

Legislative Council Panel on Housing

New Rent Adjustment Mechanism for Public Rental Housing

Purpose

This paper aims to present to Members the methodology for compiling the income index, and the income data collected for the first period of the first rent review under the new rent adjustment mechanism.

Background

2. On 7 January 2010, the Transport and Housing Bureau briefed the Legislative Council Panel on Housing on the progress of the first rent review under the new rent adjustment mechanism vide Paper No. CB (1) 796/09-10(03). Under the new mechanism, domestic rent adjustments are made with reference to the change in income index between the first and second periods of the rent review cycle, and the income in the first period¹ of the first rent review will at a later stage be used as the basis for comparison in computing the income change. The index for that period will be set at 100. As such, prior to the completion of income data collection for the second period², the mean household income of public rental housing (PRH) tenants in 2007, as computed by the Commissioner for Census and Statistics (C for C&S) in his independent capacity, would not serve the purpose of comparison for the first rent review.

3. However, in view of Members' concern about the income data in the first period of the first rent review, and in order to further enhance the transparency of the rent review, the Transport and Housing Bureau undertook to provide the Legislative Council Panel on Housing with the income data in the first period. In this connection, the C for C&S has provided the required data vide this paper for Members' information.

¹ The first period of the first rent review refers to the period of 12 months expiring on 31 December 2007.

² The second period of the first rent review refers to the period of 12 months expiring on 31 December 2009.

Compilation of Income Data

4. The compilation of income index involves both “data collection” and “data computation”. The Housing Authority (HA) is responsible for the collection, verification and input of PRH households’ income data. The quality control procedures involved in the process are drawn up according to the recommendations of the Census and Statistics Department (C&SD). The computation of the income index and of relevant data, which include the change in the income index between the first and second periods of the rent review cycle, is taken up by the C for C&S in his independent capacity in accordance with Section 16A(7)(b) of the Housing Ordinance.

1. Data Collection

5. The compilation of the income index serves to assess the “pure income change” in the household income of PRH tenants during the rent review cycle with a view to determining the rate of rent adjustment. To assess the overall pure income change of PRH tenants, the household size distribution of PRH tenants in the rent review cycle should remain unchanged, so that the impact on household income due to variation of household size distribution could be eliminated in the compilation of income index. In this connection, PRH tenants were categorized by household size and samples were drawn accordingly, which could also enhance the accuracy of the income data collected by household size category.

6. As far as sampling is concerned, the first period comprises 12 months, and, adopting a probability-based statistical methodology, 2 000 PRH tenants were selected every month to participate in the Survey on Household Income of PRH Tenants by means of proportionate stratified systematic random sampling. A total of 24 000 sampled households were drawn in the first period. As stated in paragraph 5 above, PRH tenants were divided into five categories (i.e. five strata) according to their household size in the sampling process, i.e. 1-person household, 2-person household, 3-person household, 4-person household, and household of five persons or more. Sampled households were then drawn from each category according to the actual proportion of PRH tenants in a particular month.

7. The income declaration forms are served under Section 25(1) of the Housing Ordinance and declaration is mandatory. All selected households are required to complete the forms. However, to mitigate the burden caused to the selected households, no household will be selected more than once within a period of 12 months.

II. Data Computation

8. The income index seeks to reflect change in the household income of PRH tenants and it should cover PRH households with normal income. In computing the income index, “non-representative” households with income deviating considerably from the normal PRH households would be excluded to minimise distortion to the outcome of the computation. Such households include:

- (1) *“Well-off tenants”*: Tenants paying additional rent (commonly known as “well-off tenants”) are better off than other PRH households. Their inclusion in the coverage of the income index would raise the overall income level and hence, cannot accurately reflect the affordability of PRH households in general;
- (2) *Other households with high “outlying” income*: Referring to those high-income households who are not required to declare income under the so-called “well-off tenants” policy (including those who have resided in PRH for less than 10 years). To assess the proportion of these households, we have adopted the “John Tukey’s Outliers Filter” method, a common statistical method, for the treatment of outliers data. Applying this methodology to define the outliers of the income data in the “Survey on Household Income of PRH Tenants” excludes PRH households with upper outlying income levels, but those with low income levels or without income will not be excluded; and
- (3) *Comprehensive Social Security Assistance (CSSA) households*: CSSA is effectively social security allowance provided by the Government, rather than income.

9. According to the data collected in the 2007 “Survey on Household Income of PRH Tenants”, 910 well-off tenants, 513 other households with upper outlying income levels, and 5 640 CSSA households are respectively excluded from the computation of the income index, accounting for 3.9%, 2.2% and 24% of the completed sample. With the exclusion of these categories of PRH households and subsequent to grossing up, C&SD computed the household size distribution of PRH tenants for the compilation of income index for the rent review. Such distribution forms the set of weights which will remain unchanged over the second period in order to discount the impact due to variation in household size distribution in the rent review cycle. The mean monthly household income over the first period is \$13,233. Please see **Annex** for the figures.

Quality Control

10. The HA and C&SD have adopted various quality control measures to ensure impartiality, objectiveness and accuracy throughout the entire process of the income survey exercise. The measures include the following:

- (1) The HA responds to tenants’ enquiries regarding the problems they encounter when completing the income declaration forms so as to minimise errors and omissions. Home visits are also conducted by the HA staff upon request to assist the physically challenged tenants and the elderly in completing the forms;
- (2) The HA has adopted the double data entry approach, i.e. the same set of data is input into the computer by two staff members separately. The two sets of data are then compared and matched with each other for verification to avoid manual input errors;
- (3) Monthly verification is conducted by the C&SD to check whether the household size distribution of the sampled households is in line with the overall household size distribution of PRH tenants, so as to ensure the representativeness of the samples; and
- (4) About 5% of tenants who have declared income are randomly selected by the C&SD for the HA to request them to submit income documentary proof to support that the information declared is true and correct.

11. The above measures serve to monitor and assess in a comprehensive manner the representativeness of the sampled PRH households, the correctness of their declared income and the accuracy of the input data. The objective is to ensure that the data adopted for the computation of income index could accurately reflect the household income of PRH tenants. Among the 24 000 sampled PRH households which participated in the HA's "Survey on Household Income of PRH Tenants" in 2007, the response rate was over 98%³. This has provided an adequate basis for the compilation of reliable statistics.

Conclusion

12. It is worth noting that, as mentioned in paragraph 2 above, rent adjustment under the new mechanism is based on the change of income index between the first and the second periods of the rent review cycle. The income index in the first period of the first rent review is set at 100 as the basis for comparison. Before completion of data collection for 2009, the 2007 income data would not serve any comparison purpose in the context of the rent review. Moreover, since the nature and coverage of "Survey on Household Income of PRH Tenants" are different from that of the other surveys conducted by the C&SD or other organisations, the data should not be used for any comparison purpose.

**Housing Department
Transport and Housing Bureau
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³ Among the 2% of tenants who were unable to provide the information requested in the declaration form, all but one were verified to have reasonable grounds such as chronic illness, overseas employment or study, or imprisonment. The only tenant who, without justification, refused to return the income declaration form as required under Section 25(1) of the Housing Ordinance was prosecuted and fined by the Court on conviction.

**Mean Monthly Household Income of PRH Tenants
in the First Period of the First Rent Review^[Note]**

Household Size	Mean monthly household income (\$) (a)	Distribution of household size % (weights) (b)
1-person	3,883	10.620%
2-person	7,948	19.443%
3-person	13,340	26.796%
4-person	16,568	28.106%
5-person or above	20,245	15.035%
Total	13,233	100.0%

Mean monthly household income

$$\begin{aligned}
 &= \$3,883 \times 10.620\% + \$7,948 \times 19.443\% + \$13,340 \times 26.796\% + \$16,568 \times \\
 &\quad 28.106\% + \$20,245 \times 15.035\% \\
 &= \mathbf{\$13,233}
 \end{aligned}$$

Note: Please note that all figures in the above table were computed by the default number of decimal points in the computer system. As it is impracticable to list out the digits in full, income figures have been rounded to the nearest whole number while the weights presented in percentage have been rounded to the nearest three decimal points.