Methodology for Computing FSS Performance Scores

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A PHA's FSS performance score will be calculated based on three measures, weighted as follows:

A. Earnings Performance Measure (50%)

B. Graduation Rate (30%)

C. Participation Rate (20%)

Together, the Earnings Performance Measure, Graduation Rate, and Participation Rate provide a balanced measurement of the performance of an individual FSS program. The three measures are calculated as follows:

A. Earnings Performance Measure Calculation

The Earnings Performance Measure gauges the extent to which the earnings[1] of FSS participants increase over time after joining the FSS program. In developing the methodology for this measure, HUD has been sensitive to the fact that some FSS programs encourage FSS participants to immediately increase their earnings while others encourage FSS participants to first build human capital through education and training in order to qualify for higher paying jobs. The methodology is also sensitive to the fact that the earnings of low-income workers are often volatile, and that the economic conditions in which different FSS programs are operating vary from community to community.

To accommodate these different factors and control for variations among FSS programs, HUD calculates the Earnings Performance Measure for each FSS program using the process outlined below. HUD applies this process to the population of FSS participants who enrolled in

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[1] For the purposes of the FSS program and these FSS measures, earnings are defined as annual earnings from all wage sources, as recorded on the HUD-50058 form. These include the following form 50058 income codes: B-Own Business, F-Federal Wages, HA-PHA Wage, M-Military Wage or W-Other Wage.

the FSS program 3.5 to 7.5 years prior to the end of the most recent quarter of data available through PIC to calculate the latest FSS performance scores.

Controlling for Variations in the Composition of Local FSS Programs: While households with elderly heads or heads who are a person with disabilities may participate in FSS, such households are not included in the calculation of a PHA's earnings performance measure. This ensures that PHAs that serve larger shares of such households are not disadvantaged in the performance measurement process as compared to PHAs that serve smaller shares of such households.

Specifically, in calculating the earnings performance measure, HUD excludes FSS participants who become classified as disabled at any point during their participation. HUD includes within the measure FSS participants that begin the FSS contract below age 62, even if they reach or exceed the age of 62 during their Contract of Participation.

Controlling for FSS Program Model and Earnings Fluctuations: To calculate an Earnings Performance Measure for a PHA, HUD first measures the growth in annual household earnings of each household enrolled in FSS at the PHA in two ways and selects the higher of the two measures for each household:

1. *Earnings Growth Since Enrollment:* the difference between (i) annual earnings upon enrollment in FSS and (ii) the most recent earnings estimate available in PIC for that household from an annual reexamination.

2. *Average Annual Earnings While in FSS:* the difference between (i) earnings upon enrollment in FSS and (ii) the household's average annual earnings during the time period between enrollment in FSS and the most recent annual reexamination of income available in PIC.

Controlling for FSS Program Model and Earnings Fluctuations: HUD selects the higher of the two measures for each household in order to accommodate different approaches to implementing FSS while also correcting for variations in year-to-year earnings, which can be volatile for low-income households. Some PHAs encourage FSS participants to focus immediately on increasing their earnings, while others encourage FSS participants to focus on obtaining education and building skills first and then seek a higher paying job once they have stronger credentials. Other agencies use both approaches, tailoring the approach to each individual. Measure 1, Earnings Growth Since Enrollment, accommodates programs that encourage participants to focus first on education and training, while both measures work acceptably for programs that encourage individuals to increase their earnings immediately. Measure 2, Average Annual Earnings While in FSS, focuses on the difference between starting and average annual earnings, which ensures that an FSS participant who has made good progress in increasing earnings while in FSS, but who nevertheless has experienced a temporary setback of job loss as of the most recent annual reexamination, nevertheless has his or her progress recognized. For each household, the Earnings Performance Measure focuses on the higher of the two measures, maximizing HUD's ability to recognize households' progress toward increased earnings while participating in FSS.

Controlling for Local Economic Conditions: Because economic conditions vary from one community to the next, HUD has built in mechanisms to control for these differences. HUD adjusts for local economic conditions in two ways. First, HUD compares the average earnings growth of FSS participants at a PHA to the average earnings growth for nonparticipants with similar characteristics at the same PHA. The difference in performance between the two groups represents the "unadjusted" Earnings Performance Measure for that PHA. Since the earnings of non-FSS participants would be expected to grow faster at PHAs located in stronger job markets

than in PHAs located in weaker job markets, this comparison helps to account for differences in local economic conditions, which facilitates a meaningful comparison of earnings growth across FSS programs. HUD then adjusts the Earnings Performance Measure for each PHA using statistical techniques described below to account for any residual effects of local economic conditions to compute the final Earnings Performance Measure for each PHA.

Specifically, to calculate an Earnings Performance Measure for each PHA, HUD:

- Selects three comparison households for each FSS household based on the extent to which the comparison households are similar to the FSS household on the following characteristics: earnings as of the time of the FSS household's entry into FSS, age of head of household, length of time in the voucher or public housing program, number of adults in the household, presence of a child with a disability, and presence of a non-head of household adult with a disability.

- Calculates the earnings growth for all of the comparison households using the same approach used to calculate the earnings growth for FSS households, with the FSS household's enrollment date being applied to its comparison households for purposes of calculating the comparison households' initial earnings.

- Calculates the difference between the average earnings growth for all FSS participants and the average earnings growth for all comparison households at each PHA. The difference between the two represents the unadjusted earnings performance measure for that PHA.

HUD applies this measure to all FSS participants with a head of household who is neither elderly nor a person with disabilities who joined FSS between 3.5 and 7.5 years prior to the end of the quarter of the PIC extract used to calculate the score. For example, if the most recent PIC

data extract ended in March 31, 2017, HUD's calculation of earnings performance measures would focus on FSS participants who joined the FSS program between October 1, 2009 and September 30, 2013. This methodology aggregates information for four years of FSS entrants in order to generate a large enough sample to analyze. The methodology does not examine data for participants that have entered the FSS program more recently than 3.5 years ago to allow sufficient time to have passed for FSS participants to have benefitted from the program. At the same time, the methodology does not focus only on an older sample of FSS participants to ensure that the results reflect recent FSS program performance to the maximum extent practicable.

Finally, to adjust for the residual effect of local economic conditions, HUD computes an adjustment factor for each PHA. To compute this adjustment factor, HUD first uses a linear regression model to examine the relationship between the earnings growth of comparison households within a PHA and the average county median income of those households. On average, earnings growth of comparison households tends to be higher in counties with high median incomes, and lower in counties with low median incomes. HUD then develops an adjustment factor that eliminates this relationship and applies this adjustment factor to the earnings performance measure for each PHA, resulting in an adjusted earnings performance measure that is used to determine the PHA's score for the earnings component of the performance measurement system.

Technical notes:

1. In measuring earnings growth, the methodology focuses solely on earnings determined through annual reexaminations, disregarding the results of any interim reexaminations. The reason for doing this is that not all PHAs require interim reexaminations of income when earnings rise in between annual reexaminations. To

ensure an apples-to-apples comparison of earnings growth across PHAs, HUD focuses only on annual reexaminations. An annual progress report is required for every FSS participant regardless of the spacing of rental re-examinations, so PHAs involved in rent reform demonstrations would be included in this scoring.

2. Under certain circumstances, HUD will require that comparison households be in the same county and PHA as the FSS participants to which they are being compared. HUD will apply this protocol to all state PHAs and to any additional PHAs where three or more counties are each home to at least 10 percent of households receiving housing assistance from the PHA (through HCV or public housing). To ensure this approach does not unduly dilute the ability to find comparable households, HUD will require that FSS participants be matched to comparison households in the same county only in counties where there are at least 4 times as many non-FSS households as FSS households being served by the PHA.

B. Graduation Rate Calculation

This measure examines the share of FSS participants at each PHA who have "graduated" from the FSS program. It is calculated based on the graduation rate of FSS participants who entered each PHA's FSS program 5 to 8 years before the end of the most recent quarter of available PIC data. The methodology focuses on these households to allow sufficient time for most of the FSS participants who will graduate to have done so. HUD considered focusing on an older cohort to capture 100% of the FSS participants who will graduate, but HUD determined that it was more advantageous for the period analyzed to include more recent performance by the PHA.

Controlling for Turnover Rates: Turnover rates at PHAs can vary significantly for reasons unrelated to FSS. To avoid penalizing programs with higher turnover, HUD excludes

non-graduating FSS participants who exited the Housing Choice Voucher (HCV) or Public Housing programs before the end of the analysis period from both the numerator and the denominator in calculating the Graduation Rate.

C. Participation Rate Calculation

The Participation Rate is the ratio of the number of FSS participants being served to the minimum number expected to be served under the standards used for awarding funding under the FSS NOFA. Agencies that exactly meet the standard will have a ratio of 1.0. Agencies that serve more than the required number will have a ratio above 1.0. Agencies that serve fewer than the required number will have a ratio below 1.0.

To calculate the Participation Rate, HUD first calculates the minimum number of FSS participants that HUD expects each PHA to serve for each of the most recent three (3) fiscal years for which both funding award and number served data are available. HUD calculates this number based on the guidelines in the NOFA and the number of coordinators funded in each agency during each year. HUD then sums the number of FSS participants actually served in each of the three years based on PIC data. Finally, HUD divides the total number of FSS participants served in each PHA by the total minimum number expected for the PHA's HUD-funded coordinator positions to determine the participation rate. If funding is only awarded to the PHA in one or two of the three years, the measure only uses data for the years for which funding was awarded. Note that this metric, while similar, is different from the "number of participants served," which has been used in NOFA competitions and assesses only the most recent period of performance.

Controlling for Annual Variation and PIC Reporting: HUD also separately calculates the Participation Rate for the most recent year and then grades a PHA's Participation Rate based on the higher of: (a) the PHA's three-year average and (b) the most recent year. Looking at the

higher of the these two values allows HUD to use the most recent available data for PHAs that have made progress in increasing the number served while avoiding penalizing PHAs for the results of an atypical year. It also ensures that PHAs that have improved the quality of their PIC reporting on FSS participation can be judged based on the FSS participant counts derived from recent PIC reports, rather than from reports submitted in earlier years. Given the new guidance that HUD issued on PIC reporting for FSS on May 16, 2016 (PIH Notice 2016-08), HUD expects the quality of FSS reporting to PIC to be improved going forward and reminds PHAs of the importance of ensuring accurate and timely submissions of FSS Addendums to PIC.

As calculated using the procedures described above, the participation rate is higher if the PHA has served more participants relative to its funding level. The ratio required in the NOFA is 25 for one full-time coordinator and 50 for each additional full-time coordinator. For example, a PHA with 1 funded full-time coordinator is expected to serve at least 25 participants during the year, while a PHA with 3 funded full-time coordinators is expected to serve at least 125 participants. If the PHA with 1 coordinator serves 40 FSS participants (much more than the minimum required) and the PHA with 3 coordinators serves 130 participants (only slightly more than the minimum expected), the PHA with the smaller number of coordinators and participants will have a higher participation rate (40/25 = 1.60 versus 130/125 = 1.04).

How will HUD convert the measures into an FSS Performance Score?

After making the calculations described above, HUD will develop an FSS Performance Score for each PHA using a two-step process.

A. Step One: Assigning scores to each of the three measures

In Step One, HUD will assign a score of 0 to 10 to each PHA's FSS program for each of the three measures. Scores will be assigned using the procedures described below. The ranges for awarding points between two values include those values as well as all intermediary values.

For the three measures, HUD has selected criteria for evaluating PHA performance. For the earnings and graduation rate measures, the highest performers are assigned a score of 10, the next-highest performers are assigned a score of 7.5, and low performers are assigned a score of 0. HUD will award a score of 5 to PHAs whose performance does not satisfy the criteria for highest, next-highest, or low performance for that measure. Participation rates are assigned a score of 0, 5, 6, 7, 8, 9 or 10.

1. **Earnings Performance Measure (50% of final score):**

   - 10 points: earnings performance measure of $8,700 or higher

   - 7.5 points: earnings performance measure between $6,950 and $8,699.99

   - 0 points: earnings performance measure below $4,050 and a p-value of <.10 on a statistical test measuring the likelihood that a PHA's earnings performance measure is significantly lower than the median measure of $6,302 (see below for a full explanation of this statistical test)

   - 5 points: All PHAs that do not qualify for a 10, 7.5, or a 0

   As described above, a PHA's earnings performance measure represents the difference between: (a) the average earnings growth for FSS participants and (b) the average earnings growth for comparison households at the same PHA, as adjusted to account for the residual effects of local economic conditions. A PHA's earnings performance measure is not simply a measure of the extent to which FSS participants increased their earnings. Instead, a PHA's earnings performance measure reflects the relative growth of FSS participants relative to a matched set of non-participants at that PHA. HUD assigns a higher score to FSS programs that achieve a higher earnings performance measure.

   In addition to focusing on the size of the earnings performance measure, the scoring for this measure applies a one-tailed test of statistical significance, designed to protect FSS programs

from being scored "low performer" due to random variation and low sample size. For example, without this protection, an individual FSS program may include several anomalous participants or control households that skew research results. The statistical test measures the likelihood that a PHA's earnings performance measure is significantly lower than the median measure. The lower the p-value, the less likely it is that a PHA received a below-median earnings performance measure due to random variation. To receive 0 points, a PHA must not only have an earnings performance measure below $4,050 but also a p-value on this test of less than .10, which means there is at least a 90% probability that the earnings performance measure is truly below the median value of $6,302.

While a similar statistical test could theoretically be applied to help identify high performing programs, such a test would make it harder for small FSS programs to qualify. To avoid disadvantaging smaller FSS programs, p-values are not considered in determining whether to award 10 or 7.5 points.

2. **Graduation Rate (30% of final score):**

- 10 points: graduation rate of 38% or higher

- 7.5 points: graduation rate between 28% and 37.99%

- 0 points: graduation rate below 10%

- 5 points: All PHAs that do not qualify for a 10, 7.5, or a 0.

   Under this approach, a higher graduation rate results in a higher score.

3. **Participation Rate (20% of final score):**

- 10 points: participation rate of 2.0 or higher

- 9 points: participation rate between 1.8 and 1.99

- 8 points: participation rate between 1.6 and 1.79

- 7 points: participation rate between 1.4 and 1.59

- 6 points: participation rate between 1.2 and 1.39

- 5 points: participation rate between .96 and 1.19

- 0 points: participation rate of .95 or lower

  Under this approach, a higher participation rate results in a higher score.

Step Two: Developing the final FSS Performance Score and grade

After computing individual scores for each of the three measures, HUD aggregates each PHA's scores using the weights noted above to develop a final FSS Performance Score from 0 to 10. Based on this score, HUD assigns the following ranking to the PHA's performance:

- Category 1: FSS Performance score of 8.0 or higher

- Category 2: FSS Performance score between 4.26 and 7.99

- Category 3: FSS Performance score between 3.26 and 4.25

- Category 4: FSS Performance score of 3.25 or lower.

How were these thresholds selected?

The thresholds for converting the three performance measures into scores in step one are fixed and will now apply to all future years until HUD revises the methodology. These thresholds were selected by applying the FSS Performance Score methodology to PIC data from the quarter ending December 31, 2016. The thresholds were selected as follows:

1. Earnings Performance Measure (50% of final score):

- The threshold for awarding a score of 10 points (an earnings performance measure of $8,700) represents approximately the 80th percentile of the distribution of earnings performance measures for all PHAs.

- The threshold for awarding a score of 7.5 points ($4,750) represents approximately the 60th percentile of the distribution of results of the earnings performance measure for all PHAs.

- The threshold for awarding a score of 0 points ($1,500) represents approximately the 20th percentile of the distribution of results of the earnings performance measure for all PHAs.

2. **Graduation Rate (30% of final score):**

- The threshold for awarding a score of 10 points represents approximately the 80th percentile of the distribution of graduation rates.

- The threshold for awarding a score of 7.5 points represents approximately the 60th percentile of the distribution of graduation rates.

- The threshold for awarding a score of 0 points represents approximately the 20th percentile of the distribution of graduation rates.

3. **Participation Rate (20% of final score):**

- The threshold for awarding a score of 10 points represents approximately the 80th percentile of the distribution of participation rates.

- The threshold for awarding a score of 0 points is 0.95, which falls below the minimum standard established by HUD. A PHA serving the minimum number of FSS participants required to obtain FSS funding would normally have a participation rate of 1.0. However, this methodology uses a score of 0.95 to give PHAs the benefit of the doubt and account for any temporary vacancies in the FSS program.

- HUD spaced the thresholds for receiving 5 to 9 points roughly evenly between .95 and 2.0.

4. **Composite FSS Performance Scores and Grades**

- The threshold for awarding a ranking of Category 1 represents approximately the 80th percentile of the distribution of FSS Performance Scores.

- The range for awarding a ranking of Category 3 represents approximately the 10th through the 20th percentiles in the distribution of FSS Performance Scores.

- Programs falling below approximately the 10th percentile in the distribution of FSS Performance Scores are classified as Category 4.

- All other FSS programs are classified as Category 2. The range for awarding a ranking of Category 2 represents approximately the 20th through the 80th percentiles of the distribution of FSS Performance Scores.

As noted above, all thresholds are now fixed and will not be recalculated each year. This will facilitate tracking individual PHA progress as well as that of all FSS programs over time. Further, this framework does not limit how many programs can receive any particular ranking. The thresholds are absolute, not relative.

What else do PHAs need to know about the FSS Performance Score Methodology?

The following is additional information about how HUD calculates FSS performance scores:

1. For households entering FSS more than one time during the analysis period, the methodology focuses only on the FSS Contract of Participation that began 5 to 8 years before the end of the most recent quarter of available PIC data to calculate the FSS performance score. This facilitates appropriate evaluation of each program's graduation rate, which focuses on the same group of households. If a participant entered more than once during that period, the methodology focuses on the older entry.

2. Where a family ports, each PHA (the receiving and the initial PHA) will benefit from the family's FSS enrollment as it relates to the PHA's participation measure. For the earnings and FSS graduation measures, HUD will include the family for the PHA who currently administers the FSS contract.

3. HUD will treat joint applicants as a single PHA for purposes of computing all three components of the FSS performance score.

4. FSS performance scores are calculated for any PHA that has sufficient data in PIC to calculate at least one of the three measures used to calculate the score. If there are insufficient data to calculate one or two of the measures, that PHA will receive a middle (standard) score of "5" for the missing measure(s) before calculating the FSS performance score.

5. A PHA for which none of the three scores are available will not receive a score.

6.. Because the earnings performance measure and the graduation rate are calculated using data that spans a range of years, it will take time for a PHA to improve its FSS Performance Score through improvements in earnings and graduation outcomes. However, improvements in these areas will eventually become apparent in a PHA's FSS Performance Score. It is important for PHAs with low scores to begin implementing improvements as quickly as possible. PHAs with participation rates below 0.95 can quickly improve their FSS Performance Scores by increasing participation rates to meet HUD's minimum requirements.