep those units occupied. In fact, some PHAs with a loss of "funds available" might be able to charge rents above the FMR and, thereby, cover costs. On the other hand, PHAs with FMRs that theoretically would cover their current costs may not be able to charge rents as high as the FMRs.

A number of factors will affect the maximum revenue an authority would be able to generate on the basis of rents charged voucher holders and other tenants. These include:

- The attractiveness of public housing units compared with private market units;

- The level of the voucher program FMR. A higher FMR means PHAs may be able to charge voucher-holders higher rents, but it also means the voucher-holders have more options open to them on the private market;

- Vacancy rates for units of appropriate sizes and rent levels in the private market. Public housing tenants may not be able to take advantage of the "portability" of their vouchers in some housing markets;

- o Mobility rates for both public housing tenants and private market renters. Households do not suddenly move in response to opportunities to reduce their rent or occupy better housing. In fact, such opportunities have been shown to have only a small effect on the mobility of low-income households. 1/ Tenants are likely to try to leave public housing, or to move into a public housing unit, at the time when they would have wanted to move in any case.

Detailed information on the market-equivalent rental value of public housing units is not available. A HUD study of alternative strategies for public housing will attempt to collect such information over the next few months. In the meanwhile, we have used available information on the value of public housing units, on local housing market conditions, and on household mobility rates to attempt a preliminary assessment of the types of PHAs that would have to make radical changes in their operations in response to the implementation of a voucher funding system for public housing.

We have drawn on information from two different sources. The first source of data is the Experimental Housing Allowance Program (EHAP). As part of the Demand Experiment component of that program, analysts compared in detail the attractiveness of public housing units and rental units occupied by voucher (housing allowance) recipients in Pittsburgh and Phoenix. The

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1/ The Housing Allowance Demand Experiment findings provide strong evidence on this point. See MacMillan, 1980

Supply Experiment component of EHAP offers the opportunity to observe how public housing tenants responded to the actual availability of a voucher to use in the private market. The Supply Experiment operated an open enrollment voucher program for a decade in a city with a substantial number of public housing units: South Bend, Indiana. Public Housing tenants in South Bend were free to apply for vouchers and to use them to move out of public housing.

The second source of data is a set of case studies for five large public housing authorities and the cities in which they operate: New York, Detroit, Seattle, Baltimore, and Los Angeles. For these five cities we have looked, first, at estimates of the characteristics of public housing and their rental value compared with private market units. We have then used information on the private rental housing market and on mobility rates for public housing and private market tenants to simulate what would happen if PHAs attempted to charge rents at two different FMR levels. The simulation produces an estimate of the rental revenue that would be generated by the units actually occupied at the two FMR levels and a comparison of that revenue with an estimate of the current costs of operating public housing at each of the five PHAs.

The limitations of the information we have assembled should be emphasized. First, we present evidence from only eight cities altogether and we cannot claim that they are representative, rather than merely suggestive, of what would happen in other cities. Second, the EHAP information does not mirror perfectly the vouchers for public housing system we are discussing. For example, the voucher units in Pittsburgh and Phoenix reflect FMRs that may be differenct from current or proposed FMRs. In the South Bend voucher program the voucher was not automatically given to public housing tenants, as it would be in the voucher system for funding public housing. Finally, the simulations of how many public housing units would be occupied at two FMR levels in five cities depend, like most simulations, on a number of assumptions and estimates.

With these caveats in mind, we summarize the results of our analysis of currently available data:

- Public housing units had only slightly lower value than the housing units occupied by voucher recipients in Pittsburgh and Phoenix when value is expressed as an estimated rent. Public housing was less likely than private market housing to have physical deficiencies relating to health and safety of occupants, but public housing tenants were also less likely to express satisfaction with their units and, especially, with their neighborhoods.

- The offer of a voucher to public housing tenants in South Bend resulted in, at most, a slight increase in public housing vacancies and a slight decrease in the size of the public housing waiting list.

- Public housing units in New York and Los Angeles have an estimated rental value close to the FMR set at the 40th percentile rent of recent movers. Seattle and Baltimore's public housing would rent for about 15 percent less than this FMR. Detroit's public housing is only worth 75 percent of FMR.

- If the authorities in the five cities attempted to charge the FMR as rent, the Los Angeles and Seattle PHAs might be able to cover current public housing costs. New York and Baltimore would need to make substantial changes in their programs. The results of the simulation for Detroit are not clear. New York and Baltimore would have such substantial shortfalls that they would need to make radical changes in their public housing programs, such as disposing of much of their stock or going out of business altogether.

Detailed Evidence

The following pages provide a more detailed account of current information on the ability of authorities managing public housing to compete for tenants and rental revenue under a voucher system. The discussion is organized by the source of information. First, the lessons from EHAP are culled, and then those from our five case studies are reviewed.

Evidence from EHAP. The key questions about vouchers concern the number of voucher-holding families who will leave public housing compared to the number of families with or without vouchers who will replace them. Data from the Demand Experiment for two very different cities--Pittsburgh and Phoenix--provide several indications of the comparative attractiveness of "market" and public housing units, and of the satisfaction of participants in vouchers and public housing.[1]

The first indicator considered is the market value--rent--of public housing units and units occupied by voucher recipients. Figure 9-1 presents the distribution of rents for the two programs in each city. In Pittsburgh a larger share of voucher units than of public housing units are valued at less than $125 per month, but is also the case that more voucher units than public housing units are worth over $150 per month (in 1974 dollars). The mean monthly rental value of public housing units, $145, exceeds that of voucher units by $9. In Phoenix, on the other hand, the mean value of public housing units, $160, is $14 less than the mean value of voucher units.[2] This appears to reflect the fact that some voucher-holders in Phoenix were able to rent units of quite high quality. In both cities only a small fraction of public housing units are in the lower rent intervals (under

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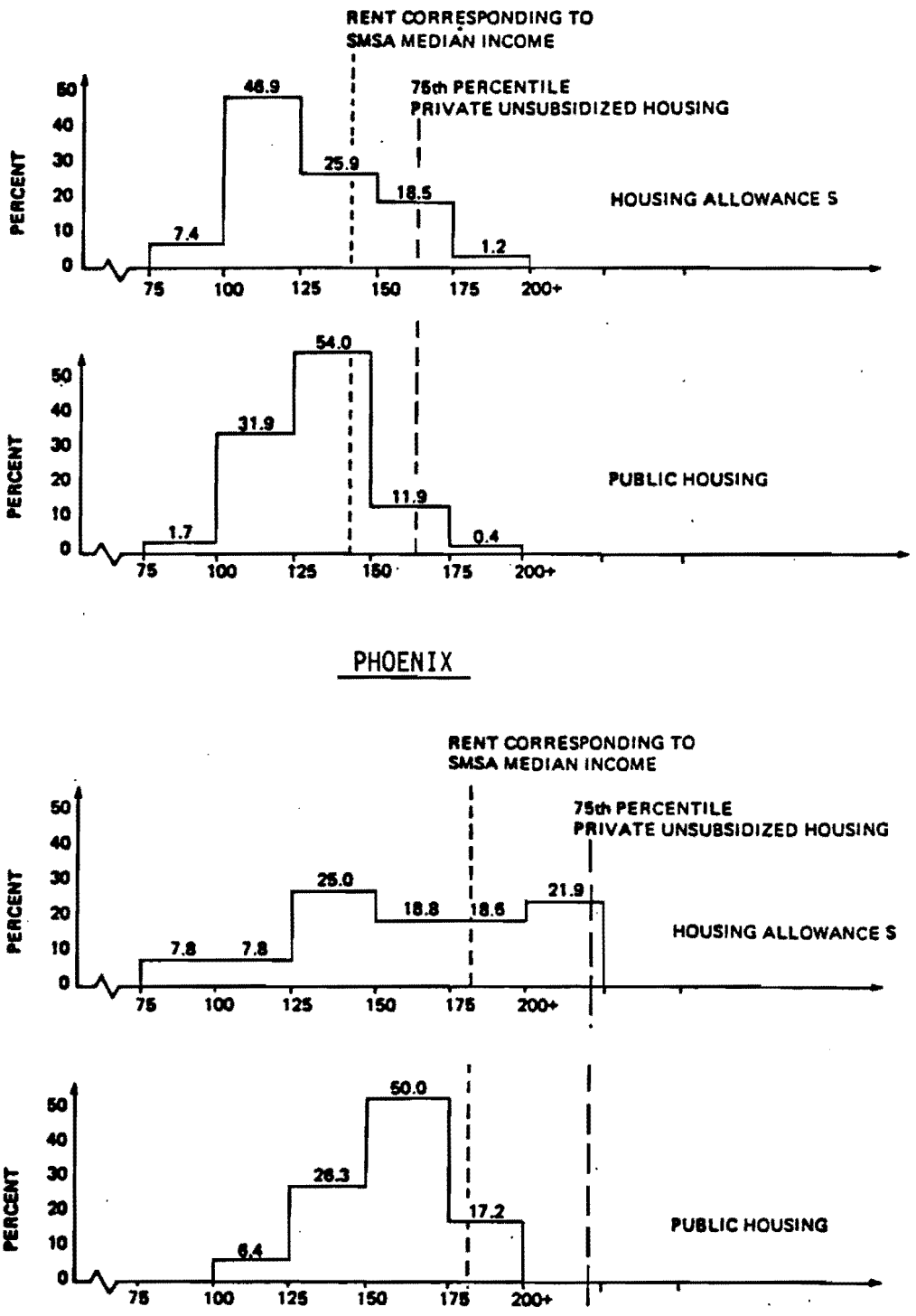
1/ See Mayo et al. (1980) and (1980a).

2/ These figures do not standardize for size of units, but the same pattern persits when one controls for this factor; Mayo (1980), Table 9-2.

FIGURE 9-1

ESTIMATED MARKET VALUES OF PUBLIC HOUSING AND VOUCHERS IN PITTSBURGH AND PHOENIX IN 1974



DATA SOURCE: Mayo (1980), Figure 3-3.

$100 in Pittsburgh, and under $125 in Phoenix). These figures certainly suggest that most public housing units in these two housing markets provide "competitive" services.

Another measure of the desirability of dwellings is their physical condition. As part of the Demand Experiment detailed inspections based on health and safety criteria were made of public housing units, voucher units, and "unassisted" dwellings occupied by households receiving cash grants not related to their housing. Various pass-fail standards were then applied to each set of units. Below are the results of applying these standards to the dwellings in each group.

PERCENTAGE OF UNITS FAILING VARIOUS HOUSING STANDARDS

INSPECTION STANDARD	PUBLIC HOUSING	VOUCHER UNITS	UNASSISTED UNITS
	PITTSBURGH		
Low	6	4	20
Applied in Program	37	26	71
High	50	90	89
	PHOENIX		
Low	3	3	25
Applied in Program	25	14	64
High	50	56	80

DATA SOURCE: Mayo (1980), figures 4-1 and 4-2.

It should be noted that voucher units had to pass an inspection for the household to qualify for the subsidy; hence, one would expect them to do better consistently. The condition of dwellings occupied by cash grant recipients gives an idea of the quality housing current public housing tenants would encounter in their search for a unit in the market. Public housing is clearly superior in both cases to the unassisted housing occupied by similar households. True, many of the deficiencies found in those units are the sort of things that could be fixed at low cost. Nonetheless, there no reason to view the physical conditions of public housing in these two cities as inferior.

A third indicator of competitiveness is the degree of satisfaction expressed by current program participants. Public housing and voucher participants and control households were all asked the following questions:

> In general, how satisfied are you with the house/apartment you now live in--would you say very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied?
>
> In general, how satisfied or dissatisfied are you with this neighborhood as a place to live--would you say very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied?

The responses to these questions were analyzed using multivariate techniques. After controlling for differences among respondents in education, race, age, and household size, in Pittsuburgh voucher recipients were found to be more satisfied with their dwellings than control households, and public housing tenants less satisified than controls. In Phoenix, no significant difference among the three groups was found. In both cities, however, public housing tenants were dissatisified with the neighborhoods in which their units were located, compared to both control households and voucher recipients.

These findings emphasize the project-specific and neighborhood-specific sensitivity of the likely response to vouchers by public housing tenants. Still, public housing in Pittsburgh and Phoenix appears to be generally competitive with vouchers in terms of the quality of housing offered. Of course, public housing must also be cost competitive--a subject we return to later.

A second source of information on the ability of public housing to compete with vouchers comes from the Supply Experiment. The Housing Allowance Supply Experiment (HASE), beginning in 1974 and 1975, operated open enrollment voucher programs in the Green Bay and South Bend metropolitan areas for a decade. Under these programs any eligible household who applied for housing assistance and lived in or moved to a dwelling satisfying the program's standards received assistance.

Eligible households included those living in public housing. This is relevant only for South Bend, since Green Bay has almost no public housing. A public housing tenant could enroll in the voucher program and look for a private market unit while continuing to live in public housing. If a public housing tenant found a suitable unit and shifted to the voucher program, and the rent of his private market unit was less than the FMR, he was permitted to keep the difference between the FMR and actual rent. Thus, the household's disposable income could increase as a result of shifting to the voucher program, since in public housing tenants simply paid a fixed share of their incomes as rent. 1/ In this respect the tenant confronted incentives similar to those that a public housing tenant given a voucher would have if the PHA charged the FMR for public housing units. One difference, though, is that in HASE the public housing tenant had to apply for the program--he did not receive the voucher automatically.

1/ In the inital program year, however, only about one-third of the participants in South Bend rented units for less than the FMR.

Another difference between HASE and the vouchers-for-public-housing possibility concerns the degree of competition faced by the PHA. The open enrollment feature of HASE by its very nature reduced the pool of applicants from which an authority could draw. In this respect, the experience in HASE may overstate the combined problems of move-out and attracting new tenants that would occur in funding public housing through a voucher approach.

The documented experience of public housing in HASE is limited to the initial 15 months of operation of HASE in South Bend.1/ While this is an admittedly limited record, it does cover what might be thought of as the period of greatest risk for authorities. In addition, even confronted with the open enrollment program, the South Bend Housing authority (SBHA) has not had serious occupancy problems over the subsequent several years of the experiment.

During the first 15 months of the operation of the voucher program in South Bend, a few tenants at housing authority projects shifted to the voucher program; and a larger number of those on the waiting list for public housing became participants in the voucher program. Tables 9-7 and 9-8 document these patterns. In particular, Table 9-7 shows that only 20 of 417, or 5 percent, of the non-elderly tenant households in public housing moved out of public housing into voucher assisted units; moreover, only 11 percent of public housing families attempted to quality for the voucher program. By contrast, Table 9-8 shows that 16 percent of the families on the SBHA waiting list became voucher recipients; on the other hand, very few elderly households even got so far as to apply for the voucher program (i.e., be interviewed). One might ask why the response to the voucher offers was so modest. First, Kozimor and Lowry (1977) concluded:

1/ Monitoring the effects on public housing was not in the original analysis program, and this work for South Bend was undertaken when the Housing authority of the City of South Bend requested it.

Table 9-7

SBHA TENANTS APPLYING FOR HOUSING VOUCHERS, BY VOUCHER PROGRAM STATUS: APRIL 1975 THROUGH JUNE 1976

VOUCHER PROGRAM STATUS	HOUSEHOLDS HEADED BY: ELDERLY PERSONS	NONELDERLY PERSONS
Number of Cases		
Total SBHA Tenants a/	263	417
Total Interviewed by HAO	11	103
Declined enrollmeent	7	56
Preferred SBHA	5	31
Other reason	2	25
Enrolled at HAO	4	47
Received payments	2	20
Percent of Total SBHA Tenants		
Total Interviewed by HAO	4	25
Total Enrolled at HAO	2	11
Total Receiving Payments	1	5

DATA SOURCE: Kozimor and Lowry (1977), Table 3.

a/ Average number of tenants, April 1975 through June 1976. The calculation reflects an average monthly vacancy rate of 4.4 and 7.1 percent for elderly and non-elderly units, respectively.

Table 9-8

SBHA APPLICANTS ALSO APPLYING FOR HOUSING VOUCHERS, BY VOUCHER PROGRAM STATUS: MARCH 1975 THROUGH JUNE 1976

	HOUSEHOLDS HEADED BY ELDERLY PERSONS		HOUSEHOLDS HEADED BY NONELDERLY PERSONS	
PROGRAM STATUS	NUMBER	PERCENT	NUMBER	PERCENT
On SBHA Waiting Lists	185	100	515	100
Interviewed by Voucher Office	17	9	267	52
Ineligible	3	2	94	18
Eligible and enrolled	14	8	173	34
Received payments	11	6	81	16

DATA SOURCE: Kozimor and Lowry (1977), Table 4.

> ... we judge SBHA project housing to be as good as or better than the dwellings typically available to renters in the allowance program. (p. 35)

Second, tenants when interviewed expressed little interest in the program, saying that they were generally satisfied with their units, although they were less happy with the neighborhoods in which their projects were located. Finally, the burden of having to locate an acceptable unit, have it inspected by the voucher program, and negotiate a lease was apparently a substantial deterrent to many public housing households.

The picture that emerges from the experience and analysis of public housing in EHAP is that public housing units can be quite competitive with private units available to voucher holders. These results hold over three quite different housing markets. Still, they are fragmentary and they do not include an assessment of whether PHAs would be able to cover costs under a voucher system. Below, analyses for five more markets are presented to supplement the evidence just reviewed.

Simulations of the Voucher System for Five PHAs. The authorities selected for the case studies--New York, Los Angeles, Detroit, Baltimore, and Seattle-manage a large number of conventional public housing units; Seattle manages the fewest units with 5,800. In addition, all are located in large central cities. Obviously, these are a very special set of the 2,800 public housing Authorities. However, they are instructive case studies because of the variety of market conditions in these PHAs' cities, and the differences in the relationships between FMRs and these authorities' current total costs. 1/

1/ The bases for selection of the five PHAs were: large sample sizes for the Annual Housing Survey SMSA sub-surveys and for the 1979 survey of public housing tenant incomes; varied geographical location; and varied market conditions.

Table 9-9 presents some basic figures on the cities in which these PHAs and a number of other large housing Authorities operate; the figures for these cities are simply illustrative, as the cities do not constitute a representative sample. The first three columns show the importance of public housing in each city's rental stock. The fourth column gives the city's score on a hardship index: values greater than 100 indicate that the city is at a disadvantage relative to its suburbs, an indication of the city's general difficulty in being attractive as a residence. Of our five cities, only Seattle does well on this score. Other columns give the ratio of the incomes of renters in the central city to those in the entire SMSA, average annual percentage changes in the number of households and the level of new construction in recent years, and vacancy rates. New York and Detroit have been losing households at a high rate (over 1 percent per year), which indicates softening in the demand for units. Nevertheless, New York, along with Seattle, has a low rental vacancy rate. Detroit, Baltimore, and Los Angeles all have fairly high vacancy rates.

The conflicting messages associated with these various indicators makes any classification of the markets hazardous. Still, some labeling will facilitate the remaining discussion: Baltimore and Detroit are loose markets, Seattle is clearly a tight market, and New York and Los Angeles are in a middle group.

These authorities also would experience quite a range of potential change if funding for public housing were shifted to a voucher system, as reflected in the figures in Table 9-10. The final two columns show the percentage change in the funds each PHA would have available to it for operations and replacements and improvements if it charged 40th percentile movers' FMRs and kept its units occupied. Seattle and Los Angeles have potential increases in resources of 96 and 51 percent, respectively, compared to PFS plus an estimate of funds needed for replacements. At the other end of the group is Baltimore, which stands to have its resources reduced 13 percent unless it can charge more than this FMR for its units. New York's resources are potentially reduced by 7 percent, while Detroit has the potential of realizing a gain of as much as 21 percent.

TABLE 9-9

HOUSING INDICATORS FOR SELECTED CITIES[a]

	PUBLIC HOUSING AS PERCENTAGE OF				RATIO: CENTRAL CITY TO ENTIRE SMSA		AVERAGE ANNUAL PERCENTAGE CHANGE[d]		VACANCY RATES	
	Rental Housing (1)	All Housing (2)	All Units in Large Structures[b] (3)	HARDSHIP INDEX[h] (1970) (4)	Total Households (5)	Renter Family Income[c] (6)	Households (7)	New Construction (8)	Owner Units (9)	Rental Units (10)
New York	5.6	4.1	7.3	211	.70	.88	-1.0	0.5	2.1	5.2
Los Angeles[f]	1.1	0.6	1.9	105	.47	1.02	0.4	1.4	1.7	7.4
Detroit	5.0	2.0	12.3	210	.35	.78	-1.7	0.3	2.1	11.3
Baltimore	10.3	5.6	32.9	256	.39	.80	-0.1	0.2	1.1	7.0
Seattle	5.4	2.5	9.4	93	.42	.92	-0.2	0.5	0.7	5.8
Chicago	5.4	3.4	10.1	245	.47	.84	-1.2	0.6	1.4	6.6
Philadelphia	9.0	0.4	22.4	205	.40	.81	-1.1	0.6	1.7	7.0
Houston	0.9	0.5	1.7	93	.60	.97	2.9	4.2	1.8	8.4
Indianapolis	2.3	1.0	5.7	124	.65	.99	0.9	2.2	2.3	9.3
Washington, D.C.	5.9	4.1	10.3	g	.26	.79	-0.4	0.3	1.8	4.5
San Francisco[e]	2.4	1.5	4.1	105	.36	.85	-0.6	0.8	1.6	9.0
Cleveland	8.6	4.6	23.8	331	.34	.78	-1.2	0.4	2.4	7.6
Boston	8.0	5.7	15.8	198	.22	.83	-2.0	0.4	2.2	10.3
St. Louis	5.9	3.2	24.5	231	.24	.75	-2.4	0.2	1.4	10.2
Denver	4.5	2.3	7.5	143	.39	.89	1.1	2.5	1.1	9.3
Atlanta	14.6	8.7	25.1	226	.29	.77	-1.7	1.6	4.2	13.4
Buffalo	5.8	3.0	32.4	189	.34	.80	-1.4	0.2	1.8	4.8
All Central Cities	g	g	g	g	.46	.90	1.2	1.9	1.6	6.0

DATA SOURCE: Struyk (1980), Table 2. Figures are from Annual Housing Survey, Metropolitan Area Reports, years 1974-76, and Department of Housing and Urban Development, Office of Housing.

[a]All data, except public housing, are for the year in which the SMSA (and central city) were surveyed in the Annual Housing Survey: 1974-Boston, Dallas, Detroit, Los Angeles, Washington, D.C.
1975-Atlanta, Chicago, Philadelphia, San Francisco;
1976-Baltimore, Buffalo, Cleveland, Denver, Houston, Indianapolis, New York, St. Louis, Seattle.
Data for all central cities combined are for 1976, taken from the Annual Housing Survey national reports (parts A and C) for that year.

[b]Denominator is all rental housing in structures with five or more units.

[c]Median income for two or more person households; data for year of the Annual Housing Survey.

[d]Percentage change from 1970 to the year of the Annual Housing Survey, divided by the number of years between 1970 and the AHS for the central city.

[e]Data, except for public housing, are for the San Francisco and Oakland central cities.

[f]Data, except for public housing, are for the Los Angeles and Long Beach central cities.

[g]Entries not tabulated for this analysis.

[h]Index developed by Nathan and Adams (1970). It combines factors like unemployment, education, and income level for central cities and their suburbs into a single figure. A value of over 100 denotes that the primary central city in the metropolitan area is disadvantaged in relation to the rest of the area; the larger the figure, the greater the disadvantage.

Table 9-10

CHANGE IN FUNDS POTENTIALLY AVAILABLE TO SELECTED PHAs IN 1980 UNDER A VOUCHER AT 40TH PERCENTILE MOVERS' RENTS

AUTHORITY	FUNDS AVAILABLE UNDER COMPARISON PFS PLUS REPLACEMENTS[a] (per unit month)	PERCENTAGE CHANGE IN FUNDS AVAILABLE UNDER VOUCHERS COMPARED TO: COMPARISON PFS PLUS REPLACEMENTS	PERCENTAGE CHANGE IN FUNDS AVAILABLE UNDER VOUCHERS COMPARED TO: COMPARISON PFS WITH MODERNIZATION
Case Study PHAs			
New York	$289	-7	-2
Los Angeles	182	51	39
Baltimore	237	-13	-18
Detroit	197	21	5
Seattle	129	96	37
Other Large and Extra Large PHAs			
Chicago	$224	11	4
Philadelphia	234	-13	7
Houston	131	62	27
Indianapolis	143	-7	-20
Washingotn, D.C.	249	-20	-28
San Francisco	235	4	-10
Cleveland	184	-29	-37
Boston	266	-10	-18
Denver	149	57	38
Atlanta	186	8	1
All PHAs	182	3	-16

a/ See Table 9-1 for explanation of the comparison cases. For a number of reasons, these figures cannot be compared directly with funds received under the PFS in 1980 by these PHAs: 1) rental and other revenue is included in "funds available"; 2) the estimate of a replacement and improvement allowance is added. This estimate is included because it is part of the total funds PHAs would have to recover from rents (after making ACC payments) under a voucher system; and 3) 1980 AELs have been adjusted to reflect the inflation factor used by the PFS only since 1982.

Gains would be smaller - and the loss to Baltimore greater - if recent modernization levels are used as the basis of comparison. At the risk of oversimplification, we can characterize these PHAs as follows:

City and PHA	Vouchers at 40th Percentile Movers' Voucher FMRs Compared with Current Costs	Market Conditions
New York	neutral	in-between
Los Angeles	gains	in-between
Baltimore	loses	loose
Detroit	gains	loose
Seattle	gains	tight

This information has helped to set the stage. Now we look more closely at the competitive position of each of the case study authorities.

The ability of a PHA to cover costs depends on the interplay among three factors:

- the rent it charges,
- the number of units occupied, and
- the cost it incurs in providing the services.

The lower the quality of the housing, the lower the rent the authority will be able to charge and achieve satisfactory occupancy rates. Voucher holders, as well as other renter households, can be expected to be careful shoppers. This is because voucher holders are permitted to retain any savings from renting a unit for less than the FMR, and must pay the extra cost of renting above the FMR. On the other hand, if rents are set sufficiently low, the authority may achieve full occupancy but not be able to cover its costs.

The point of departure for looking at the quality of housing operated by the five Authorities is a comparison of the characteristics of the public and private housing stock in each of the five central cities. This has been done using 1976 and 1977 data from the HUD/Census Annual Housing Survey. The AHS distinguishes between public and private housing by asking residents if they live in public housing, other assisted housing, or neither. The proportion of public housing residents reporting various dwelling quality defects and various neighborhood characteristics was compared to the proportion of private market renters reporting the same characteristics. The results, as reported in Table 9-11, show that the typical public housing unit is not inferior to the average private market unit in reported dwelling and neighborhood characteristics in any of the five cities. Public housing residents report dwelling defects no more frequently than private market renters. Furthermore, public housing residents say they are at least as satisfied with their neighborhoods as are private market renters. (Appendix 9-2 gives additional details for these comparisons).

Household responses to Annual Housing Survey questions about their neighborhoods are more subjective than their responses to questions about unit defects. It has been found that responses to the AHS neighborhood questions are not related in the way one would expect to the rent of the interviewed household's unit. However, the responses to questions on neighborhood quality do appear to reflect the likelihood that the household will move out of the unit, which is the behavior we are concerned about when considering the impact of a voucher funding system for public housing.

In addition to making comparisons of individual characteristics of public and private housing as reported in the Annual Housing Survey, we estimated the rents public housing units could command in the open market in each of

Table 9-11

PUBLIC HOUSING AND PRIVATE RENTAL HOUSING CHARACTERISTICS IN FIVE CITIES

COMPARISON OF RESPONSES TO ANNUAL HOUSING SURVEY
QUESTIONS ON HOUSING QUALITY

SMSA	DIFFERENCES NOT STATISTICALLY SIGNIFICANT a/		PUBLIC HOUSING SUPERIOR		PRIVATE HOUSING SUPERIOR	
	Unit Characteristics (#)	Neighborhood Characteristics(#)	Unit Characteristics(#)	Neighborhood Characteristics(#)	Unit Characteristics (#)	Neighborhood Characteristics (#)
New York	11	12	12	4	1	1
Detroit	18	14	6	2	0	1
Los Angeles	18	15	3	0	3	2
Seattle	13	14	10	1	1	2
Baltimore	20	15	3	2	1	0
Total	80	70	34	9	6	6

DATA SOURCE: Annual Housing Survey.

SAMPLE: Annual Housing Survey, 1976 and 1977 SMSA data files.

NOTE: a/ Differences in means were tested using a standard t-test.

the five cities. We did this by using the hedonic technique to estimate the relationship between private housing unit characteristics and their rents and then substituting the characteristics of the public housing units in the rent-predicting equations. 1/

The average predicted rent for each city's public housing units for each of five sizes of units (by number of bedrooms) is shown in Table 9-12. Table 9-12 also lists the contemporaneous FMR for Section 8 Existing Housing in each city. These rents and FMRs are for 1976 or 1977, depending on the year of the Annual Housing Survey data. The full, 50th percentile, FMR levels were somewhat lower in those years than more recently, even after taking inflation into acocunt. The 1980 40th percentile movers' FMRs we have used for estimates earlier in this chapter would be equivalent to 50th percentile 1976 or 1977 FMRs.

The market rent estimate for public housing shown on Table 9-12 may be higher than the actual rents those units could command for three reasons. First, the hedonic rent predictions do not reflect well the locations of housing units within the central cities examined. 2/ If public housing is located in especially low-quality neighborhoods, it will have lower potential rents than our predictions. Second, the units in the AHS samples identified as public housing may include some higher-rent units that are not actually public housing.3/ Finally, the effect on the potential rent of a public housing unit of its identification as public housing is not known. Ultimately, under a voucher system public housing might lose its "stigma", but the crucial period for being able to cover costs is the first few years. 4/

1/ A detailed explanation of the hedonic technique and variables used for this set of hedonic equations appears in Appendix 9-3.

2/ See Appendix 9-3 for more discussion of this point.

3/ See Appendix 9-2 for more discussion of this point.

4/ This is another reason for recommending supplementary funding during a transition.

Table 9-12

ESTIMATED MARKET RENTS FOR PUBLIC HOUSING IN FIVE CITIES

	PUBLIC HOUSING MARKET RENT a/	FAIR MARKET RENT b/	PUBLIC HOUSING RENT AS A PERCENTAGE OF FMR
NEW YORK (1976)			
0 Bedroom	182	181	101%
1 Bedroom	211	205	103
2 Bedroom	231	241	96
3 Bedroom	254	278	91
4 Bedroom	325	314	104
LOS ANGELES (1977)			
0 Bedroom	133	166	80
1 Bedroom	193	188	103
2 Bedroom	214	222	96
3 Bedroom	260	257	101
4 Bedroom	260	292	89
BALTIMORE (1976)			
0 Bedroom	148	148	100
1 Bedroom	152	169	90
2 Bedroom	165	201	82
3 Bedroom	196	232	84
4 Bedroom	166	264	63
DETROIT			
0 Bedroom	128	175	73
1 Bedroom	154	199	77
2 Bedroom	174	235	74
3 Bedroom	188	273	69
4 Bedroom	218	308	71
SEATTLE (1976)			
0 Bedroom	121	153	79
1 Bedroom	155	174	89
2 Bedroom	160	206	78
3 Bedroom	176	247	71
4 Bedroom	239	288	83

DATA SOURCES: Hedonic estimates rents based on Annual Housing Survey, 1976 and 1977 SMSA data files; FMRs from Federal Register.

Notes:

a/ Estimated rent to a new occupant of a public housing unit located in the central city.

b/ 1976 or 1977 FMR from the Federal Register. These FMRs were lower than 1980 FMRs in constant dollars and would be about equivalent to the 40th percentile movers' FMRs used as the basis for analysis elsewhere in this chapter.

Even if the market rents for public housing in Table 9-12 are not over-estimates, it appears that public housing could not generally be rented for the 40th percentile movers' FMR. Only for New York and Los Angeles does public housing appear to have a potential rental value as high as this FMR.

Table 9-13 compares the costs of public housing that would have to be covered by rents in each of the five SMSAs with the FMRs and the market rents just estimated. ACC debt service payment are added to the estimates of current PFS funds available and a replacement allowance, since PHAs would be required to reimburse the Federal Government for ACCs out of the rents collected.

If they were able to charge the 40th percentile movers' FMR and keep their units occupied, the Seattle, Detroit and Los Angeles PHAs would be able to cover costs. New York and Baltimore would not be able to.1/ However, if they could charge only the market rent we have estimated for public housing (as we have noted, probably an over-estimate of the rent of these units), Detroit would be added to the list of PHAs unable to cover costs. New York would have a deficit of $58 per unit month compared with current costs, Baltimore a deficit of $86 p.u.m., and Detroit, $20.

In order to test whether the patterns observed on Table 9-13 hold if market conditions and household mobility rates are taken into consideration, we developed a simulation model that included these factors and applied the model to the five cities. The model assumes that public housing tenants are given a voucher and that they move into private market housing only if:

1) there is a greater than 5 percent vacancy rate for units with rents below the FMR of the appropriate bedroom size; and

2) the household would have chosen to move at that time in any case, based on mobility rates for different types of households living in public housing.

1/ This is the same as the finding shown on Table 9-10, above. The size of the differences between FMRs and current costs are not the same for Table 9-10 and 9-12 because the years for which the comparisons are made are not the same for the two tables.

Table 9-13

PHA COSTS, FMRs AND PUBLIC HOUSING MARKET RENTS

1976 or 1977 dollars p.u.m.

SMSA (year)	CURRENT COSTS FOR OPERATIONS AND IMPROVEMENTS a/	ACCs b/	TOTAL COSTS (current costs and ACCs)	FMRc/	FMR AS PERCENT OF COST	ESTIMATED MARKET RENTc/	MARKET RENT AS PERCENT OF COST
New York (1978)	$234	$59	$293	$242	83%	$235	80%
Los Angeles (1977)	156	56	212	219	103%	213	100%
Baltimore (1976)	186	69	255	200	75%	169	66%
Detroit (1977)	146	39	185	222	120%	165	89%
Seattle (1976)	96	52	148	194	131%	159	107%

DATA SOURCES: PFS Cross Section Analysis Sample and hedonic equations based on 1976 and 1977 SMSA files.

NOTES:

a/ This corresponds to "funds available" for the PFS plus Replacements comparison case. 1980 costs are deflated to the appropriate AHS year, using the city's all-item CPI as the deflator.

b/ For development and past modernization, 1981, deflated to the appropriate AHS year.

c/ Weighted by public housing bedroom size distribution. Corresponds approximately to 40th percentile movers' FMRs as FMRs are currently calculated.

The model further assumes that private market renters move into public housing if:

1) a random search through the housing market (all vacant units, public and private, with rents lower than their current rent) leads them first to a public housing unit; and

2) the household would have chosen to move at that time in any case. (See Appendix 9-4 for a more detailed description of the model).

The model was run at two different FMR levels: a high, FMR, approximately equivalent to the 40th percentile rent of recent movers, and a low FMR, set at 80 percent of the 40th percentile movers' FMR.

In both cases it was assumed both that public housing tenants would move into a private unit if it rented below the specified FMR and that PHAs would charge that FMR as rent for a public housing unit. In fact, other scenarios are plausible. The household may be willing to pay more for a private rental unit than for a public housing unit. In fact, this is what is implied by the estimates of public housing rents reported in Table 9-12 and 9-13 for New York and Los Angeles. The model may also assume a "best case" in that it uses a relatively high vacancy rate (5 percent) as the rate below which public housing tenants are unable to move to private housing and assumes absolutely no effect of the voucher on the mobility rates of public housing tenants. Finally, the model may be overly generous to public housing in using the household's current rent as the only test of whether a private renter would reject a public housing unit.

Despite the fact that, in the several features just enumerated, the model is probably conservative in its estimates of the number of public housing vacancies that would result from the voucher system, the results of the simulation confirm the results observed form looking just at the comparison between costs of public housing and market rents of public housing units.

Table 9-14 shows the results of the simulation for occupancy rates and PHA revenues. The "pre-move" columns of the table assume the PHA is collecting FMR for each unit and that vacancy rates are the pre-voucher rate for that PHA. In some cases, the simulation shows the occupancy rate and, therefore, rental revenues p.u.m. rising after the move-outs and move-ins have occurred. (The results for Detroit are not shown, because of problems with the simulation for that city). However, gains in occupancy are more likely at the lower FMR levels (lower FMRs both make it harder for public housing tenants to find private units and make public housing cheaper for private market movers).

Table 9-15 compares revenues for each of four PHAs under the high and low FMR scenarios with the total costs that must be covered by rents. Seattle covers costs under both high and low rent scenarios. New York and Baltimore have substantial shortfalls, even in the event that they are able to charge the high FMR for their units. If our estimates of the market rents of public housing units in New York are correct, New York is likely to be able to charge the equivalent of the high FMR. However, New York would still not be able to cover its current costs, since they are greater than the FMR. Baltimore would not be able to cover costs by charging the FMR and would not be able to charge the high FMR on average for its current inventory of projects. Los Angeles would have a shortfall of $36 p.u.m., or 17 percent of total costs, under the low rent scenario, but would cover costs under the high rent scenario. (Los Angeles gains in occupancy under both scenarios, presumably because its relatively tight housing market discourages move-outs and both the tight market and high mobility rates for private renters encourages move-ins). Los Angeles would be able to charge the high FMR for its current public housing stock, if our estimates of the market rents of its units are correct.

The results of our examination of the market value of public housing, current costs, and likely changes in occupancy rates for five PHAs suggest that the voucher system of funding for public housing would require radical changes

Table . .4

EFFECT OF VOUCHER SYSTEM ON PUBLIC HOUSING OCCUPANCY

1976 or 1977 DOLLARS P.U.M.

	PRE-MOVE		PERCENT OF PHA UNITS VACATED	PERCENT OF PHA UNITS OCCUPIED BY NEW TENANTS	POST-MOVE		PERCENT CHANGE IN REVENUES
	PUBLIC HOUSING OCCUPANCY RATE	PHA REVENUES UNDER VOUCHER PROGRAM (p.u.m.)			PUBLIC HOUSING OCCUPANCY RATE UNDER VOUCHER PROGRAM (p.u.m.)	PHA REVENUES UNDER VOUCHER PROGRAM (p.u.m.)	
ew York (1976)							
FMR	99.22%	$241.05	15.25%	8.05%	91.09%	$223.87	-7.1%
.8 FMR	99.22%	192.88	12.30%	12.42%	100%	193.12	+0.1
altimore (1976)							
FMR	96.39%	193.49	13.75%	11.05%	95.69%	194.42 a/	+0.5%
.8 FMR	96.49%	154.89	11.61%	11.54%	96.42%	154.66	-0.2%
os Angeles (1977)							
FMR	93.20%	206.64	10.69%	17.49%	100%	219.77	+6.4%
.8 FMR	93.20%	165.53	7.19%	13.99%	100%	176.05	+6.4%
eattle (1976)							
FMR	95%	186.52	19.57%	19.17%	94.60%	186.77a/	+0.1%
.8 FMR	95%	149.24	3.80%	7.10%	98.30%	154.39	+3.5%

ATA SOURCES: Annual Housing Survey 1976 and 1977 SMSA data files and 1979 public housing tenant income survey (described in Sadacca and Loux, 1980).

OTES:

/ Actual 1976 or 1977 FMR, which would be equivalent to a 1980 FMR based on the 40th percentile rent of recent movers.

/ Revenues increase despite loss in occupancy because of change in bedroom size distribution of vacancies.

Table 9-15

CURRENT PHA COSTS AND PHA REVENUES UNDER HIGH AND LOW VOUCHER FMRs

1976-1977 DOLLARS P.U.M.

PHA	TOTAL COSTS a/	HIGH FMR b		LOW FMR b	
		DOLLAR SURPLUS/ DEFICIT	PERCENTAGE SURPLUS/ DEFICIT	DOLLAR SURPLUS/ DEFICIT	PERCENTAGE SURPLUS/ DEFICIT
New York (1976)	293	-69	-24%	-100	-34%
Baltimore (1976)	255	-61	-24	-100	-39
Los Angeles (1977)	212	+8	+4	-36	-17
Seattle (1976)	148	+39	+26	+6	+4

NOTES:

a/ From Table 9-13. Includes operations, replacements and improvements and debt service. 1980 costs are deflated to appropriate AHS year, using the city's all-item CPI as the deflator.

b/ The high FMR is the actual FMR for these cities for 1976 or 1977 and would be equivalent to a 1980 FMR based on the 40th percentile rent of recent movers. The low FMR is 80 percent of the actual 1976-1977 FMR and would be somewhat lower than a 1980 FMR based on the 40th percentile rent of all units except newly constructed units.

in the cost structures of many PHAs. Baltimore, in particular, would probably need to make radical changes in its inventory of public housing units in order to continue to operate at all. Baltimore would have to dispose of many high-cost units or units that have low market rental value. New York would have to make substantial the changes in its cost structure, as it would under FMR system described in Chapter 8, if the 40th percentile movers' rents were used as the basis for that system.

There are, then, two reasons that a PHA might be forced by a voucher system to a make major changes in its cost structure. First, the vouchers provided to public housing tenants might not provide sufficient revenue to cover current public housing costs, even if those tenants, and/or unsubsidized tenants, were willing to pay a rent equivalent to the voucher FMR (for public housing tenants this would mean paying the Federally-determined "rent contribution" for the public housing unit). This PHA would be in the same situation as under a FMR funding system that provided the PHA with less than its current revenue (see Chapter 8). Second, under a voucher system the PHA might not be able to charge rents as high as the FMR for its current inventory of projects. Depending on the size of the drop from the PHA's current revenue as a result of one or both of these factors, the PHA might have to dispose of several of its higher-cost (or lower value) projects in order to be able to operate under a voucher system.

APPENDIX 9-1

PRESENTATION OF FUNDING FORMULA

The discussion of funding can be formalized and clarified through the presentation of some basic formulae. First, define the subsidy received by the kth household under a voucher program and living in public housing, S_k, as

$$S_k = rij - {}^{b}jy_k$$

where

Y_k is the income of the kth household:

b_j is the share of income the household must spend on the dwelling in project j;

r_{ij} is the rent of a unit of the ith number of bedrooms in project j.

FMR_i is the Fair Market Rent or payment standard on which the amount of Federally funded subsidy for a particular locality and household size is based.

Note that b_j effectively varies from some standard figure (e.g., 0.3) depending on the relation between FMR_i and rij: where $FMR_i >$ rij, then b_j is less than the standard; where $FMR_j <$ rij, b_j is greater than the standard. The revenue potentially available to the PHA as a result of Federal programs, R^V, is simply

$$R^V = ij$$

$$\sum\sum rij^V$$

where

v is the "voucher status" of the household occupying the ijth dwelling.

The "voucher status" subscript is simply an indicator to emphasize that the authority will have three types of tenants; those who were living at the authority at the time of the shift to the vouchers, those who moved in after the start-up of the voucher system who brought a voucher with them, and post start-up tenants without vouchers. Finally, the net revenue available to the PHA for operating expenses and improvements and reserves, NR, is

$$NR = R - ACC$$

where

ACC is the total debt service payments on bonds and notes incurred before implementation of the voucher system.

APPENDIX 9-2

Public and Private Housing Characteristics in Five Cities

Data Reliability

The Annual Housing Survey data used here is subject to two type of errors: sampling error and response error. Before sampling is done, every dwelling in a given SMSA has an equal probability of selection. The actual sample of dwellings may not precisely mirror the average unit in the population, however. Hence the public housing units surveyed by the AHS may not reflect the average public housing unit. Second, in both the AHS and the Current Population Survey, more respondents report living in public housing than actually do. Many households who receive rent subisides do not know what housing program they participate in. Over-reporting public housing units will affect our results if dwellings whose occupants report living in public housing and do not are different from public housing dwellings. There are many other housing programs in addition to the Public Housing Program. Some of these housing programs, such as military housing and housing on state university campuses, do not serve lower income households. However, we do not know if the average public housing unit is very different from the average unit mistakenly reported as public housing. Therefore, we are not in a position to predict to what extent the results are affected by response error.

Findings

A total of 24 unit characteristics and 17 neighborhood characteristics were compared in each of the five central cities. Table 9-2-1 decribes each of the 24 characteristics and the results of the comparison city by city. In several instances public housing is superior to the stock of private

Table 9-2-1

COMPARING PUBLIC HOUSING TO PRIVATE MARKET RENTAL DWELLINGS:
CENTRAL CITY NEW YORK, DETROIT, LOS ANGELES, SEATTLE AND BALTIMORE

CHARACTERISTIC	DIFFERENCES NOT STATISTICALLY SIGNIFICANT	PUBLIC HOUSING SUPERIOR	PRIVATE HOUSING SUPERIOR
UNIT CHARACTERISTICS			
Plumbing			
Has complete plumbing facilities	D,L,S,B	N	
Connected to public sewer	N,D,L,S,B		
Flush toilet breakdown lasting six hours or more	N,D,S		L,B
Piped water in building	N,D,L,S,B		
Kitchen			
Complete kitchen facilities	D,B	N,L,S	
Kitchen appliances all useable	N,D,L,S,B		
Physical Structure			
Roof leaks	D,L	N,S,B	
Basement leaks	N,D,L,S,B		
Cracks in walls or ceilings	D,L,B	N,S	
Holes in floor	L,B	N,D,S	
Peeling paint over one sq. ft.	N,D,L,B	S	
Broken plaster over one sq. ft.	N,D,L	S,B	
Signs of rats or mice	N,L,S,B	N	

Table 9-2-1 (continued)

COMPARING PUBLIC HOUSING TO PRIVATE MARKET RENTAL DWELLINGS:
CENTRAL CITY NEW YORK, DETROIT, LOS ANGELES, SEATTLE AND BALTIMORE

CHARACTERISTIC	DIFFERENCES NOT STATISTICALLY SIGNIFICANT	PUBLIC HOUSING SUPERIOR	PRIVATE HOUSING SUPERIOR
UNIT CHARACTERISTICS			
Common Area			
Light fixtures in public halls	D	N,B	L,S
Public hall lights working	N,D,L,S,B		
Hazardous steps	N,D,S,B	L	
Firmly attached stair railings	N,L,S,B	D	
Multi-story building lacks elevator	D,L,B	N,S	
Heating			
Space heater lacks flue	D,S,B	N,L	
Heat breakdown lasting six hours or more	L,B	N,D,S	
Electrical			
Working electrical wall outlets in all rooms	L,B	N,D,S	
Blew fuses in last 90 days	D,L,S,B		N
All wiring in house concealed	L,B	N,D,S	
Lacks use of telephone	N,S,B	D	L

Table 9-2-1 (continued)

COMPARING PUBLIC HOUSING TO PRIVATE MARKET RENTAL DWELLINGS:
CENTRAL CITY NEW YORK, DETROIT, LOS ANGELES, SEATTLE AND BALTIMORE

CHARACTERISTIC	DIFFERENCES NOT STATISTICALLY SIGNIFICANT	PUBLIC HOUSING SUPERIOR	PRIVATE HOUSING SUPERIOR
NEIGHBORHOOD CHARACTERISTICS			
Transportation			
Heavy street traffic a problem	N,D,L,S,B		
Street in need of repair	D,L,S,B	N	
Street in lighting adequate	N,D,L,S,B		
Pollution			
Street noise a problem	N,D,L,S,B		
Trash, litter, or junk in street	N,D,L,S,B		
Commercial activity in neighborhood	D,L,S,B	N	
Odors, smoke, or gas a problem	N,D,L,S,B		
Airplane noise a problem	N,D,L,S,B		
Rundown houses in neighborhood	D,S,B	N	L
Conveniences			
Shopping facilities adequate	D,B		N,L,S
Schools adequate	D,L,S	N,B	
Hospitals adequate	N,L,B	D,S	
Security			
Crime a problem	N,D,L,S,B		
Police protection adequate	N,D,L,S,B		
Fire protection adequate	N,L,S,B	D	
Abandoned Buildings in Neighborhood			
Reported by respondent	N,D,L,S	B	
Reported by enumerator	N,L,B		D,S

SAMPLE: Annual Housing Survey, 1976 and 1977 SMSA data files.

SYMBOL KEY: N represents New York City
D represents Detroit
L represents Los Angeles
S reprsents Seattle
B represents Baltimore

market dwellings, since fewer public housing residents report dwelling defects and undesirable neighborhood characteristics. In New York, just over one-half of the comparisons favored public housing as a place to live in terms of unit characteristics and nearly one-third of the New York comparisons favored neighborhoods having public housing. Public housing in Seattle also compares favorably with the private stock with 10 of the 24 comparisons favoring public housing. Fewer New York City public housing residents report that their units lack complete plumbing facilities, or lack complete kitchens, report leaking roofs, cracks in walls or ceiling, holes in floors, or signs of rats or mice compared to private market units. In addition, fewer New York City public housing residents report heating defects or heating equipment breakdowns and report fewer electrical problems. Seattle public housing residents also report fewer structural, heating, and electrical defects.

According to their occupants, New York City public housing units are located in better neighborhoods compared to private market units. Public housing residents report fewer problems with neighborhood streets, commercial activity, rundown houses, and inadequate schools. The only aparent flaw with the location of public housing is that it lacks adequate shopping facilities. Public housing residents in New York, Los Angeles, and Seattle report a problem with adequate shopping facilities. With the exception of adequate shopping facilities, public housing is either not different from or is preferred to the private stock in terms of transportation facilities, pollution, convenience, security, and location of abandoned buildings.

APPENDIX 9-3

HEDONIC ESTIMATES OF THE MARKET VALUE OF PUBLIC HOUSING UNITS IN FIVE CITIES

The hedonic technique estimates an equation that expresses rent as a function of the unit's structural, household, and neighborhood characteristics. Rent represents an expenditure on housing services. Housing service denotes the benefit derived from a unit: shelter, heating and/or cooling equipment, cooking facilities, neighborhood amenities, and local public services. If per-unit prices of housing services are constant within a housing market, then dwellings providing more services demand higher rents. Hence, a three-bedroom unit demands a higher rent compared to a two-bedroom unit, other influences held constant.

Structural characteristics of private market units in the AHS included in the hedonic equations we estimated for these five cities are: number of bedrooms, bathrooms, and other rooms (excluding kitchens); whether or not the unit is a single-family attached, detached, or multifamily structure; and the dwelling's age. The area a dwelling is located in also influences rent. Other things equal, units in desirable areas having adequate transportation facilities and reliable public services command higher rents than do units in neighborhoods that lack these amenities. A complete list of hedonic variables used to predict rents for the five SMSAs appears in Table 9-3-1. Predicted rents for public housing are for the central city PHA's jurisdiction only (i.e., Los Angeles but not Long Beach for the Los Angeles SMSA).

The hedonic technique for predicting rents has several advantages and disadvantages. The primary advantage is that it incorporates many dwelling characteristics and allows the analyst to examine the influence of each

Table 9-3-1

HEDONIC VARIABLE DEFINITIONS

Variable Name	Definition
Structural Variables	
BUILT1a	Equals 1 if structure built since 1970, 0 otherwise
BUILT2	Equals 1 if structure built between 1960 and 1970, 0 otherwise
BUILT3	Equals 1 if structure built between 1950 and 1960, 0 otherwise
BUILT4	Equals 1 if strucure built between 1940 and 1950, 0 otherwise
BUILT5	Equals 1 if structure built before 1940, 0 otherwise
CELLAR1	Equals 1 if structure has a basement, 0 otherwise
NUNITS2a	Equals 1 if building is single family detached, 0 otherwise
NUNITS3	Equals 1 if building is single family attached, 0 otherwise
NUNITS4	Equals 1 if building is a single duplex attached, 0 otherwise
NUNITS5	Equals 1 if building has 3 or 4 units attached, 0 otherwise
NUNIS56	Equals 1 if building has 5 to 9 units attached, 0 otherwise
NUNITS7	Equals 1 if building has 10 to 19 units attached, 0 otherwise
NUNITS8	Equals 1 if building has 20 to 49 units attached 0 otherwise
NUNITS9	Equals 1 if building has over 50 units attached, 0 otherwise
BEDRMSa[a]	Equals 1 if unit has 0 bedrooms, 0 otherwise
BEDRMS2	Equals 1 if unit has 1 bedroom, 0 otherwise
BEDRMS3	Equals 1 if unit has 2 bedrooms, 0 otherwise
BEDRMS4	Equals 1 if unit has 3 bedrooms, 0 otherwise
BEDRMS5	Equals 1 if unit has 4 bedrooms, 0 otherwise
BEDRMS6	Equals 1 f unit has 5 or more bedrooms, 0 otherwise

Table 9-3-1 (cont'd.)

HEDONIC VARIABLE DEFINITIONS

Variable Name	Definition
Structural Variables	
Contract Condition Variables	
ELECINC	Equals 1 if electricity included in rent, 0 otherwise
WATRINC	Equals 1 if water is included in rent, 0 otherwise
TRSHINC	Equals 1 if trash collection is included in rent, 0 otherwise
GAS1	Equals 1 if natural gas is used and excluded from rent, 0 otherwise
GAS2	Equals 1 if natural gas is used and included in rent, 0 otherwise
OIL1	Equals 1 if oil, coal, or kerosene are used and excluded rent, 0 otherwise
OIL 2	Equals 1 if oil, coal or kerosene are used and included in rent, 0 otherwise
Location Variables	
New York	
COUNTY1[a]	Equals 1 if unit is in Bronx County, 0 otherwise
COUNTY2	Equals 1 if unit is in Kings County, 0 otherwise
COUNTY3	Equals 1 if unit is in Nassau County, 0 otherwise
COUNTY4	Equals 1 if unit is in New York County, 0 otherwise
COUNTY5	Equals 1 if unit is in Queens County, 0 otherwise
COUNTY6	Equals 1 if unit is in Richmond County, 0 otherwise
COUNTY7	Equals 1 if unit is in Suffolk County, 0 otherwise
COUNTY8	Equals 1 if unit is in the balance of the SMSA, 0 otherwise
Detroit:	
COUNTY1[a]	Equals 1 if unit is in Macomb County, 0 otherwise
COUNTY2	Equals 1 if unit is in Oakland County, 0 otherwise
COUNTY3	Equals 1 if unit is in Wayne County, 0 otherwise

Table 9-3-1 (cont'd.)

HEDONIC VARIABLE DEFINITIONS

Variable Name	Definition
Structural Variables	
Los Angeles:	
COUNTY1[a]	Equals 1 if unit is in Los Angeles County, 0 otherwise
COUNTY2	Equals 1 if unit is in Long Beach County, 0 otherwise
COUNTY3	Equals 1 if unit is in Los Angeles' Suburbs, 0 otherwise
Seattle:	
COUNTY1	Equals 1 if unit is in Seattle's Central City, 0 otherwise
Baltimore:	
COUNTY1[a]	Equals 1 if unit is in Baltimore County, 0 otherwise
COUNTY2	Equals 1 if unit is in Baltimore's Central City, 0 otherwise
COUNTY3	Equals 1 if unit is in the balance of the SMSA, 0 otherwise

characteristic on rent. The hedonic equation's ability to accurately predict rents is limited by the quality of the data used in estimating the hedonic equation, however. The major disadvantage of AHS data is that they lack specific locational information. The Bureau of the Census, which conducts the AHS, does not identify any area that represents fewer than 250,000 households. This confidentiality requirement allows only limited geographic disaggregation. Only eight locations are identified in the New York SMSA, three in Detroit, three in Los Angeles, two in Seattle, and three in Baltimore. Within each identified location, there is substantial variation in rents that can be attributed to unmeasured neighborhood influence. This variation cannot be accurately identified using AHS data and therefore predicted rents for specific dwellings are in error because the dwellings are in better or worse neighborhoods than the average neighborhood embodied in the regression results.

APPENDIX 9-4

SIMULATIONS OF THE EFFECT OF A VOUCHER SYSTEM ON PHA OCCUPANCY RATES

For each SMSA, the simulation model begins by separating public housing units from private market units in the central city of the SMSA. The private market units are then identified as either occupied or vacant. The program proceeds by calculating the vacancy rate for private market dwellings of different sizes renting at: (1) below the FMR; and (2) above the FMR. With vacancy rates for private market units established, the simulation program predicts mobility for public housing tenants. Mobility out of public housing is prohibited if the vacancy rate for affordable units (units renting for less than the FMR) and appropriate size is less than 5 percent. If the vacancy rate for a particular sized unit exceeds 5 percent then the program predicts mobility for public housing tenants who would need a unit of that size using a mobility function estimated from a 1979 public housing tenant income survey. These functions express the probability of moving out of public housing within one year as a function of household's income, household head's age, sex, and race, number and ages of children present, and whether or not the spouse is present. The average mobility rates were 20 percent for zero-bedroom units 23 percent for one-bedroom units, 35 percent for two-bedroom units, 25 percent for three-bedroom units, and 20 percent for four-bedroom units. Using these functions, an estimated probability of moving out of public housing is computed for each tenant, and a random number is drawn. If the random number is less than the probability of moving and if the vacancy rate for affordable units exceeds 5 percent, then the household moves to one of the affordable private market dwellings. This sequence is performed for all public housing residents.

Next, it's the private market renters turn. Probability of moving was taken from the AHS based on income, race of head of household, and location (central city or suburbs). Each central city private market renter has a probability of moving. This probability is compared to a randomly drawn number

and the household is forced to search for a dwelling if its probability of moving is greater than the randomly drawn number. The moving private market household searches over all randomly sorted private and public housing units and moves to the first vacant dwelling here the rent charged is lower than the household's current rent. That vacant unit is now classified as occupied and the unit vacated by the moving household is classified as vacant. This sequence is followed for all private market renters.

The simulation model computes the following values: (1) pre-mobility, i.e., after implementation of vouchers but before any reaction to them, public housing vacancy rates; (2) pre-mobility public housing rental revenues per unit month; (3) the percent of public housing tenants moving out and the number of private renters that take their place; (4) post-mobility public housing vacancy rates; (5) post-mobility public housing rental revenues assuming the FMR is charged; and (6) the percent change in public housing rental revenues resulting from the changes in the occupancy rate. The post-mobility public housing rental revenues are then compared to PHA costs to determine whether the PHA can cover costs under the assumed rent schedule.

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CHAPTER X

ALTERNATIVE FUNDING SYSTEMS: A SYSTEM BASED ON PRIVATE MARKET OPERATING COSTS

10.1 INTRODUCTION

A funding system for public housing operating costs based on private market operating costs represents another possible system warranting consideration. In its simplest form, such a system would establish benchmark "allowable costs" based on private market operating costs for localities and invoke a subsidy formula representing the difference between the benchmark private costs and PHA revenues. Annual payments for development and modernization costs would be handled outside this funding system. A method of adjusting costs for inflation would be needed.

The rationale for such a system is similar to that of a FMR or voucher-based system: to use the discipline of the private market as a means of encouraging cost-effective use of the public housing stock. Attractive aspects of this system include its potential simplicity and the desire to establish an acceptable level of operating expenses based on private market experience.

There are also formidable problems with a funding system based on private market operating costs. The major problems are both methodological and practical in nature:

- The only available private market data comprise a self-selected sample of buildings. There is no way to determine what kind of bias this introduces into the data.
- There is little or no information on important characteristics of the private market buildings that affect costs: their location (city or suburb/high crime or low crime areas); their structural characteristics, such as building age, size, design, quality of the materials; tenant characteristics (primarily elderly persons or families, etc.); and tenant services offered (if any).
- The coverage of the private market sample is very thin in certain areas, particularly for elevator buildings (which make up a substantial portion of public housing stock). Also, all of the private sector data are from metropolitan areas and many of the city samples are much too small to be used individually.

- It is inappropriate to compare private market operating costs directly with public housing operating costs: each sector faces a somewhat different set of cost pressures. For example, the low-income tenantry and neighborhoods served by public housing impose additional costs not always reflected in private market data (such as additional costs for social services, security, or maintenance). Indeed, public housing is known to serve more tenants with particular difficulties securing housing: the disabled, larger households, minorities. At the same time, the rulings of local courts, PHA procedures and eviction regulations for public housing make it difficult to remove problem tenants. Thus, costs for rent collection, vandalism, and litigation can be substantial. In addition, administrative costs for certifying tenant incomes for eligibiltiy and following prescribed tenant selection procedures are incurred for public housing unlike the private market.

  On the other hand, real estate taxes are much more important costs for the private sector than for public housing and should not be considered when costs are compared. Moreover, operating costs in the private sector are dependent on funds available through rents, which are in turn dependent on supply and demand conditions in the local market. Supply and demand conditions are far less relevant to operating funds available to Public Housing Authorities.

The system cannot be acceptable if the underlying data for the private sector are deficient in important respects. If a series of adjustments to the private market data were sought in an effort to take account of additional PHA costs, the simplicity and "discipline" of the system would be diminished. Finally, transitional problems are inevitable to the extent that the private market system is not highly correlated with the current system or involves substantially fewer subsidy dollars in general. PHAs may be put into a precarious financial status.

It should be stated at the outset, therefore, that unlike the alternative funding systems presented in previous chapters, a system based on private market operating costs is not considered viable at the present time for the reasons just mentioned and discussed in more detail below. Nevertheless, general comparisons of private market and public housing operating costs are conducted based on available data to indicate the magnitude of differences in operating cost levels and patterns of expenditures.

The availability of private market data and limitations of the data are discussed first. Comparisons of public housing and private market operating

costs (based on the available data) follow. Reasons for rejecting a system based on private market costs as a feasible system are then summarized.

10.2 NATURE OF AVAILABLE DATA

IREM Data

The Institute of Real Estate Management (IREM) of the National Association of Realtors collects income and expense data on a national sample of private market apartment buildings. The data are published annually in a volume Income/Expense Analysis: Apartments. 1/ This is the most comprehensive source of data available on private market operating costs. Income and expenses per square foot of residential building space are provided for a large number of income and expense items. Data are furnished for four building types: elevator buildings, low-rise buildings with 12-24 units, low-rise buildings with 25 or more units, and garden-type buildings. The data are reported for six regional areas in the United States and for selected metropolitan areas. However, the sample sizes for the metropolitan areas are too small for acceptable comparisons (for example, 6 elevator buildings are sampled in Newark, 8 elevator buildings in Cincinnati, and 11 elevator buildings in Los Angeles).

Limitations of the IREM Data

The most fundamental limitations of the IREM data are the self-selection which underlies the sampling process, the lack of a consistent sample from year to year, sparse information on the characteristics of the buildings, and the small geographic sample sizes which preclude obtaining localized private market cost figures directly from the IREM data. Instead, a price index would have to be used in combination with the IREM regional data to derive

1/ Data for this analysis come from Income/Expense Analysis-Apartments, 1980 Edition, Institute of Real Estate Management. The data pertain to income and expenses actually incurred calendar year 1979. Data for public housing authorities and HUD insured projects come from operating statements for fiscal year ending 1980 (except for PHAs with fiscal years ending in December--the FYE 1979 statement is used). These costs also reflect 1979 costs. This is because PHA fiscal years end in December, March, June and September (with a fairly even distribution). Since the operating time frame spans a 21 month period (January 1979 through September 1980), the mid point is October 1979.

local allowable cost levels. These factors are discussed in more detail below.

The sample consists of those properties voluntarily reported to the Institute of Real Estate Management by real estate managers (the institute's own members, certified property managers, and "the public at large which is involved with the fiscal management of multi-unit properties"). As a result, it is subject to self-selection and, therefore, a bias of unknown proportions. In addition, the sample changes substantially from year to year. The percentage of buildings represented in the sample for four consecutive years is less than 20 percent. This greatly impedes the reliability of the data in determining variations over time.

In order to compare private operating costs with public housing operating costs, one would like to control for factors which affect costs such as the age of the housing stock and infrastructure, the size and type of units, tenant composition, neighborhood characteristics and operating conditions. Unfortunately, we know very little about the characteristics of the private market sample other than the structure type, average size of units, and kind of utilities furnished. Information on the age of the stock is typically not presented while information on the infrastructure, neighborhood characteristics, and tenant composition (the age of tenants, for example, being relevant to costs) is not known. 1/

The problem of obtaining localized cost figures (since local samples represented in the IREM data are too small for reliability) can be addressed by using a price index in combination with the regional data. Obviously, this is not a perfect solution since the source data vary according to only six regional categories. Nevertheless, a local allowable cost figure could be

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1/ Although data on the age of buildings are collected, they are not available for the full regional sample. Indeed, IREM will not release the data tapes to users. The only information on the age of the stock pertains to buildings represented in the sample for four consecutive years (less than 20 percent of the sample) and a few metropolitan areas. It should also be noted that approximately 8 percent of the sample is composed of subsidized buildings. According to a phone conversation with a IREM staff member, 200 to 300 forms for subsidized buildings were incorporated in the sample in 1981--a number considered comparable to that for 1980. Without the data tapes, it is not possible to distinguish these buildings.

constructed once a price index is chosen. Candidate price indices include components of the Consumer Price Index (such as the household furnishings and operations index) local government wage rates (LGWRs), or a combination of price series. 1/ This same index could be used for annual inflation adjustments.

In summary, the IREM data is the largest and most detailed data base of private market housing operating costs. However, the data have debilitating drawbacks when considered as the basis for devising a system of public housing "allowable" costs. The self-selected sample, the lack of descriptive characteristics of the buildings, and the highly aggregated geographical coverage all impair the usefulness of the data.

OLMS Data

Another source of data on operating costs of privately owned and operated housing comes from the Office of Loan Management System (OLMS) at HUD. This system collects data on operating costs of housing insured by the FHA. Six program types were chosen for the purpose of this analysis. The two "nonsubsidized" programs are Section 207 and Section 221(d)(4) non-Section 8 projects. The other four programs involve interest or rent subsidies: Section 202, Section 236, Section 221(d)(3), and Section 221(d)(4)-Section 8.

The OLMS data are of interest for comparative purposes and, in the case of the subsidized programs, because the tenant characteristics of this housing are relatively close to tenant characteristics in public housing. Indeed, operating costs of the subsidized programs are also useful for comparison since they include administrative costs of certifying tenants for income eligibility--comparable to costs incurred by PHAs.

However, there are overwhelming disadvantages to this data set as well. The number of units represented in any one program is too limited for development of local cost levels. Moreover, operating costs for projects in the OLMS

1/ The extent to which various indices, or combinations of them, have adequate coverage and represent housing goods and services has been previously discussed in analyses of the PFS inflation factor. See Merrill et al. and Struyk et al.

system are heavily influenced by HUD policies about both revenues and expenses. For example, many projects insured under Section 236 or Section 221(d)(3) may have inadequate subsidies and may therefore be spending inadequate amounts for maintenance and other operating expenses. At the other end of the spectrum, some projects may be more than adequately subsidized but may be encouraged to overspend on operating costs because the projects are operating under limited dividend rules.

10.3 COMPARISON OF PRIVATE COST DATA WITH PUBLIC HOUSING DATA

Total operating costs less property taxes (or payments in lieu of taxes in the case of public housing) are shown for the private sector IREM sample in Table 10-1 and for public housing authorities in Table 10-2. 1/ Sample sizes are shown in Table 10-3. The exclusion of property taxes is important for comparability since PHAs are exempted from paying property taxes and make only a token payment to local governments--10 percent of shelter rents or less--whereas property taxes make up a substantial component of operating costs for private sector housing. 2/

The comparisons are made corresponding to the six regional groups for which private sector data are reported. A weighted average private sector operating cost has been computed for each region (and for the total IREM sample) which aggregates the respective costs of elevator buildings, low-rise buildings (of 25 or more units) and garden type buildings. The weights are designed to approximate proportions of the major building types represented in the public housing stock based on data from a 1979 HUD Field Study. 3/

1/ The operating cost data for public housing authorities come from Form 52599--Statement of Operating Receipts and Expenditures. It is reported on a dollars per unit month basis. IREM data are reported as dollars per square foot per year. The data have been converted to per unit month data by multiplying by the total number of rentable square feet and dividing by the number of apartment unit months in the sample.

2/ For the private sector IREM sample, the median property tax in 1980 was $24.80 per unit month for elevator buildings, $19.69 for low-rise buildings (25 or more units), and $17.17 for garden type buildings. By contrast, the average payment in lieu of taxes for PHAs in 1980 was $2.56 per unit month (a weighted average taking into account PHA size and region).

3/ The 1979 HUD Field Study identified six project types in a random sample of all public housing developments: walk-ups, garden projects, town houses, (footnote continues on p. 10)

Table 10-1

MEDIAN PRIVATE SECTOR OPERATING COSTS
PER UNIT MONTH IN 1980

	ELEVATOR BUILDINGS	LOW RISE BUILDINGS (25 or more units)	GARDEN TYPE BUILDINGS	WEIGHTED AVERAGE a/
Region 1 & 2	$110.01	$73.47	$104.60	$97.21
3	98.01	87.67	76.09	89.51
4 & 6	121.57	71.47	83.82	96.77
5	89.10	84.56	87.41	87.27
7, 8, 10	90.33	89.07	82.29	88.01
9	81.74	79.87	84.59	81.83
Total U.S.A.	98.68	84.76	85.88	91.23
SAMPLE				
Apartments	100,868	69,385	407,643	577,896
Buildings	567	774	2,577	3,918

SAMPLE: Apartment buildings surveyed by the Institute of Real Estate Management of the National Association of Realtors.
DATA SOURCES: Income/Expense Analysis-Apartments, 1980 Edition, Institute of Real Estate Management.
NOTES: Operating costs are calculated exclusive of real estate taxes.
a/ The weights for the weighted average are .446 for elevator buildings, .315 for low rise buildings, and .239 for garden type buildings. The weights are estimated proportions of the building types represented in the public housing stock.

Table 10-2

AVERAGE PUBLIC HOUSING AUTHORITY OPERATING COSTS
PER UNIT MONTH IN 1980

	AVERAGE OPERATING COST (UNWEIGHTED)	STANDARD DEVIATION	DIFFERENCE FROM PRIVATE SECTOR SAMPLE	SAMPLE (N)
Regions 1 & 2	$161.13	34.29	$ 63.92	53
Extra-large PHAs	217.08	3.20	119.87	3
Large PHAs	171.23	29.30	74.02	24
Medium PHAs	153.66	34.14	56.45	15
Small PHAs	134.03	20.71	36.82	11
Region 3	135.33	31.31	45.82	39
Extra-large PHAs	185.39	41.93	95.88	4
Large PHAs	140.46	24.77	50.95	18
Medium PHAs	120.60	18.69	31.09	9
Small PHAs	115.34	21.04	25.83	8
Regions 4 & 6	97.54	23.18	0.77	113
Extra-large PHAs	127.36	22.82	30.59	7
Large PHAs	108.32	16.33	11.55	34
Medium PHAs	101.19	21.03	4.42	32
Small PHAs	80.24	17.52	-16.53	40
Region 5	111.42	29.30	24.15	50
Extra-large PHAs	159.72	32.89	72.45	5
Large PHAs	115.66	20.18	28.39	16
Medium PHAs	104.18	18.50	16.91	10
Small PHAs	98.94	26.99	11.67	19
Regions 7, 8, 10	97.56	23.96	9.55	17
Extra-large PHAs	-	-	-	-
Large PHAs	111.64	13.63	23.63	8
Medium PHAs	93.49	21.93	5.48	5
Small PHAs	74.49	26.84	-13.52	4
Region 9	147.14	32.27	65.31	14
Extra-large PHAs	182.26	48.29	100.43	2
Large PHAs	168.25	28.01	86.42	4
Medium PHAs	129.83	16.02	47.62	5
Small PHAs	124.45	16.40	42.62	3
Weighted Average a/	147.20	49.45	55.97	286

SAMPLE: PFS Analysis Sample
DATA SOURCES: PFS Analytic Data Base
NOTES: Operating costs are calculated exclusive of payments in lieu of (property) taxes - PILOT.
a/ The weighted average takes into account the distribution of all public housing units by size of PHA and region. It should be noted that the weights are based on the entire analytic sample of 314 PHAs. Thus, this figure does not take account of the missing values that were generated for 29 PHAs (3 large PHAs, 12 medium PHAs and 13 small PHAs) due to a missing Form 52599 for operating cost data.

Table 10-3

NUMBER OF DWELLING UNITS REPRESENTED IN PUBLIC HOUSING
AND PRIVATE SECTOR SAMPLE BY REGION

		PRIVATE SECTOR SAMPLE							
	PUBLIC HOUSING SAMPLE	ELEVATOR BUILDINGS UNITS	(BUILDINGS)	LOW-RISE BUILDINGS UNITS	(BUILDINGS)	GARDEN TYPE BUILDING UNITS	(BUILDINGS)	TOTAL UNITS	(BUILDINGS)
Regions 1 & 2	232840	15050	(122)	7738	(96)	20812	(155)	43600	(373)
Region 3	106255	32260	(159)	4851	(65)	75290	(369)	112401	(593)
Regions 4 & 6	186448	8193	(44)	17548	(139)	156658	(907)	182399	(1090)
Region 5	127467	33146	(150)	18645	(213)	61357	(390)	113148	(753)
Regions 7, 8, 10	27309	8864	(67)	8740	(130)	39990	(292)	57594	(489)
Region 9	31460	3355	(25)	11863	(131)	53536	(464)	68754	(620)
Total Units	711779	100868	(567)	69385	(774)	407643	(2577)	577896	(3918)

SAMPLE: PFS Analysis Sample and Private Sector Sample.
DATA SOURCES: PFS Analytic Data Base and Income/Expense Analysis-Apartments, 1980 Edition, Institute of Real Estate Management.

Findings on Overall Operating Costs

Public housing operating costs in 1980 are substantially higher than operating costs reported for the private sector sample. Public housing costs average $147.20 per unit month whereas private housing costs average $91.23. The average difference is $55.97 per unit month which is 61 percent higher than private sector costs. This is a rough approximation, since the samples do not have the same geographical distribution of units. However, figures show higher public housing costs for every regional group except Regions 4 and 6 (the South) where the difference between private sector costs and public housing costs is less than $1.00 per unit month. The greatest difference in operating costs occurs in the West (Region 9, which includes Arizona, Nevada, California and Hawaii) and the Northeast (Regions 1 and 2). The Northeast has the highest average operating costs in both the private sector sample and the public housing sample. Nevertheless, the public housing sample operating cost averages $63.92 per unit month more than the private sector sample. The West, by contrast, has high average operating costs in the public housing sample but the lowest average operating costs in the private sector sample. The difference between the public housing costs and private sector costs in the West is $65.31 per unit month.

Since public housing costs vary greatly by PHA size, the greatest discrepancies occur for extra-large PHAs. However, because the private sector data cannot be disaggregated by size of building or project, there is no way to make adequate comparisons.

Operating costs for other HUD housing programs are also higher than private sector operating costs (see Table 10-4 and sample sizes in Table 10-5). Average costs are lower than public housing operating costs, however, with the exception of Section 207. Section 207 unit costs are dominated by the

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(footnote continued from p. 6)
high-rise projects, single family developments, and "other." For the purpose of this analysis, weights were developed relating high-rise projects to elevator buildings, walk-up projects to low-rise buildings (of 25 or more units) and garden projects in the HUD study to garden type buildings in the IREM sample. These building types account for 68.4 percent of all units in the HUD sample and the weights are .446 for elevator buildings, .315 for low-rise buildings and .239 for garden type buildings.

Table 10-4

AVERAGE OPERATING COSTS PER UNIT MONTH IN 1980
FOR OTHER HUD HOUSING PROGRAMS

	"NONSUBSIDIZED" PROGRAMS		"SUBSIDIZED PROGRAMS"			
	SECTION 207	SECTION 221d4/ NON-SEC.8	SECTION 202	SECTION 236	SECTION 221d3	SECTION 221d4/ SEC.8
Region 1	$155.12	$189.52	$100.29	$144.39	$156.11	$152.74
2	234.20	166.37	102.90	183.70	156.13	148.12
3	148.29	142.07	111.58	115.48	152.32	122.64
4	111.51	102.14	103.27	100.01	102.02	90.56
5	139.54	118.42	108.46	114.21	132.21	106.82
6	143.06	128.17	98.74	126.76	125.72	121.55
7	100.51	111.27	102.62	113.68	106.90	96.16
8	99.30	109.68	22.87 a/	110.69	94.22	100.80
9	122.59	111.59	107.66	116.61	120.28	108.09
10	111.70	98.38	98.22	90.58	77.00	81.53
Overall (Weighted average)	170.84	117.75	104.10	118.33	121.53	101.37
Total Units	75,336	141,435	25,258	273,470	156,991	65,340

SAMPLE: HUD Insured or Sponsored Multifamily Projects.
DATA SOURCES: HUD Office of Loan Management System (OLMS).
NOTE: Operating costs are calculated exclusive of real estate taxes.
a/ Figure corresponds to one project of 120 units.

Table 10-5

NUMBER OF DWELLING UNITS REPRESENTED IN OTHER HUD HOUSING PROGRAM SAMPLES BY REGION

	SECTION 207	SECTION 221d4/ NON-SEC.8	SECTION 202	SECTION 236	SECTION 221d3	SECTION 221d4/ SEC.8
Region 1	1,752	5,843	533	22,586	14,269	695
2	30,009	2,768	1,113	14,713	11,527	1,571
3	5,177	2,366	3,420	17,447	3,578	1,912
4	7,951	34,542	8,140	60,791	37,335	20,196
5	9,010	33,433	2,886	51,593	28,373	12,774
6	8,070	20,332	1,801	34,826	26,412	2,452
7	4,306	11,279	2,813	14,969	9,275	11,178
8	1,140	3,429	120	11,983	5,570	5,148
9	6,786	24,694	2,275	35,679	12,019	7,429
10	1,135	2,749	2,157	8,883	8,633	1,985
Total Units	75,336	141,435	25,258	273,470	156,991	65,340

SAMPLE: HUD Insured or Sponsored Multifamily Projects.
DATA SOURCES: HUD Office of Loan Management System (OLMS).

high cost of units in Region 2 (New York and New Jersey) which account for 40 percent of all Section 207 units in the sample. Indeed, disparate geographical distributions of units hinder overall comparisons.

Comparisons of costs by region between public housing and other HUD housing programs indicate that public housing operating costs in the South (Regions 4 and 6) are typically somewhat lower than other HUD programs. 1/ By contrast, PHA costs in Region 9 (princially California) are substantially higher than other HUD program costs.

Unfortunately, reasons for operating cost differences between the private sector sample, the public housing sample, and the sample of other HUD programs cannot be pinpointed. The data are simply too limited to control for factors such as the characteristics of the units (the size, age, quality or locations of the units), tenant characteristics, or program environments. It is possible, however, to compare the nature of operating expenditures for the respective samples. Comparisons of cost components can be helpful in indicating whether expenditure patterns are similar or different across the samples.

Findings on Cost Components

Operating costs (net of property taxes) were divided into three major categories for comparison: administrative costs, utilities costs, and maintenance costs. Administrative costs include administrative salaries as well as "general expenses" including insurance, employee benefit contributions, etc. Maintenance costs include maintenance labor and materials costs, security costs, and tenant services expenses for recreation, etc.

Table 10-6 displays components of operating expenditures for both public housing and the private sector sample. Public housing authorities seem to spend more money on each of the major cost components with the exception of PHAs in the South (Regions 4 and 6) and utilities costs in the Central and

1/ This may be due to philosophical attitudes on the part of PHA managers in the South. Observers have noted that many executive directors of Southern PHAs seek to minimize reliance on federal subsidies and therefore try to both limit costs and offset them with tenant rental revenue.

Table 10-6

COMPARISON OF OPERATING COST COMPONENT EXPENDITURES
PER UNIT MONTH IN 1980: PUBLIC HOUSING AND PRIVATE SECTOR SAMPLE

	PUBLIC HOUSING (UNWEIGHTED)	PRIVATE SECTOR SAMPLE	DIFFERENCE FROM PRIVATE SECTOR SAMPLE
Regions 1 & 2			
Administrative costs	$ 36.29	$ 24.55	$ 11.74
Utilities costs	74.33	48.77	25.56
Maintenance costs	50.51	39.10	11.41
Total costs	161.13	112.42 a/	48.71
Region 3			
Administrative costs	34.96	20.51	14.45
Utilities costs	55.41	41.81	13.60
Maintenance costs	44.96	38.59	6.37
Total costs	135.33	100.91 a/	34.42
Regions 4 & 6			
Administrative costs	24.04	25.05	-1.01
Utilities costs	36.29	43.96	-7.67
Maintenance costs	37.21	42.64	-5.43
Total costs	97.54	111.65 a/	-14.11
Region 5			
Administrative costs	29.69	21.68	8.01
Utilities costs	39.95	32.42	7.53
Maintenance costs	41.77	36.62	5.15
Total costs	111.41	90.72 a/	20.69
Regions 7, 8, 10			
Administrative costs	30.84	26.44	4.40
Utilities costs	24.85	36.41	-11.56
Maintenance costs	41.87	36.97	4.90
Total costs	97.56	99.82 a/	-2.26
Region 9			
Administrative costs	51.01	25.32	25.69
Utilities costs	29.11	28.45	0.66
Maintenance costs	67.03	40.54	26.49
Total costs	147.15	94.31 a/	52.84
Overall (Weighted Average)			
Administrative costs	38.83	23.67	15.16
Utilities costs	53.45	39.44	14.01
Maintenance costs	54.92	38.11	16.81
Total costs	147.20	101.22 a/	45.98

SAMPLE: PFS Analysis Sample and the IREM Private Sector Sample.
DATA SOURCES: PFS Analytic Data Base and IREM Data.
NOTES: Total costs are calculated exclusive of property taxes or payments in lieu of taxes.
a/ Private sector total costs are calculated as the sum of component costs and differ from Table 10-1 as a result of variations in the sample for component costs. Reporting to IREM is voluntary. Many managers who report total operating costs do not report component expenditures, so the sample size for this date is smaller than the sample for Table 10-1.

Northwestern U.S. (Regions 7, 8 and 10). On the average, PHAs spend $15.16 more per unit moth on administrative costs than private sector managers, $14.01 more on utilities costs, and $16.81 more on maintenance costs.

Administrative costs may be necessarily higher because PHAs need to certify tenants for eligibility for public housing and follow various procedural requirements for tenant selection, etc. Whether higher maintenance costs per unit imply more maintenance or less efficient maintenance cannot be determined. It should be noted, however, that discrepancies in maintenance costs cannot be largely accounted for by differences in tenant services and protective services expenses. Such costs for PHAs range from a minimum (unweighted) average of $2.37 per unit month in Regions 4 and 6 to a maximum of $7.03 in Region 9. The average amount (taking into account PHA size and region) is $5.72--corresponding to $2.29 for tenant services and $3.43 for protective services. Moreover, recreation expenses and security costs are also reported for buildings in the private sector sample. Higher utilities costs, particularly in the Northeast, may be due to older infrastructure, fewer individual controls, use of different fuel types, or lesser incentives for conservation. It is not possible to distinguish the reasons for differences.

Table 10-7 shows component operating expenditure levels for each of the other HUD housing programs based on the OLMS data. 1/ As expected, administrative cost levels are more comparable to PHA administrative costs than to the private sector level. Utilities costs in the Northeast are also more comparable to PHA utility cost levels than to the private sector sample. With the exception of Section 207, however, program averages for utility costs are somewhat lower than public housing costs. Maintenance costs vary considerably with regions--although it is of interest to note that costs in other HUD programs are uniformly lower in Region 9 than observed for Public Housing which exhibited both high overall costs and high maintenance costs. Program averages in other HUD programs show generally lower maintenance costs than public housing (except for Section 207).

1/ Utilities costs for Section 221d4/non-Section 8 projects and Section 221d4/Section 8 projects have been adjusted to represent the average of Section 236 and Section 221d3 utility costs. This was recommended by HUD due to the fact that many of the 221d4 units are recently built and have individual metering so that full costs are not represented--unlike Section 236 and Section 221d3.

Table 10-7

AVERAGE OPERATING COST COMPONENT EXPENDITURES
PER UNIT MONTH IN 1980 FOR OTHER HUD HOUSING PROGRAMS

	207	221d4/ NON-SEC.8	202	236	221d3	221d4/ SEC. 8
Region 1						
Administrative costs	$ 38.19	$ 56.40	$ 29.52	$ 36.60	$ 38.03	$ 51.12
Utilities costs	56.25	70.63	46.66	70.78	70.48	70.63
Maintenance costs	60.69	62.58	24.68	37.10	47.56	30.99
Total costs	155.13	189.61	100.86	144.48	156.07	152.74
Region 2						
Administrative costs	52.87	44.27	28.34	44.53	40.21	48.72
Utilities costs	94.30	75.07	42.23	83.75	66.38	75.07
Maintenance costs	87.06	47.04	32.32	55.43	49.65	24.34
Total costs	234.23	166.38	102.89	183.71	156.24	148.13
Region 3						
Administrative costs	36.70	55.48	31.39	36.41	41.27	46.70
Utilities costs	58.48	46.64	43.97	44.95	48.32	46.64
Maintenance costs	53.10	39.95	36.23	34.29	62.72	29.30
Total costs	148.28	142.07	111.59	115.65	152.31	122.64
Region 4						
Administrative costs	40.44	34.25	31.56	32.42	33.47	35.94
Utilities costs	25.27	33.07	40.94	32.33	33.82	33.07
Maintenance costs	45.80	34.85	30.93	35.28	34.73	21.55
Total costs	111.51	102.17	103.43	100.03	102.02	90.56
Region 5						
Administrative costs	44.80	37.60	40.82	33.98	37.86	38.65
Uitlities costs	36.99	42.41	38.97	40.45	44.37	42.41
Maintenance costs	57.75	38.49	28.51	39.87	49.97	25.79
Total costs	139.54	118.50	108.30	114.30	132.20	106.85
Region 6						
Administrative costs	44.09	38.55	32.93	35.88	36.14	41.04
Utilities costs	47.78	47.81	34.95	47.90	47.72	47.81
Maintenance costs	51.20	41.82	30.86	43.01	41.86	32.70
Total costs	143.07	128.18	98.74	126.79	125.72	121.55
Region 7						
Administrative costs	33.13	37.76	31.21	35.72	36.86	39.94
Utilities costs	24.96	32.79	43.93	37.76	27.82	32.79
Maintenance costs	42.44	40.63	27.49	40.18	42.22	23.45
Total costs	100.53	128.18	102.63	113.66	106.90	96.18
Region 8						
Administrative costs	27.66	36.23	7.20	35.25	30.31	35.36
Utilities costs	26.22	35.63	10.41	39.46	31.80	35.63
Maintenance costs	45.42	37.82	5.25	35.98	32.11	29.82
Total costs	99.30	109.68	22.86	110.69	94.22	100.81
Region 9						
Administrative costs	46.55	40.53	42.07	40.75	44.08	42.77
Utilities costs	25.73	31.42	32.28	34.25	28.60	31.42
Maintenance costs	50.31	39.63	33.32	41.62	47.60	33.88
Total costs	122.59	109.68	107.67	116.62	120.28	108.07
Region 10						
Administrative costs	40.11	43.39	43.27	33.01	31.09	39.61
Utilities costs	24.34	22.75	21.58	23.30	22.19	22.75
Maintenance costs	47.24	32.25	33.37	34.28	23.72	19.65
Total costs	111.69	98.39	98.22	90.59	77.00	82.01
Overall (Weighted Average)						
Administrative costs	45.93	38.73	34.30	35.81	36.57	38.97
Utilities costs	59.61	39.55	38.63	43.16	42.65	36.91
Maintenance costs	65.32	39.50	31.21	39.39	42.31	25.51
Total costs	170.86	117.78	104.14	118.36	121.53	101.39

SAMPLE: HUD Insured or Sponsored Multifamily Projects.
DATA SOURCES: HUD Office of Loan Management System (OLMS).
NOTES: Operating costs are calculated exclusive of property taxes.

10.4 IMPLICATIONS OF THE SYSTEM AND REASONS FOR REJECTING THIS AS A FEASIBLE SYSTEM

If an alternative funding system were developed establishing allowable cost levels equivalent to private market operating costs as represented by the IREM data, it is clear that most PHAs would receive considerably fewer funds. A comparison of public housing operating costs with private market costs indicated that PHAs spent $55.97 per unit month more on operating expenditures (on average--excluding property taxes) than the private market sample.

The exception to this pattern of reduced funding would be some PHAs in the South (particularly small PHAs) and some small PHAs in Regions 7, 8 and 10 which had lower operating costs than the private sector. Losses of funds would be greatest for PHAs in the Northeast, West (California), and for large PHAs in general. While adjustments could be made to allowable cost levels corresponding to differences in PHA size or other factors, careful empirical work would be needed to assess options.

However, such a system cannot be considered viable at the present time because the available data needed for the system are seriously deficient. In summary, existing private market data suffer from problems of self-selection (the buildings are voluntarily reported by real estate managers rather than being chosen in a random sample), lack of important information on unit characteristics and operating environments that affect costs (such as building age, quality, locations in city or suburb/high crime or low crime areas, tenant characteristics, etc.) and inadequate sample sizes for geographic areas. It is impossible to ascertain whether the private sector sample of buildings is representative and unbiased. It is also impossible to assess reasons for differences in costs between private sector and public housing units in the absence of fundamental information on building characteristics. Until appropriate data can be obtained and comparative analysis undertaken controlling for a variety of factors, it is not feasible to develop a credible system.

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CHAPTER XI

LOCAL CONTROL AND FEDERAL REGULATION

11.0 INTRODUCTION

The relationship between funding levels, local control (and responsibility) and Federal regulation is a complex one that has received increasing attention in recent months. The National Association for Housing and Redevelopment Officials, for example, has linked fixed funding levels with loosening Federal control over tenant rents and incomes. The President's Commission on Housing, for its part, has tied its public housing funding proposals to "the maximization of local control, responsibility and accountability through:

(a) minimizing Federal regulatory constraints and oversight of public housing operations and management and

(b) allowing local decision regarding the continued use or disposition of the stock.

Previous chapters of this report have described alternative Federal funding systems for public housing but have not addressed directly the issue of Federal vs. local control of the program. Some of the possible funding systems imply a greater degree of latitude at the local level, however. We have recommended that under all potential funding systems, and particularly those that would provide substantially lower funding levels to some PHAs, Federal restrictions on the removal of public housing units from the stock be relaxed. We have also discussed the need for modernization funding to take care of the deferred maintenance and physical deterioration of many public housing projects and have suggested that the use of those funds be made as flexible as possible to enable PHAs to modify their stock to respond to funding constraints. Again, this recommendation applies to all systems but would be a key element in a transition to a system that made substantial changes in the distribution of public housing funds.

Three of the funding systems examined in earlier chapters would combine funding for the operation of public housing projects with funding for their future replacement and capital improvement needs. This feature of the Fair Market Rent and Housing Vouchers systems, and of Cost-based Funding with a Replacement and Improvements Allowance, would provide additional local control over the public housing stock.

Finally, the Housing Vouchers funding system for public housing would increase the local PHAs' control over their public housing housing programs by broadening the range of households to whom public housing could be rented and, generally, enabling the housing authority to act much as a private market landlord.

There are other possibilities for increasing local control over public housing. These include the removal or relaxation of Federal rules on the income level of those who live in public housing and the rents they pay for units that continue to receive direct Federal subsidies (as distinct from units under the voucher system in which subsidies go only to households). There are also deregulation possibilities in areas such as wage rates, lease and eviction rules and contracting procedures.

This chapter investigates further the implications of devolving to the local level decisions on key aspects of the public housing program that are currently shaped or determined largely at the Federal level. It begins (Section 11.1) with a discussion of the various types of Federal control of public housing that now exist and of the possibilities for a diminished Federal role. Section 11.2 then describes the role of local government in public housing and the relation between the general purpose local government and the public housing authority. We suggest changes in that relationship that may be a necessary part of a strategy of increasing local control of public housing.

Finally, Section 11.3 analyzes two public housing funding systems that are linked explicitly with increasing local control. The first is the proposal of the National Association of Housing and Redevelopment Officials (NAHRO), which is centered on decontrol of tenant incomes and rents. The second is the proposal of the President's Commission on Housing, which links deregulation and local decisions on the disposition of projects to the constraints of a new funding system.

11.1 THE POTENTIAL FOR DECREASED FEDERAL CONTROL

The U.S. Housing Act of 1937 requires that local public housing agencies be vested with "the maximum amount of responsibility in the administration of their housing programs." However, PHAs operate under a variety of restrictions governing their policies and management practices. They agree to comply with many of these requirements at the time of execution of the Annual Contributions Contract (ACC). Others are embodied in Federal statutes and in regulations, handbooks and notices governing various areas of PHA activity, including the operating subsidy system and the modernization program. In effect, PHAs agree that in exchange for Federal financial support, they will follow Federal guidelines for their operations.

On the other hand, there are many areas of public housing operations in which PHAs have a great deal of autonomy--either because the law and regulations are silent or becvause regulations are not enforced. The physical condition of projects is an example. The ACC merely stipulates that projects must be maintained in "decent, safe and sanitary" condition and the regulations do not provide further definition of these terms. While HUD inspects public housing projects with a view to assessing modernization needs, there is little attempt to force PHAs to maintain their projects at a specified physical standards. In addition, as discussed in Chapter 6 of this report, there is little Federal control over the way in which PHAs use their operating resources (as distinct from modernization funds) to perform various tsks. Functions can be contracted out or

decentralized to various degrees, and housing and other services can be provided to tenants at a number of different levels. Thus, Federal control of public housing is uneven, both in principle and in practice.

In addition to recognizing the generally uneven nature of Federal control of public housing, it is useful to distinguish between four different types of Federal control over the Public Housing Program:

1. Federal determination of the basic goals of the program, such as the type of housing provided and the type of households served.

2. Requirements that relate to other Federal objectives or responsibilities, such as equal employment opportunity and environmental protection.

3. Requirements for specific management practices, such as standard procurement practices or eviction procedures.

4. Detailed Federal reporting requirements and collection of statistics, and Federal monitoring of PHA operations.

Removing or relaxing the first two types of Federal control would change the fundamental nature of the program and could make it essentially a local rather than a federal program. The third and fourth types of requirement have to do more with operational flexibility. A considerable degree of loosening of requirements in these areas would leave public housing still basically a Federal program. Loosening of requirements in these areas might be called "deregulation," while relaxing the imposition of Federal goals--both those specific to housing programs and those not--might be better termed "local policy-making". Figure 11-1 illustrates these distinctions with some examples. Our emphasis is on requirements that relate to the operation rather than the development of public housing, since the funding systems that are the subject of this report do not cover the development of new public housing projects.

FIGURE 11-1

POSSIBLE AREAS FOR INCREASING LOCAL CONTROL OF PUBLIC HOUSING

Type of Control	Examples
Local Policy-making	
Basic goals of Public Housing as a housing program	income limits tenant selection preferences non-discrimination in tenant selection rent rules project disposition decisions modernization strategies
Other Federal goals applied to Public Housing	equal employment opportunity wage rates and labor law employment opportunities for tenants and area residents and businesses environment protection
Deregulation	
Requirements for specific	procurement and contracting insurance standard book-keeping personnel policies selection procedures eviction procedures income verification financial control systems
Reporting and oversight	reports providing statistics on occupancy, finances, unit availability, modernization activities, etc. review of discretionary funding proposals review of operating budgets management reviews occupancy audits engineering surveys IG and GAO audits

Local Policy-Making for Public Housing

The Federal Government has increasingly chosen to define the basic goals of the Public Housing Program through statutory language and regulations in such areas as income limits, rent schedules, site and neighborhood standards (for new public housing), priorities for tenant selection, priorities for the use of modernization funds, and restrictions on the disposition of projects.

Many of these policies have been discussed in earlier chapters of this report. For example, Chapter 2 reviewed the history of income limits and rents and the gradually increasing Federal control of program goals relating to whom the program should serve and at what rent levels. The Brooke Amendments are often cited as a watershed in the program, a point at which local authorities lost the ability to charge rents that covered costs because of the imposition of the 25 percent-of-income maximum rent. As has been shown in Chapter 2, however, a combination of Federal policies for public housing since the early 1950s and basic economic and demographic changes had already resulted in a tenantry largely composed of very poor households dependent on income transfer programs. During the period between the Brooke Amendments and 1981, PHAs retained a fair amount of flexibility in determining rent and income policies. Many PHAs did not use this latitude either to charge as much rent as permitted or to pursue a policy of attracting relatively higher income tenants (Struyk, pp. 103-109 and 112-117). At the same time, the Federal government had assumed responsibility for operating costs not covered by rents and paid ever increasing subsidies, in part because of the failure of rents paid by tenants to keep up with inflation. The 1981 legislation appears to be a response to the failure of a policy of limited flexibiity in the area of income and rents.

What is less clear is whether a more radical departure from Federal determination of who should receive assistance and in what amount would have different results. With no restrictions on rents or incomes, some public housing projects currently receiving operating subsidy might become self-sufficient. Furthermore, if the link between the amount of operating

susbsidy and tenant-paid rent were broken, those PHAs that could charge higher rents would have a powerful incentive for doing so. On the other hand, even projects with no operating subsidy would still have their capital costs paid by the Federal government. Would this continued subsidy mean that the Federal government should still place some limits on the incomes of public housing tenants and/or pass judgement on the acceptability of rent burdens? It should also be recognized that many PHAs will never be able to charge rents that cover even operating costs, given the locations and condition of their projects.

In addition to the Federally set income limits and rent schedules, a provision of the 1979 Housing and Community Development Amendments superimposed Federal priorities for tenant selection on priorities the PHAs set themselves. The Federal priorities are for households occupying substandard housing and those involuntarily displaced. Federal regulations implementing Title VI of the Civil Rights Act of 1964 had already prohibited tennant selection and assignment practices that would have the effect of perpetuating racial segregation.

In addition, Title VIII of the Civil Rights Act of 1968 and related court decisions (e.g., Shannon, 3rd Circuit, 1970) have required HUD to administer its program in a manner to "affirmatively promote" fair housing. However, the multiplicity of legitimate objectives in the area of tenant selection and the complexity of implementing preferences has meant that HUD has trod lightly in enforcing positive requirements, as distinct from non-discrimination. Regulations implementing the 1979 preferences have not been published as of this writing and PHAs are permitted to affirmatively promote fair housing in their selection and assignment policies without much explicit guidance from HUD.1/

1/ Most of the litigation relating to HUD's Title VIII responsibilities in regard to public housing has focussed on the location of public housing projects rather than on tenant selection.

Chapter 3 has discussed Federal restrictions on the sale, demolition or other disposition of public housing projects. Federal permission has always been required before units could be removed from the public housing stock. The conditions under which permission could be granted were first spelled out in regulations published in 1979 and they were extremely narrow. The issue has become more important in recent years for a number of reasons. First, the aging of the public housing program means that some projects may have become obsolete. Second, growing limitations on public housing funds mean that there will be increased pressure on PHAs to get rid of their least efficient projects. Third, the relative success of programs that subsidize poor households in private market housing over the past several years has made it clear that construction of replacement buildings is not the only alternative to continuing to operate a public housing project.

We have argued earlier in this report that PHAs should be permitted to respond to the constraints of any funding system by disposing of projects that cost more than alternative forms of housing assistance.

On the other hand, should the Federal Government be able to insist that a PHA take such actions under certain conditions? For example, Chapter 4 has proposed discretionary reductions of the allowable expense levels of certain PHAs as a result of extensive review of a PHA's operations. As part of that review, should HUD be permitted to determine that particualr projects should be eliminated or should the review extend only to inefficient management practices? Under the current public housing funding system, HUD can withhold (but not reduce) operating subsidies from financially troubled PHAs that have not drawn up satisfactory work-out agreements.1/ Should HUD be able to insist on project disposition as part of a work-out agreement?

1/ If HUD refuses to approve the PHA's operating budget, PFS funds may be withheld.

The answer to these questions may depend on the degree of local government financial involvement and oversight of the PHA's operations. The more the local government is willing to share the responsibility for both projects and households, the more the Federal Government can leave decisions on how to meet funding constraints to local decision-makers.

A related question is whether PHAs (or local governments) should be permitted to dispose of a project when such an action would require increased Fedeal funding (for example, if the Federal Government's continued responsibiity for debt service payments plus the cost of housing vouchers for the projects' tenants would be more than the total costs of keeping those tenants in public housing). Reasons for the city's wanting to dispose of such a project might include the project's negative effect on its neighborhood, a planned reuse of the site as part of an economic development strategy, or a strategy of using concentrated projects for moderate income housing while providing housing for very low-income households on scattered sites. Should the Federal Government be willing to sustain extra costs in order to permit local governments to pursue such options? Should willingness to accept increased costs be limited to disposition of projects regarded as "troubled"?

Finally, in regard to any decision to dispose of a project, should the Federal Government accept the local government's judgment that current tenants can be rehoused with vouchers or do HUD and Congress retain direct responsibility for the housing welfare of those tenants?

Chapter 7 has discussed the Federal programs that provide funds for capital improvements to exisiting public housing projects, the Modernization and Comprehensive Improvement Assistance (CIAP) programs. These programs presume Federal control over the nature of the public stock by basing modernization fund allocations on discretionary decision by HUD rather than on some sort of entitlement based on the PHA's number of units, operating costs, age of buildings or some other "automatic" characteristics. The CIAP Program implies a greater degree of PHA discretion in that it

calls for the authority to draw up comprehensive five-year plans and permits HUD to reimburse the PHAs for that planning effort. 1/ Nonetheless, HUD still reviews and approves the plans and is able to impose Federal priorities for the use of modernization funding. For example, energy modernization (which is considered a "special need" outside the comprehensive plan) is currently being encouraged because of its importance for utility cost reductions.

Both the Modernization Program regulation, and the CIAP statutory language have recognized that, because of its discretionary nature, modernization funding can be an important tool for Federal control of PHA operations in areas other than the physical side of public housing. According to the old Modernization regulations, the area office can require correction of management deficiencies as a condition of funding. The CIAP legislation goes further and intended management improvement plans to be an integral part of a PHA's comprehensive plan for dealing with its stock.

Several of the funding systems examined in this report would include a shift to even greater local control of modernization funding. Under Cost-Based Funding with a Replacements and Improvements Allowance (Chapter 7), a system based on housing vouchers for public housing tenants (Chapter 9), and one version of the FMR system (Chapter 8), PHAs would have a single source of funds for both operations and on-going capital improvements and would follow whatever strategy for capital improvements they wanted within their overall funding limitation. This would be very much in keeping with a policy of defederalization that also included greater local control over rent and income policies and/or disposition of projects, since the rent potential of projects could be closely related to capital improvements made to them. On the other hand, no funds would be spent on projects scheduled for disposition.

1/ Up to five percent of total CIAP funds can be used for this purpose.

Local control over modernization funding should be combined with increased local responsibility for the future needs of public housing projects. As noted in earlier chapters, we are unable at this point to design a formula for predicting future modernization needs that covers all items that will eventually need replacement. The FMRs on which funding levels in the FMR and voucher systems are based are not supposed to reflect the precise costs of public houisng projects, but, rather, the cost of alternative housing assistance.1/ Therefore, the fact that a replacement and improvements allowance does not cover all future needs for all buildings is not necessarily a weakness of those funding systems. In any case, funding for future replacements of major items (roofs, and heating plants, heating distribution systems) could be handled in a locally controlled public housing system in a number of ways. Further research on capital investments in multifamily housing can bring us closer to a formula-funding approach that does cover all items, although it will not insure against the indiosyncratic future needs of each individual building. Furthermore, replacements of major components of buildings costing many thousands of dollars per unit should be treated as part of a community's overall housing strategy and should be compared with alternative approaches to providing for housing needs. It may be reasonable to rely on local governments to use their capital budgets, their community development funds, or their housing program funds to share the costs of future modernization of public housing. As we have seen, modernization of public housing is already an eligible activity under the Community Development Block Grant Program and cities have been willing to use CDBG funds for public housing despite their relatively small degree of current over the goals of the Public Housing Program.

1/ See Chapters 8 and 9.

Fair housing is an area of goal-setting that is basic to a housing program. Federal requirements in this area are based on general civil rights legislation more than on statutes specific to HUD. The Federal Government would not be able to pull back from its responsibilities under either Title VI or Title VIII so long as Public Housing remained a Federally-funded program. However, the fairly light HUD monitoring of the operations of the Public Housing Program in the area of fair housing means that continued Federal responsibilities in this area would not constitute a major exception to increased local control over tenant selection policies.

There are also other areas of Federal law applied to public housing that are outside the HUD statutes and, unlike fair housing, do not relate specifically to the housing function of the Public Housing Program. The ACC currently imposes contractual requirements on PHAs in several such areas of Federal law. Many are covered by regulations as well. They include equal employment opportunity, environmental protection, wage rate determination and labor law coverage for PHA workers, and employment opportunities for residents of public housing projects and for residents and businesses located in the project's neighborhood.

Some of these areas are covered by State and local as well as Federal law. Whether PHAs should continue to be governed by requirements in these areas that apply to Federal programs (as contrasted with local programs or private businesses) depends on how indirect the tie to the Federal Government becomes.

Whether the relaxation of Federal requirements in areas such as wage rate determination and environmental protection could bring about substantial cost savings depends on several factors about which not much is currently known. One is whether these requirements are currently enforced in a manner which adds to costs. Another is whether State and local laws that would continue to apply to local programs impose requirements just as stingent as current Federal requirements.

An assessment of whether Federal requirements relating to non-housing goals should be removed from PHAs in a locally controlled public housing program depends ultimately on how important the goals are considered to be. If they are important, then a second determination is whether State and local laws are generally adequate to achieve them.

Deregulation of Public Housing

There is a long list of Federal requirements for the Public Housing Program that do not imply Federal control over the basic goals of the program but, rather, mandate practices believed to represent good or cost-effective management. Many of these requirements are written into the Annual Contributions Contract and some appear also in regulations. For example, PHAs are required to use competitive procurement practices in specified circumstances, to avoid contractors declared ineligible by HUD, to carry adequate insurance and to keep books and records in a standard format. PHAs must have published personnel policies and managers of projects with 75 or more units must receive HUD-approved certification. Public housing boards of commissioners may not receive compensation. PHAs must comply with HUD regulations and policies relating to litigation and must follow certain rules for the deposit and investment of funds.

In the area of occupancy, PHAs must take written applications and verify income and other information supplied by prospective tenants. Tenant selection policies must be designed to avoid concentration of the most deprived households in particular projects, to preclude admissions of tenants likely to cause management problems, and to attain a tenant body composed of families with a broad range of incomes.1/ Selection criteria must be specified in detail and formally adopted. Applicants must be

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1/ This last requirement might be considered to relate to program goals as well as good management practices.

notified of the basis for a determination that they are ineligible and must have an opportunity for an informal hearing. Rent schedules must be published and tenants notified of proposed changes and given an opportunity to comment.1/ Occupancy of public housing units must be based on written leases. Termination of a lease can only be for "serious or repeated violation of the material terms of the lease" and must be by written notice. The tenant has a right to an elaborate grievance process in response to an eviction notice.

In the area of financial management, PHAs must develop annual operating budgets which must be approved by the board of commissioners. Expenditures not in conformance with the operating or modernization budget are not permitted.

If any or all of these requirements were removed public housing would still be essentially the same program. Whether they should be removed depends on two key considerations:

- Are the requirements necessary to protect the Federal investment in public housing and/or to prevent the Government from being exposed to unnecessary costs? The requirements for adequate insurance coverage and for verification of tenant incomes appear to be designed toward these purposes.

- Do the requirements to describe practices that a well-managed PHA would follow in any case and thus largely amount to technical assistance? Or do they impose unneccessary costs in terms of time, resources, and additional management problems?

1/ The standard rent rules to be adopted following the 1981 legislation may make this provision obsolete.

Probably the most controversial requirements are those relating to evictions. It can be argued that the detailed lease requirements and grievance procedures prescribed by the regulations keep the PHA from running afoul of local tenant/landlord laws and thereby help make possible the eviction of problem tenants. On the other hand, the very existence of Federal regulations in this area supplies tenants with additional procedural grounds for fighting an eviction. This is certainly an area in which the Federal regulations are unpopular with PHAs. A similar area is admissions policies. The detailed guidance in the regulations about how to screen out problem tenants while avoiding discrimination against classes of persons is intended to help PHAs avoid pitfalls. And yet, it appears that few PHAs attempt to use credit checks, references from prior landlords, police records or home visits to avoid high-risk tenants. 1/ It is possible that the requirement that applicants declared ineligible be entitled to an informal hearing is sufficient to discoruage most PHAs from applying eligibility criteris other than income limits.

Requirements that are less controversial and are probably either neutral or helpful for most PHAs include standard recordkeeping and published personnel policies. On the other hand, certification of housing managers and Federal procurement guidelines may improve the quality of operations at some PHAs while creating unnecessary paperwork and delays at others. The degree of "regulatory burden" imposed by these and other requirements depends in part on the extent of HUD oversight of PHAs and whether it distinguishes appropriately between PHAs that need assistance and PHAs that could be left more or less alone without an adverse effect on their performance.

The Federal Government reviews the operations of PHAs in a number of ways. First, proposals for development and modernization are evaluated by HUD and funding decisions are based on the PHA's overall performance as well as the specific merits of the proposal. Second, HUD reviews PHA operating budgets

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1/ See Struyk, 1980, pp. 107-109, for some survey results in this area.

in more or less detail depending on the financial condition of the PHA. The PFS regulations provide for "limited review" of most operating budgets and standard area office practice is to look only for discrepancies in accounting procedures or evidence of illegal or questionable expenditures. On the other hand, PHAs on the "financially troubled" list (those with reserves below 20 percent of allowable levels) are required to prepare work-out plans including specific measures to cut costs or increase revenues before HUD will approve their operating budget. In extreme cases, HUD has delayed (but not reduced) a PHA's operating subsidy allocation in order to force a satisfactory work-out plan. The PFS regulations also permit reduction of operating subsidies if the PHA is losing rental income by failing to recertify incomes on shcedule. This authority has never been used, however.

In addition to making funding determinations, HUD conducts a series of different types of reviews of PHA operations. These include management reviews, occupancy audits, engineering surveys, utilities reviews and modernization inspections and reviews. Formal audits are also conducted by the HUD inspector General and by the General Accounting Office.

Finally, HUD requires PHAs to submit numerous regular reports on such subjects as occupancy, operating receipts and expenditures, unit availability and the progress of modernization activities.

Staffing levels at HUD area offices limit the amount of monitoring that can take place and the official guidance for field office monitoring explicitly endorses "management by exception." (HUD Handbook 7460.7, 6/81). Nonetheless, the situation is probably one of both too much and not enough. Time-consuming reports are filled out by both PHA and HUD staff but are used neither as the basis of corection of individual problems nor for adequately maintained information systems on the overall performance of the program.

HUD is currently working on a public housing deregulation proposal that incudes the removal of Federal requirements in some of the areas described above. The key feature of this proposal, however, is an attempt to focus HUD oversight more narrowly on those PHAs that have the most severe problems as evidenced by financial condition, vacancies, accounts receivable or physical condition of the projects. The great majority of PHAs would have very little in the way of reporting requirements, while PHAs on the "troubled" list would be required to submit statements as often as every quarter on any or all of the following:

- personnel policy
- procurement and contracting
- utility records/energy audits
- operating budgets
- occupancy reports
- marketing plans
- tenant selection and assignment
- space standards
- tenants accounts receivable
- rental collection policy
- security deposits
- debt collection
- maintenance performance control
- tenant charges
- tenant lease
- contract management
- project security
- other, as needed

The goal of this intensive monitoring effort would be to identify and correct the PHA's problems so that eventually it could join the ranks of the untroubled PHAs. In the meanwhile, HUD would be authorized to deny modernization funding and/or to reduce operating subsidy eligibility for PHAs not making satisfactory progress.

This deregulation proposal is still under development. Among the aspects that are not yet clear is the extent of technical assistance, as distinct from more intensive monitoring, that would be provided to troubled PHAs.

Short-term intensive oversight of the operations of particular PHAs might be linked to the transitional period contemplated for PHAs that would receive lower funding levels under one or another of the public housing funding systems discussed in earlier chapters of this report. For example, an alternative examined in Chapter 4 would permit HUD to establish lower cost-based allowable expense levels on an exceptional basis for PHAs found to have excess costs and to require these PHAs to draw up plans for reducing costs to meet the lower AELs. Such a PHA would almost automatically become "troubled", at least financially, in the short-run. The degree of intensive HUD monitoring of the PHA's operations and its duration might depend, however, on the PHA's past performance under higher funding levels and on the plausibility of its plan for reducing costs. A key element would be the the local government's willingness both to oversee the PHA's operations during the transitional period and to share long-term financial responsibility for the outcome of a cost-reduction plan that involved some financial risks.

The transition into a Fair Market Rent or a housing voucher system for funding public housing could, similarly, involve more or less intensive Federal oversight of PHA operations depending on the extent of loosening of Federal control of the Public Housing Program that took place at the same time as the transition to a new funding system.

Possible Outcomes of Increasing Local Control of Public Housing

There are a number of reasons for devolving public housing decision-making to the local level that are cited be proponents of increased local control:

- Achieving cost savings through more rational management decisions and through the removal of costly and unnecessary regulations;
- Increasing local financial support for public housing;

- Providing coordination between decisions on public housing and the overall housing and community development objectives of the locality; and

- Providing greater accountability to the local community for the condition and use of the public housing stock.

The costs of regulation are always difficult to measure and it is particularly difficult to quantify the extent to which over-regulation has resulted in mismanagement and inefficiency in the public housing program. In part this results from lack of agreement as to the objectives sought by regulation in such areas as wage rates, contracting procedures and tenant selection processes. If the objective is unimportant, or if it cannot be achieved through regualtion of the Public Housing Program, then its cost is an inefficiency. On the other hand, in some areas regulations may help to contain costs by providing guidance in a complex area of management. Income certification and cost accounting systems are examples that are of such potential importance for containing costs that we have proposed a funding incentive for PHAs to follow Federal guidelines in these areas.1/

It is also possible that managers of public programs lack incentives for prudent management in areas that require long-term planning for the use of resources. In earlier chapters we have made a case for giving public housing authorities the means to manage the physical condition of their projects efficiently by doing away with the current separation of funding

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1/ See Chapter 6.

for maintenance and repair on the one hand and replacements and improvements on the other. A counter-argument is that public housing managers - and local politicians - have time horizons that are too short to permit them to defer spending in order to accomodate future needs for replacements. Therefore, the Federal Government may need to maintain control over modernization funds.

In any case, cost savings through deregulation is one goal of reducing Federal control and responsibility for public housing. Another goal is a change in the balance of financial responsibility for public housing.

As pointed out in Chapter 1, the Public Housing Program began as one which provided no subsidies for operation and in fact anticipated a local contribution towards retirement of long-term debt. Yet at present the Federal Government pays virtually all of the debt service while making available each year subsidies of over $1 billion for operating costs and at least another half of that amount for modernization. Increased local financial support for public housing could take the form of funding of capital improvements or increased provision of services or lower charges for those services.

Beyond potential cost-sharing and cost-savings through increased efficiency, a further goal of defederalization of public housing might be better integration of public housing into local housing and community development strategies. As part of the local government planning process, many communities develop strategies for preserving housing, conserving neighborhoods and promoting local economic development. Under the Community Development Block Grant (CDBG) program, local governments are eligible to receive Federal funds to help carry out these (and related) objectives. The potential for success in improving conditions in many large, deteriorating public housing projects could in many instances hinge on local government plans for community revitalization; conversely, the mere presence of such

a project could at present be placing artificial limits on viable renewal strategies. For example, the removal of a project no longer considered habitable or needed could allow for a change in land use to commercial or industrial development in order to support local economic development strategies. Under present program arrangements, it would not be unusual for the public housing program and overall community development objectives to be working at cross-purposes.

Finally, a very important goal of increasing control of public housing at the local level is to provide the means, and the will, to solve the problems of certain portions of the public housing program. These problems may be intractible if responsibility for them continues to rest at the Federal level. It may be easier to find the resources to repair deteriorated public housing projects or to "thin out" projects with multiple problems, if responsibility for the condition of those projects clearly belongs to local officials. It may also be more appropriate for local officials than for the Federal government to assess whether public housing should be converted to other use, such as moderate income housing or industrial reuse of the site, in view of local conditions which affect the possibilities for alternative assistance for public housing tenants.

Balanced against these various potential advantages of increased local control of public housing are the potential risks for the Federal Government. If the Federal Government retains responsibility for providing housing assistance to low-income households, does that mean that Congress should continue to place limits on the use of the public housing stock for other purposes? Specific applications of this general question have already been noted. For example, how far should public housing income limits and rent rules be relaxed if the Federal Government continues to pay operating subsidies, or even if the only remaining Federal funding is for public housing debt? Should project disposition decisions that imply increased total Federal spending for each low-income household be permitted?

If the Federal requirements for management practices and Federal reporting and oversight are relaxed, what happens when PHAs get into financial trouble or when their public housing projects deteriorate? Will Federal appropriations be called upon to provide the funds necessary to put PHAs into the black or to repair projects that are still viewed by the public (or the courts) as a Federal responsibility?

There are considerable possibilities for a substantially reduced Federal involvement in the Public Housing Program, giving the role of setting the program's basic goals to housing authorities and local governments and removing much of the detailed Federal regulation and oversignt of PHA operations. However, a major factor in determining the extent to which the Federal Government would be willing to relax its control is the balance that could achieved between Federal and local financial responsibillity and the degree to which local officials would be willing to be accountable to their electorates for the condition and use of the public housing stock. However, it also must be recognized that increased local policy-making would require a choice by Federal policy-makers, including the Congress, to give up their currently predominate role in determining the basic features of the public housing program, such as its income targetting and its relationship to a national strategy of housing assistance.

11.2 LOCAL GOVERNMENT AND PUBLIC HOUSING

The term "PHA", as defined by the U.S. Housing Act of 1937 desribes "any State, county, municipality, or other governmental entity or public body (or agency or instrumentality thereof) which is authorized to engage in or assist in the development or operation of low income housing." There are only a few specific federal requirements regarding either the organizational structure of PHAs or the extent to which they cooperate with or are responsible to local governments:

- The PHA must have the ability under State law to perform the key functions quoted above, and generally to administer the program.

- The PHA must also have executed with local government(s) a cooperation agreement which includes exemption from real and personal property taxes, acceptance of PHA payments in lieu of taxes or forgiveness of local of local taxes altogether. The governing body must also agree to provide to the PHA the same public services and facilities normally furnished to others in the community at no cost or at a cost no greater than paid by others.

A very wide range of administrative frameworks could conceivably meet these Federal requirements, but the typical arrangement is a semi-autonomous local public body, headed by an appointed board of unpaid public housing commissioners, and administered for the board by a paid manager (Executive Director).

Typically, the direct involvement of the mayor and/or city council is limited to such actions as appointing board members and establishing the length of their tenure. However, there are also many cases in which the PHA is more

fully integrated into the city government. What ever the institutional arrangement, it is crucial that local policy-makers be capable of providing real direction to PHAs and that they select executive directors who have housing expertise and management capability. The lifting of Federal controls would likely result in substantially more variety of management policies and practices than under uniform systems. These outcomes must be anticipated and accepted as the trade-off for the benefits of increased local flexibility. A factor in this trade-off may be a transition period to allow for appropriate changes in local institutional arrangements, including the degree of city government oversight and the staffing for the board itself.

There is also a need for increased coordination between the PHA and local government -- to assure, for example that planned city infrastructure improvements are considered as a part of PHA decisions to demolish or modernize projects, or that planned cutbacks of public services are taken into account in the preparation of projections of operating costs. Although some cases of close coordination have been documented (Baltimore and New York City are examples) it is not known to what extent such coordination has ocurred on a more widespread basis.

One of the objectives of the Housing and Community Development Act of 1974 was to strengthen local government's capacity to design and carry out coherent housing and community development programs. There is evidence that the requirement to prepare Housing Assistance Plans, and particularly the provision for local government comments on proposals to develop new housing subsidy projects, has contributed to greater coordination of local strategies. These provisions were part of a much larger shift in authority for housing and community development policy from semi-autonomous local public bodies such as PHAs and urban renewal agencies to the general purpose local governments. Prior to 1974, PHAs had a primary responsibility for determining whether there was need for additional subsidized housing in the community, and for applying to HUD for the funds to develop such housing.

After 1974, however, local governments were responsible for setting the goals for such activity. PHAs as well as local developers, finding that their development plans were contrained by the goals set by the local governments, were more willing to meet with city staff and coordinate their efforts.

Further, the trend toward treating public housing as part of an overall housing strategy has in some cases extended to existing public housing projects. Recipients of funding under the Community Development Block Grant (CDBG) program, established under the 1974 Act, have sometimes been willing to use these funds to support public housing projects, either through increased public services or through support for rehabilitation and modernization (shown in Table II-1).

The 1980 CDBG accomplishments survey indicated that during Fiscal Years 1975 through 1978 approximately 27,000 units of public housing were rehabilitated using CDBG funds. The typical scope of improvements was small since the average rehabilitation cost per unit was only about $2000. For roughly half of the public housing units rehabilitated with CDBG funds, the improvements included energy conservation measures. Nine communities in the North Central Census region averaged over 1,000 units each, accounting for one third of all public housing rehabilitated with CDBG funds during the period. These data describe estimated completions of rehabilitated units during Fiscal Years 1975 to 1979; an additional total of $50 million was budgeted by CDBG grantees for rehabilitation of public housing units in FY 1979 and 1980, representing slightly under 10 percent of the capital improvements supportable by contract authority made available under the Public Housing Modernization Program during those two fiscal years. Note that at an average rehabilitation cost of $2,000, this $50 million would have been sufficient to make improvements on approximately 25,000 additional public housing units.

Table 11-1

REHABILITATION OF PUBLIC HOUSING UNITS WITH CDBG FUNDS, 1975-1978

	U.S. TOTAL	CITY SIZE up to 100,000	100,000-249,999	250,000-499,999	500,000+
Number of units	27,415	9,823	2,690	6,449	8,452
Mean number of units	411	273	243	712	768
Number of grantees	67	36	11	9	11

SOURCE: Sixth Annual Community Development Block Grant Report, U.S. Department of Housing and Urban Development, Table A-III-1.

NOTE: Category totals may not add to national total due to weighting and rounding. Excludes activity under the Small Cities Program.

Communities have also utilized Urban Development Action Grant funds to make neighborhood or commercial improvements in or near public housing projects; and they have used CDBG funds to fund public services which benefit residents of public housing. In Baltimore, for example, $1 million per year has been spent on public housing security from CDBG funds in recent years. No data are readily available to describe the extent to which this kind of activity has taken place in other cities. 1/

Finally, a major way in which communities can support public housing is by targeting public services and facilities to public housing projects or by providing services at lower-than-normal cost. Such preferential treatment reduces the operating costs of the PHA. Consider, for example, the degree of city support provided to the New York City Housing Authority:

> "We are very fortunate in New York City that the public housing program has the full support the Mayor and City Administration. The City, even with its fiscal constraints, pays over $35 million each year for the cost of the Housing Police.... Also, the Authority has received an average of $10 million a year in Community Development funds for major maintenance work in federal, state and city-aided public housing projects. The Authority and the City have also been working closely to improve conditions in Neighborhood Strategy Areas and in the Urban Initiatives Program in the South Bronx....

1/ The Housing and Community Development Amendments of 1981 have increased the flexibility that local jurisdictions will have in utilizing CDBG funds for such purposes. See HUD Notice CPD 81-16, dated December 31, 1981. A recent HUD Notice has also confirmed that CDBG funds can be used for maintenance as well as capital improvements in public housing projects.

> The City has agreed to convert and fund 131 CETA positions in the Authority. This will enable us to maintain at least a minimum level of youth services in some Community Centers. In addition, the City is well aware of the ever present potential for "hot summers"; thus, it has provided almost $400,000 (a relatively small sum) for Summer Youth Programs in Authority locations.
>
> ...What also helps make this City/Authority relationship work is that it is a two-way street. The Authority has, for example, taken over the management and operation of a number of in-rem or tax-defaulted buildings as agent for the City. We have also undertaken the substantial rehabilitation of a number of these buildings under the public housing program, thereby preserving neighborhoods and strengthening project communities. Authority staff has conducted training programs for employees working in other City agencies and many Authority executives participate on interagency committees." 1/

Although additional examples of extensive city support to public housing exist, local support for the public housing program is often substantially weaker then in New York. In part because of a growing dependence on Federal operating subsidies, local elected leaders often consider public housing only a Federal program. An arms-length relationship between the PHA and city hall is encouraged by the semi-autonomous nature of PHAs in most localities.

1/ Testimony of John Simon, General Manager, New York City Housing Authority; in "HUD's Support of Local Public Housing Authorities", Hearings before a Subcommittee of the Committee on Government Operation, House of Representatives; May 19 and 20, 1981; pp. 116-117.

If Federal control of public housing is to be reduced, there must be an enhanced role for chief elected officials in PHA operations in the following respects:

1) Overseeing and participating in the policy decisions of housing authority boards;

2) Reviewing key operating decisions of the PHA, in place of detailed Federal oversight and to assure that PHA actions are well coordinated with city policies and plans; and

3) Providing a source of financial assistance for public services and capital improvements needed by public housing projects.

11.3 FUNDING SYSTEMS LINKED TO INCREASED LOCAL CONTROL OF PUBLIC HOUSING: NAHRO AND PRESIDENT'S HOUSING COMMISSION PROPOSALS.

We have already discussed relationships between some of the funding systems discussed in earlier chapters of this report and increased local control of public housing. This section will examine two additional funding system proposals that are even more explicit in linking a new funding system to increased local policy-making for the Public Housing Program.

The NAHRO Proposal

In October 1981, the National Association of Housing and Redevelopment Officials (NAHRO) adopted the following proposal for funding public housing:

- Beginning in FY 1983, a three-year contractual agreement (renewable at the end of the period) would be made with each PHA for a determined amount of funds.
- The funds to be allocated nationally would be equivalant to the total operating subsidy requirements estimated by NAHRO for FY 1982 (about $1.5 billion).
- Funds would be allocated on a per-unit basis to each PHA, based on a percentage of the area Fair Market Rent. The same percentage would apply to all localities and would be derived by a calculation based on the total amount funds available nationally.
- The amount of PHA income from rental receipts or other sources would not effect the level of assistance for that PHA.
- Supplemental assistance would be needed for PHAs with severe fiscal distress before they could be converted to the new system.

In exchange for these assurances of funds and for the ability to keep any increased revenues which the PHA may be able to obtain, the PHA would assure HUD of the following:

- Income limits would be maintained at the level of 80 percent of area median family income, to assure that the housing serves only the low- and moderate- income population.
- PHAs would have the flexibility to set local rent schedules, but would be required to have a cross-section of eligible families, including those on the lower end of he income scale.
- Rent systems and schedules, designed to meet the gap between operating cost and Federal operating assistance, would also take into consideration the ability of the low-income population to pay. Plans to do this would be developed in consultation with tenants and with others in the locality.

$1.5 billion is doubtless an overestimate of the amount of funds required by the current operating subsidy system in 1982, in view of Federally mandated rent increases, utilities consumption, the possibility that inflation has been over-estimated and other factors. Nonetheless, a key feature of this proposal is that inflation in costs above the starting year level is to be paid for, not by upward adjustments in subsidy over the 1983-1985 period, but by continued increases in rents charged to tenants. The trend toward Federal determination of income limits and rents, culminating in the 1981 legislation, is to be reversed. Not only are PHAs to have at least as much flexibility as they did before 1981 to rent to relatively better-off households and to charge rents designed to maximize revenue, but also they will now have much stronger incentives for doing so. Additional rental revenue will have no effect whatever on their subsidy entitlement and, indeed, will be necessary for their continued financial health.

The NAHRO proposal could represent a significant decrease in Federal control of public housing by giving PHAs far more real control than they have now or have had in recent years over decisions on whom their programs should serve and how much assistance should be provided to each household. The proposal is silent on issues having to do with control of the physical stock - project disposition and use of modernization funds. Presumably, however, PHAs' ability to cover cost increases with increased rents would be enhanced if they had a larger amount of control over the physical stock as well. In addition, the relaxation of Federal regulations, especially in the area of tenant admissions and evictions, might also contribute to the PHAs' ability to generate their own revenue and become less dependent on operating subsidy.

Another important feature of the NAHRO proposal is the assurance of a specified level of Federal funding over a three-year period. This would give PHAs an ability to plan with known funding levels in mind. It would also enable PHA directors, HUD and Congress to devote less time to working on annual operating subsidy figures and more time to solving the basic problems of public housing.

It should be noted, however, that guarantees of multi-year funding do not have to be tied to fixed dollar amounts. Any of the funding systems discussed in this report could be funded on a multi-year basis, with or without adjustments at the end of the multi-year period to correct errors in predicting elements of the funding system such as AELs, FMRs, utility rates and consumption, or tenant incomes.

The intent of the NAHRO proposal in regard to the allocation of funds is not altogether clear. Since the estimate of funds needed in 1982 is based on subsidy needs - in other words, it does take into account rental revenue as of that year - presumably the funds provided to each PHA should be based on FMR (as a proxy for cost) minus rental revenue as of 1982. Furthermore, since capital costs will continue to be paid by the Federal Government, and

since they differ markedly among PHAs, average ACC debt service for each PHA should also be subtracted from the FMRs. Additionally, FMRs should be weighted by the bedroom size distribution of the public housing units managed by the PHA.

What emerges, then, is an allocation system very much like the FMR system examined in Chapter 8 of this report, but with some key differences:

- In the NAHRO proposal there is no upper limit on increases in funds for those PHAs that gain as a result of the change in the allocation system. The FMR system described in Chapter 8 provides that no PHA can experience more than a 20 percent gain in total funds available. This difference has, as we shall see, a marked effect on the distribution of funds to different types of PHAs;

- The NAHRO proposal assumes a fixed aggregate national subsidy based on an estimate of total need external to the FMRs themselves. Therefore, the subsidy to each PHA is based on a percentage of FMR rather than on the actual FMR.

- After the initial estimate of subsidy need, the subsidy under the NAHRO proposal does not increase with annual increases in FMRs.

- Funding under the NAHRO Proposal is not intended to provide for future replacements and improvements.

Our ability to analyze the implications of the NAHRO proposal for different types of PHAs is limited at this time because of the feature of the proposal that permits PHAs to keep increases in rental revenue. A full analysis would require an estimate of the rent potential of the projects owned by each PHA. How attractive are the projects to households with incomes up to 80 percent of median? How high a rent could be charged to households at different income levels given their opportunities for renting in the private

market? In addition, under the NAHRO proposal some Federal oversight of rent and income policies remains--including a provision for consultation with current tenants. For those PHAs with highly marketable projects. Some guess would have to be made as to the limits that would be imposed on increased rents and on tenant selection policies.

What we can point out here is that - the FMR allocation system aside - a proposal that makes PHAs dependent on rent increases to cover increased costs will be more workable for PHAs with relatively attractive projects (newer projects, projects that have recently been modernized, projects in good locations and projects without difficult tenants) than for PHAs with less marketable projects.

We can also present information that shows the effect of the NAHRO proposal's version of a FMR-based allocation system compared with a system based on current PFS subsidy entitlements and with the FMR system outlined in Chapter 8 of this report. It should be noted that since October 1981, NAHRO has become more tentative on the issue of whether FMRs or current PFS subsidies should be used as the basis for allocations.

For simplicity of analysis, and to avoid the issue what the total funding amount should be based on the 1982 PFS (since $1.5 billion is an overestimate), we have based the total amount of subsidy on the comparison case used elsewhere in this report: Comparison PFS, based on 1980 AELs, utility costs and tenant incomes, but assuming rent charges of 30 percent of income and adjustments to AELs to reflect the new inflation factor that includes non-wage costs. The total amount subsidy used is, in fact, irrelevant to a comparison between two allocation systems that are based on that same total.

Table 11-2 shows the gain and loss in total funds available per unit month to different types of PHAs if approximately $712 million in subsidy funds (our estimate for "Comparison PFS" in 1980) were allocated based on FMRs minus ACC payments and rental revenue, rather than on the PFS formula.

TABLE 11-2

COMPARISON OF ALLOCATING $711 MILLION UNDER THE NAHRO PROPOSAL AND THE PFS: TOTAL FUNDS AVAILABLE TO PHAS a/

1980 DOLLARS PER UNIT MONTH

PHA-Type	NAHRO Proposal	Comparison PFS	Average Differences	Average Percent Difference b/
Extra-Large	199.83	210.46	-10.63	
Northeast	204.61	243.13	-38.52	-16
South	195.20	142.55	52.65	42
Central	185.41	170.17	15.24	11
West	243.25	181.39	61.86	38
Large	157.23	145.10	11.77	
Northeast	157.65	182.36	-25.23	-11
South	147.06	127.73	19.33	18
Central	137.49	117.14	17.89	17
West	219.10	141.76	77.34	58
Medium	146.47	130.41	14.99	
Northeast	141.71	157.85	-16.14	-8
South	146.74	115.42	31.17	28
Central	136.25	113.14	22.00	19
West	190.78	134.47	56.31	46
Small	133.54	114.66	18.17	
Northeast	134.84	150.29	-15.90	-9
South	125.11	97.68	27.91	31
Central	128.36	103.00	24.44	24
West	171.22	109.83	61.38	55

SAMPLE: PFS cross-sectional analysis sample: Comparison PFS (314); NAHRO Proposal (298).

NOTE: a/ Total funds available includes rental revenue. However, rental revenue for both funding systems (the NAHRO proposal and Comparison PFS) is estimated at 30 percent of the adjusted income of current tenants. Under the NAHRO proposal, PHAs might have better success at maximizing rental income than under a system in which rents are standardized. See Chapter 2 for more discussion of trade-offs betwen percent-of-income rents and tenant income levels.

b/ Weighted by unit months available for different PHAs.

As can be seen, PHAs in all size groups in the Northeast lose substantial amounts of funding and PHAs in the West are substantial gainers. Large and extra-large PHAs in the Northeast do particularly badly, losing 16 and 11 percent of their total funding respectively. Extra-large Southern PHAs and Western PHAs of all sizes have their funds increased by more than one-third.

Table 11-3 compares these differences with the pattern of changes in funds available if the FMR system examined in Chapter 8 were substituted for the PFS. Although the Chapter 8 FMR system does not take a fixed pot of money as its starting point, the total subsidies for two of the possible FMR levels "bracket" the subsidies for the PFS (or the NAHRO system based on the same total). This enables us to see clearly the distributional effect of the two ways of applying FMRs.

Because of the constraint on the amount of additional funding a PHA can receive under the Chapter 8 FMR system, the "winners" do not gain as much under the Chapter 8 system. Conversely, average losses are not as large either. This is because, under the NAHRO/FMR allocation system, all PHAs must be limited to subsidies based on less than the full FMR in order to make room for big "winners" within a fixed total dollar amount.

The NAHRO proposal is silent in two key areas. One is the level of modernization funding assumed to be needed for either catch-up modernization or future capital improvements. Another is the future of the funding system beyond 1985. Will a new estimate of operating subsidy need for that year (or for 1986-1989) be made based on inflation in FMRs or the PFS inflation factor from 1982 to 1985? Will rents actually charged in 1985 be the basis for the new subsidy estimate?

It is important to understand that, to the extent that it does not provide for increases in subsidy to cover inflation, the NAHRO proposal assumes not just that rental revenue can keep up with inflation in PHA costs, but that increases in rents above cost inflation are possible. Table 11-4 illustrates this point with a hypothetical example. If rent increases are possible and rental revenue covers an increasing portion of costs, the rent increase necessary to cover a ten percent annual cost increase declines each year. But even after ten years, rents still have to rise more than costs to keep up with inflation if subsidy is held constant.

Table 11-3

PERCENT CHANGE IN FUNDS AVAILABLE UNDER NAHRO SYSTEM AND CONSTRAINED FMR SYSTEMS

TYPE OF PHA	NAHRO (NATIONAL SUBSIDY $712 MILLON)	Constrained FMR 40th Percentile Movers' rents a/ (NATIONAL SUBSIDY $765 MILLON)	Constrained FMR, 40th percentile all but new units' rents a/ (NATIONAL SUBSIDY $571 MILLON)
Extra-large			
Northeast	-16	3	-15
South	42	15	13
Central	11	12	5
West	18	13	10
Large			
Northeast	-11	-3	-13
South	18	8	1
Central	17	14	7
West	58	12	10
Medium			
Northeast	-8	2	-11
South	28	6	3
Central	19	13	11
West	46	20	15
Small			
Northeast	-9	-5	-10
South	31	7	6
Central	24	8	4
West	55	19	18

SOURCE: PFS cross-sectional analysis sample.

NOTE: a/ The funds available comparison for FMR systems differs from the funds available comparisons in Chapter 8. Here we are considering FMRs as means for allocating operating subsidies only, so we do not include an estimate of replacement needs in the PFS figures with with the FMR-based allocations are compared.

TABLE 11-4

RELATIONSHIP BETWEEN COST AND RENT INCREASES
IF SUBSIDY IS FIXED

Hypothetical Dollars Per Unit Month

	Costs	% Increase	Subsidy	Rental Revenue Necessary to Keep Subsidy Level	% Increase
Year 1	200	-	100	100	-
Year 2	220	10	100	120	20
Year 3	242	10	100	142	18
Year 4	266	10	100	166	17
Year 5	293	10	100	193	16
Year 6	322	10	100	222	15
Year 7	354	10	100	254	14
Year 8	389	10	100	289	14
Year 9	428	10	100	328	14
Year 10	471	10	100	371	13

The President's Housing Commission Proposal

On February 25, 1982, the President's Commission on Housing adopted a recommendation that:

> "...over a specified period of years the Low Rent Public Housing Program be restored to local management and control, passing to PHAs and their local governments responsibility and choice in the maintenance and disposition of current public housing projects."

The core of the Commission's proposal is an approach to achieving, through joint local-Federal decision, a more flexible future use of the current public housing stock. However, the proposal also contains, at least implicitly, a system for funding public housing operating subsidies. After summarizing the Commission's proposal, we will present some analysis of that funding system so that readers can compare it with other systems examined in this report.

The Commission's proposal calls for a transition period, covering "a reasonable number of years", during which PHAs and their local governments, acting jointly with the Federal Government, would make an assessment of each project in the public housing stock. The PHAs could choose among several options, one of which would be to allow the project to continue to receive both debt service and operating subsidy. Other options would provide for alternative uses of the project, including sale of the project or conversion to homeownership and retirement of its debt; demolition of the project or sale at a loss; and operation of the project without Federal rent restrictions and with Federal debt service but not operating subsidy. These other options would remove the project from the operating subsidy system and would require Federal approval.

Projects that continued to receive Federal operating subsidies as well as debt service at the end of the transition period would be subject to an operating subsidy ceiling. Generally, the operating subsidy would be the lower of the project's PFS subsidy as of the end of the transition period or the cost of assisting households of the equivalent size and income through housing vouchers, after subtracting debt service that continued to be paid by the government. In other words, the operating subsidy would be capped at an FMR-based amount, but would not be increased to that amount if the PFS operating subsidy were lower.

For projects removed from the operating subsidy system, the Federal Government would provide housing vouchers to eligible current tenants to enable them to relocate or to afford higher housing costs in their projects. In some cases, the removal of a project from the operating subsidy system could result in Federal costs greater than a voucher subsidy for current tenants, since the Government might also be making continued debt service payments for the project.1/ In these cases, and in other special circumstances, the local and Federal Governments might agree to keep the project in the Program with operating subsidies higher than the generally applicable operating subsidy ceiling.

1/ It is difficult to predict how often this situation would occur. In some cases the voucher subsidy would only be paid for some units, since other units would be vacant or occupied by households not eligible for vouchers. It might also be possible, in the case of projects that continued to receive Federal debt service subsidies, to provide less than a full voucher subsidy to households that remained in the project, with full voucher subsidies only for households that moved out of the project. For more discussion of assessing the costs of alternative treatments of public housing projects, see Chapter 3.

Projects that continued to receive operating subsidies would be subject to Federally determined income limits and rent rules. In all other respects, there would be "maximum reduction of Federal requirements." The President's Housing Commission proposal thus offers a contrast to the NAHRO proposal, under which Federal control over income limits and rents would be relaxed. The basic character of public housing as part of the Federal income support system is maintained by the President's Commission proposal for those projects that remain in the operating subsidy system. For those projects, the Government would continue to determine household eligibility rules and to decide on the level of support for each household that achieves the Federal goal of providing affordable housing for low income households. Because of the availability of vouchers for current tenants of projects no longer receiving operating subsidies, the Federal Government would maintain the goal of providing affordable housing for those households as well.

The focus of the President's Housing Commission Proposal is on project-by-project determination of the future use and Federal funding of the public housing stock. The Commission implies that the ceiling on operating subsidies, for those projects that remain in the system after the transition, is to be applied on a project-by-project basis. However, while it is easy to determinine a voucher equivalent operating subsidy for each unit and, therefore, each project, it is more difficult to determine on a project basis whether that subsidy would be higher or lower than the current PFS subsidy since it is difficult to say what costs are currently permitted for each project.

Only a small percentage of PHAs currently have project-based cost accounting. A project-based accounting system could be set up as part of the transitional period, and project-based accounting would be a valuable tool for PHAs in preparing to meet the funding constraints of any operating subsidy system that provided reduced funding for some PHAs -- including both the cost-based and FMR-based systems described in earlier chapters of this report. However, PHAs would have mixed incentives if they were directed to allocate curent costs by project for the purpose of identifying the cost ceiling of the ultimate operating subsidy system, as well as for identifying projects that are candidates

for being removed from the operating subsidy system. On the one hand, the PHA would need accurate cost information to determine whether a project could cover costs through market rents plus a debt service subsidy should that option be chosen. The PHA would also need to correctly identify projects that should be demolished or converted to other use because of very high costs. But working against these incentives for accurate cost accounting would be the PHA's powerful interest in showing that projects destined to remain in the operating system have costs close to the FMR. Because of this problem in obtaining reliable data, it might be wiser to apply the operating subsidy ceilings on the basis of PHA average costs.

Basing the operating subsidy ceiling on current PHA-wide average costs rather than on current costs for each project would also make sense if the operating subsidy ceiling is intended to produce average operating subsidies at least as low as current average operating subsidies. A voucher-equivalent subsidy would be greater than the current per unit PFS operating subsidy for many PHAs at any of the three FMR levels used for analysis in this report. If the comparison between the FMR-based subsidy and the current subsidy were made on a project basis, PHAs with average costs below the FMR-based subsidy might decide to retain in the subsidy system those projects with costs higher than the average but lower than the FMR, while removing projects that have lower than average costs. If this happaned on a widespread basis, the average cost of the operating subsidies proposed by the President's Commission could be higher than current average operating subsidies. 1/

For these reasons, we will assume that the "funding system" implied by the President's Housing Commission proposal provides the lower of operating subsidies based on PHA-wide average operating costs under the PFS or the FMR-based subsidy less debt service.

1/ See for example, Table 9-2, which compares total operating subsidies based on a voucher payment less debt service with total PFS subsidies for the same number of units. The total voucher-equivalent operating subsidy, and therefore the average, is higher than the average PFS operating subsidy at every FMR level.

We have estimated the costs and distributional effects of the Commission's proposal for allowable operating subsidies as though it applied to all the units currently in the Program. In fact, the President's Commission proposal contemplates that there would be substantially fewer units in the operating subsidy system at the point after the transitional period when the operating subsidy ceilings took effect. We have no way of estimating how many fewer units there would be, how the removal of units would effect either PFS-based average subsidies or FMR-based average subsidies for particular PHAs (for example, by changing the PHA's bedroom size distribution), or the extent to which PHAs would have reduced the per unit funding needed to operate their projects by removing high-cost projects from the operating subsidy system.

Thus we do not provide a picture of the operating subsidy system as it would look after the transition period proposed by the Commission. What we do show is the relative pressure that the coming operating subsidy ceilings would put on different types of PHAs to modify their programs during the transition period. In this respect the analysis is similar to the analysis of other funding systems in other chapters of this report, which also shows gains and losses in funding to PHAs if they continued to operate their current inventories of projects. In every case we assume that PHAs would be able to respond to the constraints of a funding system by removing their most expensive projects from the program and that there would be a transition period during which they would do so. The President's Commission proposal is unique, however, in the emphasis it places on the role that local governments would play in deciding on the future of the public housing stock and on the details of the alternative uses for projects that could be chosen. For example, the President's Housing Commission proposal would give PHAs the option of increasing their revenue through selling projects at a profit (a sales price

greater than outstanding debt) or by charging rents that more than covered operating costs for projects that continued to receive debt service subsidies. Revenue thus generated could be used to offset the costs of projects that remained in the operating subsidy system and thus help the PHA meet the funding constraint of that system.1/

1/ Whether this would work to the net benefit of the PHA depends on whether the projects taken off the operating subsidy system not only could generate additional revenue but also had relatively high costs. The removal of low-cost projects would raise the average cost of the remaining projects, offsetting the additional revenue generated by these projects. As noted elsewhere in this report, a study now under way at HUD is developing information about the costs and revenue potential of different types of public housing projects. Until such information is available, it is extremely difficult to assess the cost implications for the Federal Government or for PHAs of a strategy of reducing the number of projects that receive operating subsidies and are subject to Federal rent rules.

Table 11-5, then, shows the effect of the subsidy ceilings in the President's Housing Commission proposal on different types of PHAs if they attempted to operate all of their current projects. The table compares funds available based on the Commissions's proposed operating subsidy ceiling with funds available under the current PFS.1/ The basis of comparison, both for defining the subsidy ceiling and for making comparisons with the current system, is PFS-based operating subsidies alone. Unlike some of the comparisons between funding systems examined earlier in this report and the current PFS, the losses shown here do not include an estimate of funds the PHA would need for replacements and improvements. The President's Commission proposal makes no provision within the operating subsidy for the on-going capital improvement needs of the public housing projects that remain in the program. If we assumed these needs had to be covered within the Commission's operating subsidies ceiling, funds lost by each PHA would be greater. (The President's Housing Commission proposal does assume, like the funding systems examined earlier in this report, that the modernization "backlog" for projects remaining in the program is taken care of during a transitional period.)

1/ Here as elsewhere in this report we have used a comparison case designed to to reflect the current PFS with fully phased-in 1981 rent changes. "Funds available" include rent payments as well as Federal subsidies and reflect the total resources available to the PHA to operate its units.

Table 11-5 shows the percentage change in funds available to PHAs for subsidies resulting from funding ceilings based on three different FMR levels: 50th percentile rents of recently occupied standard units, 40th percentile rents of the same units and 40th percentile rents of all standard units except new units. These are the same three FMR levels used to analyze FMR-based subsidy systems in Chapters 8 and 9 of this report. It should be noted that the President's Housing Commission assumes no particular FMR or payment standard levels for the housing payments or vouchers to be compared with public housing costs and used to assure continued assistance to current tenants.

Because of their high costs under the PFS compared with private market rents, a relatively large number of public housing units in the Northeast would be in PHAs affected by the Housing Commission's operating subsidy ceilings regardless of the FMR level used. This result is similar to that for other subsidy systems based on FMRs. However, unlike other such systems, this system does not actually add funds to Western PHAs. Since no PHA can receive more than its PFS subsidy, Western PHAs basically remain at their PFS levels.

At the higher of the three FMR levels examined (FMRs actually in place for Section 8 Existing Housing in 1980), the subsidy ceiling would provide only a small constraint on subsidies for most PHAs, while at the lowest of the three FMR levels, losses for categories of PHAs range up to 15 percent of funds available for operating public housing.

Table 11-6 shows the aggregate national subsidies under the system implied by the President's Housing Commission Proposal, if all projects continued to receive operating subsidies. Since all projects would not be likely to stay in the system, the totals shown are probably an overestimate of the operating subsidy costs of the proposal. The total amount of Federal

Table 11-5

PRESIDENT'S HOUSING COMMISSION PROPOSAL:
EFFECT OF OPERATING SUBSIDY CEILINGS ON
PHA OPERATING FUNDS AVAILABLE

TYPE OF PHA	PERCENT REDUCTION IN FUNDS WITH FMRS AT: 50th Percentile Movers' Rents	40th Percentile Movers' Rents	40th Percentile Rents Of All But New Units
Extra-Large			
Northeast	-1	-2	-15
South	0	0	0
Central	-1	-3	-3
West	0	0	0
Large			
Northeast	-5	-8	-14
South	-1	-3	-7
Central	0	-2	-4
West	0	-1	-1
Medium			
Northeast	-5	-7	-13
South	-1	-2	-3
Central	-1	-2	-3
West	0	0	0
Small			
Northeast	-6	-9	-12
South	-2	-3	-4
Central	-2	-2	-3
West	0	-1	-2

SOURCE: PFS cross-sectional analysis sample.

NOTE: a/ Operating subsidy plus rental revenue.

Table 11-6

NATIONAL SUBSIDY COSTS OF PRESIDENT'S HOUSING COMMISSION SYSTEM
AT THREE FMR LEVELS
(ASSUMING CONTINUED SUBSIDY OF ALL CURRENT UNITS)

MILLIONS OF 1980 DOLLARS

	CURRENT PFS	FMR at 50th Percentile Movers' Rents	FMR at 40th Percentile Movers' Rents	FMR at 40th Perentile Rents Of All But New Units
Operating subsidy	$712	677	643	521
Loan Authority for On-going Modernization	375	375	375	375
Total Made Available for 1,087 Operations and Modernization	1,087	1,052	1,018	896

SOURCE: PFS cross-sectionsl analysis sample.

NOTES: a/ Other revenue available to PHAs: $1.2 billion rental revenue; does not include $1.5 billion one-time funding need for catch-up modernization.

subsidy needed to continue to aid the same households--through operating subsidy, debt service, and/or vouchers, depending on the options exercised at the local level--could be greater or less than the totals shown on Table 11-6. If voucher subsidies and continuing debt service for projects taken out of the operating subsidy system are low, and if cost savings for these projects more than offset any operating subsidies permitted above the ceiling for projects remaining in the system, then the total costs to the Federal Government for all forms of subsidy for these households could drop below those shown in our estimates for operating subsidies for all projects.

Total national subsidies range from $677 million per year, if FMRs are at the 50th percentile of private market movers' rents, to $521 million for FMRs at the 40th percentile of rents for all but newly built units in each market area (the Administration's voucher program proposal). This compares with operating subdidies of $712 million for our comparison case, the "current PFS" in 1980 dollars. Since the President's Housing Commission proposal does not address the question of future funding for replacements and improvements to the public housing stock, Table 11-6 also shows $375 million per year as a proxy for the continued Federal cost of the modernization of public housing.1/ In fact, however, the return to local control proposed by the Commission might include local government financing of the on-going modernization needs of the public housing stock.

1/ Based on average annual loan authority for modernization from 1969 to 1980. See Chapter 7.

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