

For Information

Legislative Council Panel on Housing 2020 Rent Review of Public Rental Housing

PURPOSE

This paper informs Members of the outcome of the 2020 rent review conducted under the established rent adjustment mechanism for public rental housing (PRH) as stipulated in the Housing Ordinance (Cap. 283); and seeks their views.

THE REVIEW

2. The existing PRH rent adjustment mechanism is stipulated under Section 16A of the Housing Ordinance which came into effect on 1 January 2008. Section 16A provides that the Hong Kong Housing Authority (HA) shall conduct a rent review every two years¹ and vary the PRH rent according to the change in the income index between the first and second periods covered by the review.

3. For the 2020 rent review, the income index (computed by the Commissioner for Census and Statistics based on the data from the “Survey on Household Income of PRH Tenants” conducted by HA) for the second period (i.e. 2019) of the rent review is higher than that for the first period (i.e. 2017) by 9.66%. In accordance with the PRH rent adjustment mechanism stipulated in the Housing Ordinance, the proposed rent adjustment under the 2020 PRH rent review is +9.66%. Details of this rent review are set out in the attached **Memorandum** for HA’s Subsidised Housing Committee (SHC).

4. Members are invited to note the outcome of the 2020 rent review and express views on the review. The subject will be considered by the SHC at its meeting on 20 July 2020.

**Housing Department
June 2020**

¹ Section 16A(1)(b) of the Housing Ordinance stipulates that HA “shall review the relevant rent as soon as practicable after the second anniversary of the expiry date of the second period for the last review”.

**Memorandum for the Subsidised Housing Committee of
the Hong Kong Housing Authority**

2020 Rent Review of Public Rental Housing

PURPOSE

This paper –

- (a) seeks Members' endorsement of the outcome of the 2020 rent review conducted in accordance with the rent adjustment mechanism for public rental housing (PRH) as stipulated in the Housing Ordinance (Cap. 283); and
- (b) recommends Members to consider whether it is necessary to provide any special relief measures to PRH tenants, and if so, the measures to be implemented.

RECOMMENDATION

2. Members are recommended to –

- (a) approve the outcome of the 2020 rent review which was conducted in accordance with section 16A(4) of the Housing Ordinance (paragraph 14 below); and
- (b) consider whether it is necessary to provide any special relief measures to PRH tenants, and if so, the measures to be implemented (paragraphs 18 to 22 below).

BACKGROUND

3. The existing PRH rent adjustment mechanism is stipulated under section 16A of the Housing Ordinance which came into effect on 1 January 2008. Section 16A provides that the Hong Kong Housing Authority (HA) shall conduct a rent review every two years^{Note 1} in accordance with the mechanism stipulated therein and vary the PRH rent according to the change in the income index between the first and second periods covered by the review. Section 16A(4) provides that HA,

- (a) “if satisfied on a review of the relevant rent that the income index for the second period is higher than the income index for the first period by more than 0.1%, shall as soon as practicable after the review increase the relevant rent by the rate of the increase of the income index or 10%, whichever is less”; and
- (b) “if satisfied on a review of the relevant rent that the income index for the second period is lower than the income index for the first period by more than 0.1%, shall as soon as practicable after the review reduce the relevant rent by the rate of reduction of the income index”.

Based on the above statutory provisions, HA is required to adjust the PRH rent in strict accordance with the stipulated mechanism.

4. The mechanism provides an **objective basis for HA to determine when PRH rent should be adjusted and by how much, taking into account tenants’ affordability**. It also helps promote the long-term sustainability of the PRH programme. Background information on the rent adjustment mechanism, as well as the methodology for data collection and computation is at ----- **Annex A**.

5. After section 16A of the Housing Ordinance was enacted in June 2007, HA reduced the PRH rent by 11.6% in August 2007, which corresponded to the change in average income of PRH tenants between “January to December 1997” and “April 2005 to March 2006”. After section 16A came

Note 1 Section 16A(1)(b) of the Housing Ordinance stipulates that HA “shall review the relevant rent as soon as practicable after the second anniversary of the expiry date of the second period for the last review”.

into effect on 1 January 2008, HA conducted a rent review in 2010^{Note 2}, 2012, 2014, 2016 and 2018 respectively. In each review, the Subsidised Housing Committee (SHC) of HA considered the report of the Commissioner for Census and Statistics (C for C&S) and endorsed the outcome, and the rent adjustment came into effect on 1 September. The rent adjustments since the enactment of section 16A of the Housing Ordinance are summarised below –

	Change in Income Index	Adjustment of PRH rent	Effective date of new rent
Enactment of section 16A of the Housing Ordinance	-	-11.6%	August 2007
2010 review	+4.68%	+4.68%	September 2010
2012 review	+16.24%	+10%	September 2012
2014 review	+19.27%	+10%	September 2014
2016 review	+16.11%	+10%	September 2016
2018 review	+11.59%	+10%	September 2018

OUTCOME OF THE 2020 RENT REVIEW

6. For the 2020 rent review, the first period for the purpose of computing the income index is the 12 months in 2017, while the second period is the 12 months in 2019. The Census and Statistics Department (C&SD) has confirmed that the data collected through the “Survey on Household Income of Public Rental Housing Tenants” (the Income Survey) conducted by HA accurately reflected the household income of PRH tenants in both 2017 and 2019. The survey data have been used to compute the income index for PRH tenants accordingly. Distribution of survey data and details of households excluded from the computation of the mean monthly household income are set out in the ensuing paragraphs.

Note 2 Section 16A(1)(a) of the Housing Ordinance stipulates that HA shall “review the relevant rent as soon as practicable after 1 January 2010”. In relation to the first rent review to be conducted after 1 January 2010, section 16A(8) of the Housing Ordinance defines the first period as a period of 12 months expiring on 31 December 2007, and the second period as a period of 12 months expiring on 31 December 2009.

Sample distribution

7. Monthly sampling of 2 000 PRH households for the first and second periods was conducted in accordance with the actual distribution of household size each month as shown at **Annex B1** and **Annex B2** respectively.

8. By design of the proportionate stratified systematic random sampling, the distribution of tenant household sample by PRH estate and by district corresponds to the actual distribution of all PRH households. A comparison of the tenant household sample and actual distribution of households by district and by estate for the first and second periods is at **Annex C1** and **Annex C2** respectively.

Exclusion of non-representative households

9. A total of 24 000 PRH households were sampled in each of the first and second periods. The response rates were 98.5% and 98.9% for 2017 and 2019 respectively. The remaining 1.5% and 1.1% involved 356 incomplete cases for 2017 and 255 incomplete cases for 2019. These tenants were unable to provide all the information requested in the declaration form, and all were verified by the Housing Department (HD) to have reasonable grounds (e.g. chronic illness, overseas employment or study, imprisonment, etc.) for not being able to provide the information required.

10. According to the methodology set out at Annex A and as shown at ----- **Annex D1**, in the 2017 Income Survey, 807 “well-off tenants”^{Note 3}, 525 other households with income higher than the upper outlying levels, and 4 216 Comprehensive Social Security Assistance (CSSA) households were excluded from the computation of the income index, accounting for 3.4%, 2.2% and 17.9% of the completed samples respectively. Upon exclusion of these three categories of non-representative households, another 96 invalid sampling units (i.e. deceased tenants and tenants who had terminated their tenancies) and the 356 incomplete cases mentioned in paragraph 9 above, the sample size for computing the income index is 18 000 for 2017.
- 11. As shown at **Annex D2**, in the 2019 Income Survey, 908 “well-off tenants”, 444 other households with income higher than the upper outlying levels, and 3 732 CSSA households were excluded from the computation of the income index, accounting for 3.8%, 1.9% and 15.8% of the completed sample respectively. Upon exclusion of these three categories of non-representative households, another 103 invalid sampling units and the 255 incomplete cases as mentioned in paragraph 9 above, the sample size for computing the income index is 18 558 for 2019. C&SD considers the resultant sample sizes for both the first and second periods form a sound basis for the compilation of the income index.

Note 3 HA’s Housing Subsidy Policy (HSP) and the Policy on Safeguarding Rational Allocation of Public Housing Resources (SRA) are commonly referred to as the “Well-off Tenants Policies”. Under the “Well-off Tenants Policies”, households after living in PRH for 10 years are required to declare their household income and assets, and thereafter biennially. Those with a household income equivalent to two to three times of the PRH income limits have to pay 1.5 times net rent plus rates. Those with household income equivalent to three to five times of the PRH income limits are required to pay double net rent plus rates. PRH households with total household income or net assets value exceeding the prescribed limits (i.e. five times and 100 times of the PRH income limits respectively), as well as those who have private domestic property ownership in Hong Kong, are required to vacate their PRH flats.

Households who are required to vacate their PRH flats but have a temporary housing need may apply for a fixed-term licence to stay in the PRH for a period of not more than 12 months, during which time a licence fee equivalent to the double net rent plus rates or market rent, whichever is higher, is charged. “Well-off tenants” are PRH tenants who are paying additional rent (i.e. 1.5 times or double net rent plus rates, or market rent).

Computation of mean monthly household income

12. Applying a standard statistical method to gross up the survey data above, C&SD computed the household size distribution of PRH tenants which forms a set of weights for computing the overall mean monthly household income and hence the income index for the rent review. Details of the two periods are at **Annex D1** and **Annex D2** respectively.

13. The mean monthly household income of PRH tenants in the first period (i.e. 2017) is \$22,631 and this index is set at 100. The adjusted mean monthly household income in the second period (i.e. 2019) is \$24,817. The index of the second period is therefore 109.66. C&SD has conducted various quality checks and computed the income index with reference to the income data for the first and second periods in its independent capacity. Findings of the quality checks performed by C&SD and the computation of income index are ----- appended at the C for C&S' report on the 2020 rent review exercise at **Annex E**.

14. As mentioned in paragraph 3 above, section 16A(4)(a) of the Housing Ordinance stipulates that if the income index for the second period is higher than that for the first period by more than 0.1%, HA shall increase the PRH rent by the rate of increase of the income index or 10%, whichever is less. Since the income index for the second period is **higher** than that for the first period **by 9.66%**, rent adjustment under the 2020 PRH rent review is **+9.66%**.

IMPACT OF RENT ADJUSTMENT ON TENANTS

15. A total of about 779 300 households were residing in PRH as at December 2019. Among them –

- (a) about 79% (about 616 600 households) were paying normal rent;
- (b) about 14% (about 112 400 households) were CSSA households whose rent was mostly covered by the Government in most cases;
- (c) about 4% (about 31 400 households) were “well-off tenants” who were paying additional rent; and

16. about 2% (about 18 900 households) were receiving assistance under HA's Rent Assistance Scheme (RAS). The average monthly rent as at December 2019 was \$2,072, and an adjustment of +9.66% means **an increase of about \$200 on average**. As at December 2019, the monthly rent ranged from \$443 to \$5,159. The upward rent adjustment will hence **range from \$42 to \$498**, as tabulated below –

Monthly rent increase Note 4	No. of households Note 5*	Percentage among all PRH households Note 5
+\$42 to \$100	23 900	4%
+\$101 to \$150	157 300	24%
+\$151 to \$200	194 900	29%
+\$201 to \$250	107 800	16%
+\$251 to \$300	91 600	14%
+\$301 to \$350	53 900	8%
+\$351 to \$498	37 400	6%

Notes

* Figures rounded to the nearest hundred.

IMPLEMENTATION DATE

17. Section 16A(4) of the Housing Ordinance stipulates that HA shall adjust PRH rent as soon as practicable after the rent review, whereas section 16A(5)(b) provides that HA shall not vary the relevant rent before the second anniversary of the date of the last variation. In all the previous rent reviews under the current mechanism, the new rent came into effect on 1 September. We therefore propose that, subject to Members' endorsement of the outcome of the 2020 rent review, the rent adjustment take effect from 1 September 2020.

Note 4 The rent increase distribution range as shown is calculated on the basis of normal rent (i.e. rent inclusive of net rent and rates) payable by PRH tenants. For those additional rent paying households who are required to pay 1.5 or 2 times of the net rent, the distribution of the actual rent payable upon rent adjustment for them may be different.

Note 5 CSSA households are excluded, as their rent is fully covered by the Government in most cases.

CONSIDERATIONS

18. With the global and local economic environment worsening since last year and becoming more uncertain amid the Covid-19 pandemic, there have been calls for HA to freeze PRH rent or grant rent waivers or concessions. The latest real GDP growth rate forecast (-4% to -7%) for 2020 by the Government and unemployment rate (5.9%) are strong evidence that Hong Kong is currently going through the greatest economic difficulties since the financial crisis in 2009. The Government also admits that Hong Kong's economic outlook is getting even more challenging.

19. As noted in paragraph 3 above, HA is bound by law to review PRH rent every two years, and to implement the new rent level "as soon as practicable after the review". Hence, HA would not be acting in accordance with section 16A(4) of the Housing Ordinance if it does not adjust the rent in accordance with the stipulated mechanism. Notwithstanding the above, section 17 of the Housing Ordinance confers a power on HA that it may "remit, in whole or in part and for such period as it thinks fit, the payment of any rent, premium or other consideration payable under any lease." HA therefore can consider whether to provide rent waivers under the auspices of section 17 of the Housing Ordinance having regard to the economic challenges likely to be faced by its PRH tenants within the next two-year cycle from September 2020, and if so, the extent.

Rent relief measures provided by HA and the Government in the past

20. By way of background, HA has conducted six rounds of rent review since the current PRH rent adjustment mechanism came into effect on 1 January 2008 (see paragraph 3 above). In the first rent review conducted in 2010, HA granted a one-month rent waiver in order to alleviate the burden of PRH tenants who might not yet have benefited from the economic recovery then. In the 2012 rent review, HA adopted a "sharing of burden approach" by granting a one-month rent waiver to share the financial burden of PRH tenants. In the 2014 rent review, SHC laid down the principle that granting a rent waiver to all tenants irrespective of whether tenants were in need might not be the best use of public money. It might also not be the most equitable measure, when there continued to be a growing demand on HA's resources from applicants who were waiting for PRH units. Instead, there should be targeted assistance to those tenants who were in need (see paragraphs 22(c) below). HA therefore did not grant rent waiver in the 2014, 2016 and 2018 rent reviews.

21. On the other hand, there were also occasions where the Government provided rent payment of one to two months for PRH tenants as part of its Budget initiatives. The rent waivers provided by HA and relief measures provided by the Government since 2010 are summarised as follows –

Year	Rent payment offered by the Government	Adjustment of PRH rent by HA	Rent waiver granted by HA
2010	2 months (July, August)	+4.68%	1 month (September)
2011	2 months (August, September)	N/A (not HA's rent review year)	
2012	2 months (July, August)	+10%	1 month (September)
2013	2 months (August, September)	N/A (not HA's rent review year)	
2014	1 month (August)	+10%	None ^{Note 6}
2015	1 month (August)	N/A (not HA's rent review year)	
2016	None	+10%	None ^{Note 6}
2017	None	N/A (not HA's rent review year)	
2018	None	+10%	None ^{Note 6}
2019	None	N/A (not HA's rent review year)	
2020	2 months (January, July) ^{Note 7}	+9.66%	To be considered

22. In considering the extent of rent relief measures for PRH tenants in the 2020 review, the following factors are relevant considerations –

(a) Relief measures already provided by the Government

- (i) As shown in the table under paragraph 21 above, the Government has already received funding approval from the Legislative Council (LegCo) for paying rent for the lower income public housing tenants for two months in 2020, one in January 2020 as one of the Government's helping measures announced in August 2019, and another one in July 2020 as part of the 2020-21 Budget initiatives.

Note 6 Given the economic situation at that moment and the growth in tenants' income, HA considered that granting a rent waiver to all tenants might not be the best use of HA's revenue. Instead, HA considered that there should be targeted assistance to those tenants who were in need, such as by enhancing the Rent Assistance Scheme (RAS).

Note 7 The January payment arose from the Government's initiative announced in August 2019; the July payment was announced as part of the 2020-21 Budget initiatives.

- (ii) Besides, as one of the 2020-21 Budget initiatives, the Government will waive the rates for all four quarters of 2020-21, subject to a ceiling of \$1,500 per quarter for each rateable property. In line with the established practice, HA will pass on all the rates concessions to PRH tenants, which is estimated to be \$2,599 million in total. The rates concession receivable by each PRH household ranges from about \$480 to \$6,000 in 2020-21.
- (iii) As a rough reference, the above rent payments and rates concessions provided by the Government are equivalent to about **a saving of 3.14 months'**^{Note 8} **rent in 2020** for PRH tenants.

(b) Impact on HA's financial position

- (i) Section 4(4) of the Housing Ordinance stipulates that "[t]he policy of the HA shall be directed to ensuring that the revenue accruing to it from its estates shall be sufficient to meet its recurrent expenditure on its estates."
- (ii) The financial implications of granting a rent waiver are substantial. A one-month rent waiver would amount to \$1,613 million (based on the proposed new rent). Based on the budget endorsed by HA in January 2020, a 9.66% increase in PRH rent in September 2020 will improve the position of HA's rental housing operating account from a deficit of about \$703 million to a surplus of about \$427 million in 2020-21^{Note 9}. If HA were to provide a one-month rent waiver while increasing the rent by 9.66% in September 2020, the deficit of HA's rental housing operating account in 2020-21 would be increased from \$703 million to about \$1,186 million; and the average monthly operating

Note 8 This is estimated based on the Government's two-month rent payments in 2020 and rates concessions for the remaining 10 months in 2020.

Note 9 The 9.66% rent increase commencing in September 2020 will result in an estimated additional net revenue of around \$1,130 million (i.e. \$1,940 million x 7/12 months) in 2020-21.

deficit for each PRH unit in 2020-21 would be increased from about \$72 to \$122 (instead of turning to a surplus of \$44 with the rent increase). The deficit of HA's rental housing operating account for 2020-21 will further increase if a rent waiver of more than one month is to be provided.

(c) Rent Assistance Scheme (RAS)

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- (i) PRH tenants with temporary financial difficulties may seek assistance under HA's RAS to pay their rent. Depending on the level of their income, eligible applicants will be granted either 25% or 50% rent reduction for a period of two years.
 - (ii) HA reviews the operation of RAS and introduces enhancements to the scheme from time to time. As a result of past enhancement measures, **the number of RAS beneficiaries increased substantially by 63%**, from about 12 300 as at July 2014 to about 20 100 as at May 2020. Details of RAS and relevant enhancements are at **Annex F**.
 - (iii) In view of the impact of the Covid-19 pandemic on the economy, as a temporary measure, HA has put in place discretionary arrangement so as to provide timely assistance to those tenants with financial difficulties by withholding the issuance of Notice-to-Quit (NTQ) on grounds of rent arrears from May to October 2020. PRH tenants/licensees with short term financial difficulties paying either normal rent or reduced rent under RAS, and with household income below the PRH income limit (PRHIL) may submit one-off applications for HA's approval on withholding the issuance of NTQ. If approved, NTQ against rent arrears will be withheld up to October 2020 and the approved tenants/licensees are allowed to settle all outstanding rent by November 2020.
 - (iv) We will continue to review the operation of RAS and consider measures to further enhance the scheme as appropriate.

FINANCIAL IMPLICATIONS

23. According to the budget endorsed by HA in January 2020, the rental housing operating account is estimated to have a deficit of \$703 million in 2020-21. Upon the PRH rent increase by 9.66% from September 2020 onwards, it is estimated that there will be a surplus of about \$427 million in the rental housing operating account in 2020-21.

24. If Members consider it necessary to provide special relief measures to PRH tenants, the financial implications will depend on the measures to be implemented. As noted in paragraph 22(b)(ii), in case a one-month rent waiver is provided, it will lead to a deficit of \$1,186 million in HA's rental housing operating account in 2020-21.

PUBLIC REACTION AND PUBLICITY

25. HA is required by law to increase the PRH rent by 9.66% which is derived according to the established mechanism as provided for in the Housing Ordinance. There have been strong demands for the HA to freeze/reduce PRH rent and/or provide special relief measures in view of the current global and local economic difficulties.

26. This paper is copied to members of HA and the Finance Committee concurrently for information.

BRIEFING FOR THE LEGISLATIVE COUNCIL'S PANEL ON HOUSING

27. As per established practice, we will brief the Legislative Council's Panel on Housing of the outcome of the 2020 rent review at its meeting on 6 July 2020. This paper is issued to the Panel on Housing in parallel to facilitate discussion at the Panel. Taking into account views from Panel Members and other stakeholders, we will make a further submission to SHC for consideration at the meeting on 20 July 2020.

DISCUSSION

28. At the SHC meeting to be held on 20 July 2020, Members will be invited to approve the outcome of the 2020 rent review in accordance with section 16A(4) of the Housing Ordinance (paragraph 14 above) and consider whether it is necessary to provide any special relief measures to PRH tenants, and if so, the measures to be implemented.

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(Strategy Division)
Date of Issue : 23 June 2020

c.c. Members of Housing Authority
Members of Finance Committee

Background and methodology of the Rent Adjustment Mechanism

A. Background leading to the establishment of the current rent adjustment mechanism

It has been a long-established policy for HA to set the rent of public rental housing (PRH) at affordable levels. At the same time, under section 4(4) of the Housing Ordinance, the policy of HA shall be directed to ensuring that the revenue accruing to it from its PRH estates shall be sufficient to meet its recurrent expenditure on its PRH estates.

2. Prior to 1998, HA used to review and adjust the rent of PRH units in batches biennially. Each batch comprised different number of units in different locations. In determining whether, and if so the extent to which, PRH rent should be adjusted, HA would take into account a number of factors, including tenants' affordability, consumer price movements, Government rates, wage movement, comparative estate values, running costs of the estates under review, HA's financial conditions, etc. In 1997, the Housing Ordinance was amended by way of a Private Members' Bill. The amended Ordinance came into effect in March 1998. The then section 16(1A) of the Housing Ordinance imposed, inter alia, the requirement of the median rent-to-income ratio (MRIR) of all estates not exceeding 10% after any rent variation. The requirement did not provide an objective basis for HA to consider any rent adjustment, since increases in MRIR could be brought about by extraneous factors other than changes in PRH tenants' household income, such as an increase in the proportion of small households, elderly households or CSSA households, and improvement in the PRH allocation standard. There was thus a need to establish an objective and sustainable mechanism to form the basis for rent adjustments.

3. HA set up an Ad Hoc Committee in January 2001 to review its domestic rent policy. The objective of the review is to map out a rent policy that is affordable and flexible, provides greater choice to tenants, and contributes to the long-term sustainability of the public housing programme. In November 2006, HA approved the Report on the Review of Domestic Rent Policy, which recommended the formulation of the income-based rent adjustment mechanism to replace the previous statutory 10% MRIR cap.

B. The current mechanism

4. The Housing (Amendment) Bill 2007 (the Amendment Bill) introduced the current mechanism to provide for upward or downward adjustment of PRH rent according to the changes in the household income of PRH tenants. The Amendment Bill was passed by the Legislative Council in June 2007 and came into operation on 1 January 2008. To provide a starting point for the rent adjustment mechanism to operate effectively, HA reduced the PRH rent by 11.6% from August 2007^{Note}.

5. Under the current PRH rent adjustment mechanism, HA shall conduct a rent review every two years and vary the PRH rent according to the change in the income index between the first and second periods covered by the review. As stipulated in section 16A(4) of the Housing Ordinance, if the income index for the second period is higher than that for the first period by more than 0.1%, HA shall increase the PRH rent by the rate of increase of the income index or 10%, whichever is less. If the income index for the second period is lower than that for the first period by more than 0.1%, HA shall reduce the PRH rent by the rate of reduction of the income index.

6. Rent adjustments are made with reference to the change in the income index between the first and second periods of the rent review cycle. In accordance with section 16A(8) of the Housing Ordinance, for the 2020 rent review, the first period is the period of 12 months expiring on 31 December 2017, and the second period is the period of 12 months expiring on 31 December 2019. Under section 16A(7)(a), an income index for the first period reflects the level of the mean monthly household income of tenants over the first period and an income index for the second period reflects the level of the adjusted mean monthly household income of tenants over the second period. As stipulated in section 16A(8), “adjusted mean monthly household income” means the mean monthly income of tenants assessed on the basis of the distribution of the household size of those tenants over the first period.

Note In 2006, HA’s Ad Hoc Committee on Review of Domestic Rent Policy considered that for the income-based rent adjustment mechanism to operate effectively and fairly, the then PRH rent should be adjusted to a level considered appropriate and acceptable to the community. Since the level of PRH rent had remained unchanged from 1997 to 2006, a comparison of the income index of PRH tenants in the two periods of January - December 1997 and April 2005 - March 2006 was made, and the corresponding decrease in income of 11.6% was adopted as the basis for the rent reduction.

7. Section 16A(7)(b) of the Housing Ordinance specifies that the Commissioner for Census and Statistics (C for C&S) shall, in relation to the compilation of the income index, compute the index. This includes the computation of the change in the income index between the first and second periods.

C. Data collection and computation

8. Compilation of the income index involves data collection and data computation. The income data of PRH households collected through the Income Survey is used as the basis for compiling the income index.

9. To collect the income data, a sample of 2 000 PRH households is randomly selected by HA each month and each sampled household receives a notification letter together with an income declaration form. The income declaration forms are served under section 25(1) of the Housing Ordinance and declaration is mandatory. The declarable income includes remuneration from employment and self-employment, and other income (for example, interest and dividends). All sampled households are required by law to complete the forms. However, to mitigate the burden caused to the sampled households, no household is selected more than once within the two periods of January – December 2017 and January – December 2019.

10. For each sampled household, every family member listed in the tenancy records shall, in compliance with the relevant stipulations of the Ordinance, declare truthfully their monthly income. Explanatory notes are provided in the income declaration form to facilitate their provision of income data. The sampled households shall return the duly completed income declaration forms within the time specified. Information provided by tenants is treated in strict confidence and is solely used for compiling the income index. Households who knowingly make false statements of their particulars required in the income declaration forms, or refuse or fail to return the forms by the specified time, shall be guilty of an offence and will be liable to prosecution.

11. 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 extent of rent adjustment. To do this, the household size distribution of PRH tenants in the rent review cycle should remain unchanged, so that the impact on household income due to variations of household size distribution could be eliminated in computing the income index.

The role of HA

12. HA collects the income data from the sampled households. The sampling method and the data collection process were devised in consultation with the Census and Statistics Department (C&SD) to ensure the representativeness and accuracy of the Income Survey.

13. As far as sampling is concerned, a probability-based sampling method is adopted to randomly select 2 000 PRH tenants each month to participate in the Income Survey. PRH tenants are first categorised into five household size categories (i.e. five strata): 1-person households, 2-person households, 3-person households, 4-person households and households of 5 persons or above. Households are then drawn from each category according to the actual household size distribution of PRH tenants in a particular month. 2 000 households were sampled according to the actual household size distribution month by month. This method is known as **proportionate stratified systematic random sampling**. It provides more precise estimates than the simple random sampling.

14. In the course of data collection and processing, HA has adopted the following measures to safeguard the quality of data collected in the Income Survey –

- (a) HA responds to tenants' enquiries regarding any problems they encounter when completing the income declaration forms so as to minimise errors and omissions. Home visits are also conducted by HA staff upon request to assist physically challenged tenants and the elderly to complete the forms;
- (b) HA has carried out preliminary vetting of all the returned income declaration forms upon receipt from the sampled households. For those forms which were not duly completed or in need of further clarification, the households concerned were contacted by the staff of HD, and may be asked to provide documentary proof of income and other related information for verification of the declared income data;
- (c) HA has adopted a 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; and

- (d) HA has conducted computerised validation check on the input data of the Income Survey. Any discrepancies identified were verified with the sampled households concerned before providing the dataset to C&SD for computing the income index.

The role of C&SD

15. C&SD is responsible for conducting quality checks on the work of HA in the Income Survey; and computing the income index in its independent capacity in accordance with section 16A(7)(b) of the Housing Ordinance.

(a) Quality check on the work of HA in the Income Survey

16. C&SD has adopted various quality checks to ensure the impartiality, objectiveness and accuracy of HA's work in the Income Survey. These measures serve to monitor and assess in a comprehensive manner the representativeness of the sampled PRH households, the correctness of the declared income and the accuracy of the input data. The objective is to ensure that the data adopted for the computation of the income index could truly reflect the household income of PRH tenants. These measures include –

- (a) statistical testing is conducted by C&SD to evaluate if the distribution of the sampled households is in line with the actual distribution of PRH tenants in terms of household size and geographical distribution, so as to ensure the representativeness of the samples;
- (b) about 5% of the sampled households who have declared income are randomly selected by C&SD for HA to request them to submit income documentary proof to support that the information declared is true and correct. Some 1 200 households in each of the first and second periods are covered by this additional verification. Furthermore, C&SD conducts random check to confirm whether HA has vetted the income documentary proof properly;
- (c) about 2% of the completed income declaration forms are randomly selected by C&SD each month to check the accuracy of data input performed by HA; and
- (d) C&SD carries out another round of checking on HA's data validation work as mentioned in paragraph 14(d) above to ensure that all necessary steps have been taken.

(b) Exclusion of non-representative households

17. The income index seeks to reflect changes in the household income of PRH tenants over the first and second periods. In computing the income index, “non-representative” households with considerable income deviation are excluded, in accordance with the methodology noted by the Bills Committee scrutinising the Amendment Bill mentioned in paragraph 4 above, to minimise distortion to the outcome of the computation. Households excluded from computation of the income index are –

- (a) **“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;
- (b) **Other households with high “outlying” income**: Referring to those high-income households who are not “well-off tenants” paying additional rent (including those who have resided in PRH for less than 10 years). To assess the proportion of these households, the “John Tukey’s Outliers Filter Method”, a common statistical method, has been adopted for the treatment of outliers’ data. Applying this method to define the outliers of the income data in the Income Survey has excluded PRH households with income higher than the upper outlying levels (please see **Appendix** on the methodology); and
- (c) **CSSA households**: The level of CSSA is set by the Government. It does not reflect the income level of representative PRH tenant households.

(c) Computation of mean monthly household income

18. With the exclusion of the three categories of non-representative PRH households and invalid sampling units, as well as the application of statistical method to gross up the survey data, C&SD computes the household size distribution of PRH tenants which forms a set of weights for computing the overall mean monthly household income and hence the income index for the rent review.

19. The distribution in the first period forms the set of weights which remains unchanged over the second period. In statistical term, the mean monthly household income of the second period is “adjusted” based on the household size distribution of the first period in order to discount the impact on household income due to variation in household size distribution in the rent review cycle.

Appendix to Annex A

The John Tukey's Outliers Filter Method

Background

The “Report on the Review of Domestic Rent Policy” published by HA in end 2006 proposed to exclude CSSA and additional rent paying households from the coverage of the income index. It further suggested households with extreme income in each household size category be excluded from the calculation of the index to deal with the so-called “outliers”.

2. At the third Bills Committee (which scrutinised the Housing (Amendment) Bill 2007) meeting held on 16 March 2007, Members raised concerns about the potential distortion to the resultant rate of rent adjustment under the new rent adjustment mechanism by high income households. The Government responded that, in addition to CSSA households and additional rent-paying households, the approximate top 1% household income in each household size group would also be excluded when calculating the weighted average household income.

3. The idea of excluding households with extremely high income was further discussed in subsequent Bills Committee meetings. While Members were aware of the Government's suggestion, some Members were of the view that more stringent selection rules should be applied so that “mild outliers” would also be excluded.

4. Upon further consultation with C&SD, the Government proposed to adopt the John Tukey's Outliers Filter Method to assess the proportion of households with outlying income levels. Based on the income pattern of PRH tenants back then, it was estimated that about top 4% and 5% households in each household size group would be excluded by applying the John Tukey's Outliers Filter Method. The suggested methodology was noted by the Bills Committee.

The Method

5. John Tukey's Outliers Filter Method was developed by John Wilder Tukey (1915-2000). This is a common and widely accepted statistical method for detecting outliers as it is applicable to different types of data set, without any assumptions on the statistical distribution or pattern of the data set.

6. The method determines the upper and lower outlier levels, based on the distribution of the whole set of original data. Those data higher than the upper level and those lower than the lower level are classified as outliers. As the two levels are determined from the original data set, there is no pre-determined percentage of data which will be classified as outliers.

7. In the context of compilation of the Income Index, the actual calculation involves –

- (a) arranging the set of household income data from the survey in ascending order, i.e. from the lowest to the highest income.
- (b) calculating the median, upper quartile or 75th percentile ($x_{.75}$) and lower quartile or 25th percentile ($x_{.25}$) of the household income of the sampled households. The median is the income level which divides the sampled households into two equal halves, one with household income above the median and the other below the median. The upper quartile is the income level which is above 75% of the sampled households. In other words, 25% of the sampled households have income above the upper quartile. Similarly, the lower quartile is the income level above 25% of the sampled households.
- (c) calculating the interquartile range (IQR) by subtracting the lower quartile from the upper quartile, i.e. $IQR = x_{.75} - x_{.25}$. The IQR thus contains the middle 50% of sampled households in terms of household income.
- (d) the upper outlying level is determined as $1.5 \times IQR$ higher than the upper quartile, i.e. $x_{.75} + 1.5 \times IQR$

Any household with income higher than this level is considered an outlier.

- (e) the lower outlying level is determined as $1.5 \times IQR$ lower than the lower quartile. i.e. $x_{.25} - 1.5 \times IQR$

Any household with income lower than this level is considered an outlier.

8. An example of the calculation for 1-person household group in 2017 is set out below –

Minimum (\$)	Maximum (\$)	Lower quartile (25 th percentile) (\$)	Upper quartile (75 th percentile) (\$)	Interquartile range (IQR) (\$)
0	117,105	4,447	9,000	4,553

$$\begin{aligned}\text{The interquartile range (IQR)} &= \text{upper quartile} - \text{lower quartile} \\ &= 9,000 - 4,447 \\ &= 4,553\end{aligned}$$

$$\begin{aligned}\text{The upper outlying level} &= \text{upper quartile} + 1.5 \times \text{IQR} \\ &= 9,000 + 1.5 \times 4,553 \\ &= 15,830\end{aligned}$$

$$\begin{aligned}\text{The lower outlying level} &= \text{lower quartile} - 1.5 \times \text{IQR} \\ &= 4,447 - 1.5 \times 4,553 \\ &= -2,383\end{aligned}$$

Similarly, upper and lower outlying levels for other household sizes can be computed. The results for 2017 are listed below –

Household size	Lower outlying level (\$)	Upper outlying level (\$)
1-person	-2,383	15,830
2-person	-9,318	37,960
3-person	-11,501	59,541
4-person	-13,256	77,261
5-person or above	-17,633	95,308

As for the 2019 data, the upper and lower outlying levels for determining the outliers are listed below –

Household size	Lower outlying level (\$)	Upper outlying level (\$)
1-person	-4,290	17,910
2-person	-11,925	43,875
3-person	-12,930	66,950
4-person	-17,000	87,000
5-person or above	-22,800	109,200

Households with income exceeding the upper outlying level or less than the lower outlying level are considered as outliers. In reality, no household from the lower end of the actual income distribution is considered as outlier and excluded.

Sample Distribution by Household Size in the First Period (2017)

Month of Declaration in 2017		Household Size					
		1P	2P	3P	4P	5P or above	Total
January	No. of Households	369	526	527	400	178	2 000
	%	(18.5)	(26.3)	(26.4)	(20.0)	(8.9)	(100.0)
February	No. of Households	370	526	528	399	177	2 000
	%	(18.5)	(26.3)	(26.4)	(20.0)	(8.9)	(100.0)
March	No. of Households	370	526	529	399	176	2 000
	%	(18.5)	(26.3)	(26.5)	(20.0)	(8.8)	(100.0)
April	No. of Households	371	526	531	397	175	2 000
	%	(18.6)	(26.3)	(26.6)	(19.9)	(8.8)	(100.0)
May	No. of Households	372	527	532	395	174	2 000
	%	(18.6)	(26.4)	(26.6)	(19.8)	(8.7)	(100.0)
June	No. of Households	373	528	532	394	173	2 000
	%	(18.7)	(26.4)	(26.6)	(19.7)	(8.7)	(100.0)
July	No. of Households	374	529	532	393	172	2 000
	%	(18.7)	(26.5)	(26.6)	(19.7)	(8.6)	(100.0)
August	No. of Households	374	529	533	392	172	2 000
	%	(18.7)	(26.5)	(26.7)	(19.6)	(8.6)	(100.0)
September	No. of Households	375	528	533	392	172	2 000
	%	(18.8)	(26.4)	(26.7)	(19.6)	(8.6)	(100.0)
October	No. of Households	376	529	533	391	171	2 000
	%	(18.8)	(26.5)	(26.7)	(19.6)	(8.6)	(100.0)
November	No. of Households	377	530	532	390	171	2 000
	%	(18.9)	(26.5)	(26.6)	(19.5)	(8.6)	(100.0)
December	No. of Households	377	531	532	390	170	2 000
	%	(18.9)	(26.6)	(26.6)	(19.5)	(8.5)	(100.0)
Overall	No. of Households	4 478	6 335	6 374	4 732	2 081	24 000
	%	(18.7)	(26.4)	(26.6)	(19.7)	(8.7)	(100.0)

Note:

Households were sampled according to the actual distribution of PRH households by household size, which varies from month to month. The percentages in brackets denote the distribution of sampled households in that month.

Sample Distribution by Household Size in the Second Period (2019)

Month of Declaration in 2019		Household Size					
		1P	2P	3P	4P	5P or above	Total
January	No. of Households	383	539	531	383	164	2 000
	%	(19.2)	(27.0)	(26.6)	(19.2)	(8.2)	(100.0)
February	No. of Households	384	540	531	382	163	2 000
	%	(19.2)	(27.0)	(26.6)	(19.1)	(8.2)	(100.0)
March	No. of Households	384	540	531	382	163	2 000
	%	(19.2)	(27.0)	(26.6)	(19.1)	(8.2)	(100.0)
April	No. of Households	385	540	531	381	163	2 000
	%	(19.3)	(27.0)	(26.6)	(19.1)	(8.2)	(100.0)
May	No. of Households	385	542	532	380	161	2 000
	%	(19.3)	(27.1)	(26.6)	(19.0)	(8.1)	(100.0)
June	No. of Households	386	543	532	379	160	2 000
	%	(19.3)	(27.2)	(26.6)	(19.0)	(8.0)	(100.0)
July	No. of Households	387	544	531	378	160	2 000
	%	(19.4)	(27.2)	(26.6)	(18.9)	(8.0)	(100.0)
August	No. of Households	388	544	531	378	159	2 000
	%	(19.4)	(27.2)	(26.6)	(18.9)	(8.0)	(100.0)
September	No. of Households	389	545	530	377	159	2 000
	%	(19.5)	(27.3)	(26.5)	(18.9)	(8.0)	(100.0)
October	No. of Households	389	545	530	377	159	2 000
	%	(19.5)	(27.3)	(26.5)	(18.9)	(8.0)	(100.0)
November	No. of Households	389	545	530	377	159	2 000
	%	(19.5)	(27.3)	(26.5)	(18.9)	(8.0)	(100.0)
December	No. of Households	390	545	529	377	159	2 000
	%	(19.5)	(27.3)	(26.5)	(18.9)	(8.0)	(100.0)
Overall	No. of Households	4 639	6 512	6 369	4 551	1 929	24 000
	%	(19.3)	(27.1)	(26.5)	(19.0)	(8.0)	(100.0)

Note:

Households were sampled according to the actual distribution of PRH households by household size, which varies from month to month. The percentages in brackets denote the distribution of sampled households in that month.

**Comparison of Distribution by District and Estate between
the Tenant Household Sample and the Actual Overall Distribution of
Tenant Households in the First Period (2017)**

	District *	Name of estate	Actual overall tenant households^		Tenant household sample	
			No	%	No.	%
1.	CENTRAL & WESTERN	Sai Wan Estate	631	0.1	16	0.1
2.	EASTERN	Chai Wan Estate	1 592	0.2	53	0.2
		Fung Wah Estate	347	0.0	13	0.1**
		Hing Man Estate	1 969	0.3	63	0.3
		Hing Tung Estate	2 061	0.3	67	0.3
		Hing Wah (1) Estate	2 259	0.3	69	0.3
		Hing Wah (2) Estate	3 494	0.5	109	0.5
		Hong Tung Estate	457	0.1	16	0.1
		Model Housing Estate	661	0.1	23	0.1
		Oi Tung Estate	3 869	0.5	125	0.5
		Siu Sai Wan Estate	6 006	0.8	187	0.8
		Tsui Lok Estate	316	0.0	14	0.1**
		Tsui Wan Estate	511	0.1	13	0.1
		Wah Ha Estate	132	0.0	5	0.0
		Wan Tsui Estate	3 595	0.5	116	0.5
		Yiu Tung Estate	5 085	0.7	161	0.7
		Yue Wan Estate	2 160	0.3	72	0.3
3.	SOUTHERN	Ap Lei Chau Estate	4 319	0.6	137	0.6
		Lei Tung Estate	1 935	0.3	63	0.3
		Ma Hang Estate	903	0.1	28	0.1
		Shek Pai Wan Estate	5 156	0.7	163	0.7
		Tin Wan Estate	3 083	0.4	103	0.4
		Wah Fu (1) Estate	4 753	0.6	157	0.7**
		Wah Fu (2) Estate	4 313	0.6	137	0.6
		Wah Kwai Estate	977	0.1	28	0.1
4.	KOWLOON CITY	Ho Man Tin Estate	4 670	0.6	145	0.6
		Hung Hom Estate	2 749	0.4	92	0.4
		Kai Ching Estate	5 179	0.7	163	0.7
		Ma Tau Wai Estate	2 056	0.3	62	0.3
		Oi Man Estate	6 258	0.8	198	0.8
		Sheung Lok Estate	345	0.0	13	0.1**
		Tak Long Estate	8 128	1.1	253	1.1
5.	KWUN TONG	Choi Fook Estate	3 414	0.5	104	0.4**
		Choi Ha Estate	484	0.1	16	0.1
		Choi Tak Estate	5 724	0.8	187	0.8
		Choi Ying Estate	3 974	0.5	125	0.5
		Hing Tin Estate	369	0.0	9	0.0
		Kai Tin Estate	2 220	0.3	75	0.3
		Kai Yip Estate	4 184	0.6	130	0.5**
		Ko Cheung Court	1 796	0.2	55	0.2
		Ko Yee Estate	1 186	0.2	43	0.2
		Kwong Tin Estate	2 266	0.3	73	0.3
		Lam Tin Estate	3 018	0.4	93	0.4
		Lei Yue Mun Estate	3 592	0.5	114	0.5
		Lok Wah North Estate	2 948	0.4	97	0.4
		Lok Wah South Estate	6 807	0.9	213	0.9

	District *	Name of estate	Actual overall tenant households^		Tenant household Sample	
			No.	%	No.	%
		Lower Ngau Tau Kok Estate	4 774	0.6	153	0.6
		On Tai Estate	541	0.1	21	0.1
		On Tat Estate	8 948	1.2	292	1.2
		On Tin Estate	720	0.1	20	0.1
		Ping Shek Estate	4 531	0.6	142	0.6
		Ping Tin Estate	5 485	0.7	177	0.7
		Po Tat Estate	7 385	1.0	237	1.0
		Sau Mau Ping Estate	11 967	1.6	383	1.6
		Sau Mau Ping South Estate	3 974	0.5	130	0.5
		Shun Lee Estate	4 366	0.6	141	0.6
		Shun On Estate	2 960	0.4	91	0.4
		Shun Tin Estate	6 869	0.9	226	0.9
		Tak Tin Estate	1 873	0.2	59	0.2
		Tsui Ping North Estate	3 029	0.4	93	0.4
		Tsui Ping South Estate	4 686	0.6	154	0.6
		Upper Ngau Tau Kok Estate	6 556	0.9	206	0.9
		Wan Hon Estate	982	0.1	27	0.1
		Wo Lok Estate	1 914	0.3	64	0.3
		Yau Lai Estate	8 471	1.1	269	1.1
		Yau Tong Estate	3 549	0.5	113	0.5
6.	SHAM SHUI PO	Chak On Estate	1 807	0.2	57	0.2
		Cheung Sha Wan Estate	1 380	0.2	40	0.2
		Fortune Estate	2095	0.3	70	0.3
		Fu Cheong Estate	5 928	0.8	185	0.8
		Hoi Lai Estate	4 884	0.6	148	0.6
		Lai Kok Estate	2 829	0.4	93	0.4
		Lai On Estate	1 329	0.2	43	0.2
		Lei Cheng Uk Estate	1 102	0.1	31	0.1
		Nam Cheong Estate	597	0.1	19	0.1
		Nam Shan Estate	2 665	0.4	88	0.4
		Pak Tin Estate	7 374	1.0	231	1.0
		Shek Kip Mei Estate	8 884	1.2	287	1.2
		So Uk Estate	2 716	0.4	89	0.4
		Tai Hang Tung Estate	1 996	0.3	63	0.3
		Un Chau Estate	7 562	1.0	241	1.0
		Wing Cheong Estate	1 478	0.2	57	0.2
7.	WONG TAI SIN	Choi Fai Estate	1 316	0.2	40	0.2
		Choi Hung Estate	7 358	1.0	235	1.0
		Choi Wan (1) Estate	5 790	0.8	184	0.8
		Choi Wan (2) Estate	2 923	0.4	92	0.4
		Chuk Yuen North Estate	1 132	0.2	40	0.2
		Chuk Yuen South Estate	5 985	0.8	188	0.8
		Fu Shan Estate	1 563	0.2	46	0.2
		Fung Tak Estate	1 117	0.1	35	0.1
		Lok Fu Estate	3 595	0.5	109	0.5
		Lower Wong Tai Sin (1) Estate	1 423	0.2	44	0.2
		Lower Wong Tai Sin (2) Estate	6 540	0.9	205	0.9
		Mei Tung Estate	2 414	0.3	77	0.3
		Shatin Pass Estate	1 275	0.2	41	0.2
		Tsz Ching Estate	7 989	1.1	251	1.0**
		Tsz Hong Estate	1 994	0.3	63	0.3
		Tsz Lok Estate	6 096	0.8	197	0.8
		Tsz Man Estate	1 966	0.3	61	0.3
		Tung Tau (2) Estate	1 988	0.3	62	0.3

	District *	Name of estate	Actual overall tenant households^		Tenant household Sample	
			No.	%	No.	%
		Tung Wui Estate	1 306	0.2	36	0.2
		Upper Wong Tai Sin Estate	4 810	0.6	153	0.6
		Wang Tau Hom Estate	5 781	0.8	181	0.8
8.	YAU TSIM MONG	Hoi Fu Court	2 778	0.4	92	0.4
9.	ISLANDS	Cheung Kwai Estate	457	0.1	15	0.1
		Fu Tung Estate	1 655	0.2	60	0.3**
		Kam Peng Estate	252	0.0	8	0.0
		Lung Tin Estate	430	0.1	11	0.0**
		Nga Ning Court	416	0.1	15	0.1
		Ngan Wan Estate	434	0.1	10	0.0**
		Yat Tung (1) Estate	5 567	0.7	177	0.7
		Yat Tung (2) Estate	6 344	0.8	198	0.8
		Cheung Ching Estate	4 823	0.6	148	0.6
		Cheung Fat Estate	1 045	0.1	37	0.2**
10.	KWAI TSING	Cheung Hang Estate	4 338	0.6	143	0.6
		Cheung Hong Estate	8 176	1.1	265	1.1
		Cheung On Estate	1 095	0.1	35	0.1
		Cheung Wang Estate	4 247	0.6	133	0.6
		Easeful Court	509	0.1	18	0.1
		High Prosperity Terrace	758	0.1	22	0.1
		Kwai Chung Estate	13 516	1.8	427	1.8
		Kwai Fong Estate	6 189	0.8	197	0.8
		Kwai Hing Estate	297	0.0	6	0.0
		Kwai Luen Estate	2 963	0.4	95	0.4
		Kwai Shing East Estate	6 217	0.8	198	0.8
		Kwai Shing West Estate	5 206	0.7	168	0.7
		Lai King Estate	4 172	0.6	136	0.6
		Lai Yiu Estate	2 794	0.4	90	0.4
		On Yam Estate	5 208	0.7	165	0.7
		Shek Lei (1) Estate	4 784	0.6	150	0.6
		Shek Lei (2) Estate	8 263	1.1	262	1.1
		Shek Yam East Estate	2 345	0.3	77	0.3
		Shek Yam Estate	2 631	0.3	84	0.4**
		Tai Wo Hau Estate	7 525	1.0	246	1.0
		Tsing Yi Estate	586	0.1	22	0.1
		Wah Lai Estate	1 427	0.2	41	0.2
11.	NORTH	Cheung Lung Wai Estate	1 353	0.2	45	0.2
		Cheung Wah Estate	1 575	0.2	46	0.2
		Ching Ho Estate	7 118	0.9	220	0.9
		Choi Yuen Estate	5 004	0.7	159	0.7
		Ka Fuk Estate	1 935	0.3	60	0.3
		Tai Ping Estate	206	0.0	5	0.0
		Tin Ping Estate	926	0.1	31	0.1
		Wah Ming Estate	1 306	0.2	41	0.2
		Wah Sum Estate	1 474	0.2	48	0.2
		Yung Shing Court	1 704	0.2	56	0.2
12.	SAI KUNG	Choi Ming Court	2 787	0.4	88	0.4
		Hau Tak Estate	4 137	0.5	131	0.5
		Kin Ming Estate	6 991	0.9	229	1.0**
		King Lam Estate	1 414	0.2	43	0.2
		Ming Tak Estate	1 458	0.2	52	0.2
		Po Lam Estate	1 495	0.2	48	0.2
		Sheung Tak Estate	5 476	0.7	173	0.7
		Shin Ming Estate	1 962	0.3	63	0.3
		Tsui Lam Estate	1 353	0.2	45	0.2

	District *	Name of estate	Actual overall tenant households^		Tenant household Sample	
			No.	%	No.	%
13.	SHATIN	Yee Ming Estate	2 044	0.3	65	0.3
		Chun Shek Estate	2 116	0.3	68	0.3
		Chung On Estate	2 716	0.4	86	0.4
		Fung Wo Estate	1 600	0.2	45	0.2
		Heng On Estate	696	0.1	27	0.1
		Hin Keng Estate	569	0.1	22	0.1
		Hin Yiu Estate	791	0.1	30	0.1
		Kwong Yuen Estate	1 074	0.1	34	0.1
		Lee On Estate	3 605	0.5	119	0.5
		Lek Yuen Estate	3 197	0.4	101	0.4
		Lung Hang Estate	4 334	0.6	141	0.6
		Mei Lam Estate	4 069	0.5	130	0.5
		Mei Tin Estate	6 682	0.9	209	0.9
		Pok Hong Estate	1 038	0.1	36	0.2**
		Sha Kok Estate	6 235	0.8	196	0.8
		Shek Mun Estate	1 947	0.3	57	0.2**
		Shui Chuen O Estate	9 796	1.3	322	1.3
		Sun Chui Estate	6 576	0.9	205	0.9
		Sun Tin Wai Estate	3 376	0.4	108	0.5**
		Wo Che Estate	6 216	0.8	194	0.8
		Yan On Estate	2 568	0.3	83	0.3
		Yiu On Estate	868	0.1	29	0.1
14.	TAI PO	Fu Heng Estate	1 515	0.2	47	0.2
		Fu Shin Estate	2 021	0.3	70	0.3
		Kwong Fuk Estate	6 155	0.8	196	0.8
		Po Heung Estate	449	0.1	10	0.0**
		Tai Wo Estate	1 605	0.2	46	0.2
		Tai Yuen Estate	4 700	0.6	150	0.6
		Wan Tau Tong Estate	524	0.1	21	0.1
15.	TSUEN WAN	Cheung Shan Estate	1 601	0.2	52	0.2
		Fuk Loi Estate	3 097	0.4	98	0.4
		Lei Muk Shue (1) Estate	2 285	0.3	69	0.3
		Lei Muk Shue (2) Estate	4 244	0.6	139	0.6
		Lei Muk Shue Estate	3 874	0.5	119	0.5
		Shek Wai Kok Estate	6 307	0.8	202	0.8
16.	TUEN MUN	Butterfly Estate	5 326	0.7	172	0.7
		Fu Tai Estate	5 028	0.7	155	0.6**
		Kin Sang Estate	495	0.1	13	0.1
		Leung King Estate	2 346	0.3	69	0.3
		Lung Yat Estate	985	0.1	30	0.1
		On Ting Estate	4 998	0.7	160	0.7
		Po Tin Estate	5 112	0.7	168	0.7
		Sam Shing Estate	1 791	0.2	57	0.2
		Shan King Estate	5 478	0.7	173	0.7
		Tai Hing Estate	8 385	1.1	271	1.1
		Tin King Estate	764	0.1	20	0.1
		Wu King Estate	4 310	0.6	134	0.6
		Yau Oi Estate	9 087	1.2	287	1.2
17.	YUEN LONG	Grandeur Terrace	4 088	0.5	131	0.5
		Hung Fuk Estate	4 840	0.6	154	0.6
		Long Ching Estate	410	0.1	17	0.1
		Long Ping Estate	3 097	0.4	98	0.4
		Long Shin Estate	829	0.1	28	0.1
		Shui Pin Wai Estate	2 352	0.3	75	0.3

	District *	Name of estate	Actual overall tenant households [^]		Tenant household Sample	
			No.	%	No.	%
		Tin Chak Estate	3 973	0.5	121	0.5
		Tin Ching Estate	6 165	0.8	200	0.8
		Tin Heng Estate	5 746	0.8	183	0.8
		Tin Shui (1) Estate	4 587	0.6	144	0.6
		Tin Shui (2) Estate	3 154	0.4	104	0.4
		Tin Tsz Estate	3 265	0.4	106	0.4
		Tin Wah Estate	3 662	0.5	111	0.5
		Tin Yan Estate	5 528	0.7	174	0.7
		Tin Yat Estate	3 321	0.4	110	0.5**
		Tin Yiu (1) Estate	4 601	0.6	148	0.6
		Tin Yiu (2) Estate	3 808	0.5	118	0.5
		Tin Yuet Estate	4 141	0.5	131	0.5
OVERALL			753 799	100.0	24 000	100.0

* The estates are grouped according to 17 districts for easy reference. There are no PRH estates in Wan Chai district.

** Chi-square tests were conducted to compare the actual overall distribution of the sample and that of the tenancy records by district and by estate. The results indicated that the differences between the actual and sampled distribution are insignificant.

[^] Refers to the average number of households for the 12 months in 2017.

Note:

Statistically, the sample distribution tallies with the actual distribution by design of the proportionate stratified systematic random sampling method. In other words, the sample effectively reflects the distribution of all PRH tenants by district and by estate.

Comparison of Distribution by District and Estate between the Tenant Household Sample and the Actual Overall Distribution of Tenant Households in the Second Period (2019)

	District *	Name of estate	Actual overall tenant households^		Tenant household sample	
			No	%	No.	%
1.	CENTRAL & WESTERN	Sai Wan Estate	627	0.1	24	0.1
2.	EASTERN	Chai Wan Estate	1 589	0.2	49	0.2
		Fung Wah Estate	324	0.0	10	0.0
		Hing Man Estate	1 946	0.3	64	0.3
		Hing Tung Estate	2 057	0.3	61	0.3
		Hing Wah (1) Estate	2 255	0.3	67	0.3
		Hing Wah (2) Estate	3 483	0.4	106	0.4
		Hong Tung Estate	460	0.1	19	0.1
		Lin Tsui Estate***	278	0.0	6	0.0
		Model Housing Estate	659	0.1	20	0.1
		Oi Tung Estate	3 878	0.5	121	0.5
		Siu Sai Wan Estate	6 001	0.8	181	0.8
		Tsui Lok Estate	317	0.0	8	0.0
		Tsui Wan Estate	471	0.1	14	0.1
		Wah Ha Estate	185	0.0	5	0.0
		Wan Tsui Estate	3 604	0.5	112	0.5
		Yiu Tung Estate	5 093	0.7	158	0.7
		Yue Wan Estate	2 157	0.3	66	0.3
3.	SOUTHERN	Ap Lei Chau Estate	4 323	0.6	135	0.6
		Lei Tung Estate	1 677	0.2	49	0.2
		Ma Hang Estate	900	0.1	29	0.1
		Shek Pai Wan Estate	5 158	0.7	161	0.7
		Tin Wan Estate	3 075	0.4	97	0.4
		Wah Fu (1) Estate	4 761	0.6	145	0.6
		Wah Fu (2) Estate	4 302	0.6	133	0.6
		Wah Kwai Estate	915	0.1	29	0.1
4.	KOWLOON CITY	Ho Man Tin Estate	4 669	0.6	145	0.6
		Hung Hom Estate	2 747	0.4	86	0.4
		Kai Ching Estate	5 180	0.7	154	0.6**
		Ma Tau Wai Estate	2 046	0.3	62	0.3
		Oi Man Estate	6 228	0.8	191	0.8
		Sheung Lok Estate	340	0.0	11	0.0
		Tak Long Estate	8 119	1.0	255	1.1**
5.	KWUN TONG	Choi Fook Estate	3 421	0.4	108	0.5**
		Choi Ha Estate	431	0.1	15	0.1
		Choi Tak Estate	5 720	0.7	176	0.7
		Choi Ying Estate	3 970	0.5	124	0.5
		Hing Tin Estate	313	0.0	10	0.0
		Kai Tin Estate	2 224	0.3	71	0.3
		Kai Yip Estate	4 185	0.5	126	0.5
		Ko Cheung Court	1 794	0.2	60	0.3**
		Ko Yee Estate	1 181	0.2	41	0.2
		Kwong Tin Estate	2 264	0.3	70	0.3
		Lam Tin Estate	3 022	0.4	87	0.4
		Lei Yue Mun Estate	3 609	0.5	112	0.5
		Lok Wah North Estate	2 946	0.4	89	0.4
		Lok Wah South Estate	6 789	0.9	209	0.9

	District *	Name of estate	Actual overall tenant households^		Tenant household Sample	
			No.	%	No.	%
		Lower Ngau Tau Kok Estate	4 771	0.6	150	0.6
		On Tai Estate	8 370	1.1	268	1.1
		On Tat Estate	9 274	1.2	291	1.2
		On Tin Estate	719	0.1	18	0.1
		Ping Shek Estate	4 521	0.6	141	0.6
		Ping Tin Estate	5 478	0.7	168	0.7
		Po Tat Estate	7 373	1.0	228	1.0
		Sau Mau Ping Estate	12 003	1.5	375	1.6**
		Sau Mau Ping South Estate	3 970	0.5	121	0.5
		Shun Lee Estate	4 345	0.6	135	0.6
		Shun On Estate	2 926	0.4	89	0.4
		Shun Tin Estate	6 859	0.9	215	0.9
		Tak Tin Estate	1 747	0.2	53	0.2
		Tsui Ping North Estate	2 755	0.4	82	0.3**
		Tsui Ping South Estate	4 691	0.6	148	0.6
		Upper Ngau Tau Kok Estate	6 554	0.8	200	0.8
		Wan Hon Estate	973	0.1	27	0.1
		Wo Lok Estate	1 908	0.2	56	0.2
		Yau Lai Estate	8 846	1.1	271	1.1
		Yau Tong Estate	3 553	0.5	113	0.5
6.	SHAM SHUI PO	Chak On Estate	1 795	0.2	56	0.2
		Cheung Sha Wan Estate	1 379	0.2	44	0.2
		Fortune Estate	2099	0.3	67	0.3
		Fu Cheong Estate	5 938	0.8	187	0.8
		Hoi Lai Estate	4 885	0.6	151	0.6
		Hoi Ying Estate***	1 228	0.2	43	0.2
		Lai Kok Estate	2 835	0.4	90	0.4
		Lai On Estate	1 332	0.2	41	0.2
		Lai Tsui Court***	226	0.0	7	0.0
		Lei Cheng Uk Estate	971	0.1	31	0.1
		Nam Cheong Estate	523	0.1	12	0.1
		Nam Shan Estate	2 662	0.3	84	0.4**
		Pak Tin Estate	7 163	0.9	218	0.9
		Shek Kip Mei Estate	9 220	1.2	281	1.2
		So Uk Estate	5 764	0.7	187	0.8**
		Tai Hang Tung Estate	1 997	0.3	58	0.2**
		Un Chau Estate	7 567	1.0	239	1.0
		Wing Cheong Estate	1 473	0.2	47	0.2
7.	WONG TAI SIN	Choi Fai Estate	1 310	0.2	36	0.2
		Choi Hung Estate	7 359	0.9	225	0.9
		Choi Wan (1) Estate	5 763	0.7	180	0.8**
		Choi Wan (2) Estate	2 906	0.4	89	0.4
		Chuk Yuen North Estate	1 017	0.1	34	0.1
		Chuk Yuen South Estate	5 962	0.8	180	0.8
		Fu Shan Estate	1 555	0.2	54	0.2
		Fung Tak Estate	1 007	0.1	30	0.1
		Lok Fu Estate	3 603	0.5	107	0.4**
		Lower Wong Tai Sin (1) Estate	1 279	0.2	36	0.2
		Lower Wong Tai Sin (2) Estate	6 552	0.8	207	0.9**
		Mei Tung Estate	2 378	0.3	76	0.3
		Shatin Pass Estate	1 272	0.2	38	0.2
		Tsz Ching Estate	7 972	1.0	256	1.1**
		Tsz Hong Estate	1 987	0.3	59	0.2**
		Tsz Lok Estate	6 099	0.8	187	0.8
		Tsz Man Estate	1 964	0.3	61	0.3
		Tung Tau (2) Estate	1 731	0.2	58	0.2

	District *	Name of estate	Actual overall tenant households^		Tenant household Sample	
			No.	%	No.	%
		Tung Wui Estate	1 303	0.2	44	0.2
		Upper Wong Tai Sin Estate	4 814	0.6	148	0.6
		Wang Tau Hom Estate	5 772	0.7	178	0.7
8.	YAU TSIM MONG	Hoi Fu Court	2 775	0.4	82	0.3**
9.	ISLANDS	Cheung Kwai Estate	455	0.1	9	0.0**
		Fu Tung Estate	1 652	0.2	53	0.2
		Kam Peng Estate	247	0.0	7	0.0
		Lung Tin Estate	430	0.1	16	0.1
		Mun Tung Estate***	3 225	0.4	106	0.4
		Nga Ning Court	417	0.1	8	0.0**
		Ngan Wan Estate	426	0.1	18	0.1
		Yat Tung (1) Estate	5 546	0.7	170	0.7
		Yat Tung (2) Estate	6 293	0.8	195	0.8
		Ying Tung Estate***	3 521	0.5	109	0.5
10.	KWAI TSING	Cheung Ching Estate	4 805	0.6	145	0.6
		Cheung Fat Estate	900	0.1	28	0.1
		Cheung Hang Estate	4 326	0.6	135	0.6
		Cheung Hong Estate	8 182	1.1	249	1.0**
		Cheung On Estate	949	0.1	32	0.1
		Cheung Wang Estate	4 244	0.5	135	0.6**
		Easeful Court	509	0.1	14	0.1
		High Prosperity Terrace	757	0.1	20	0.1
		Kwai Chung Estate	13 516	1.7	415	1.7
		Kwai Fong Estate	6 208	0.8	192	0.8
		Kwai Hing Estate	267	0.0	6	0.0
		Kwai Luen Estate	2 954	0.4	94	0.4
		Kwai Shing East Estate	6 201	0.8	185	0.8
		Kwai Shing West Estate	5 194	0.7	154	0.6**
		Kwai Tsui Estate***	852	0.1	30	0.1
		Lai King Estate	4 155	0.5	126	0.5
		Lai Yiu Estate	2 754	0.4	85	0.4
		On Yam Estate	5 200	0.7	163	0.7
		Shek Lei (1) Estate	4 795	0.6	150	0.6
		Shek Lei (2) Estate	8 243	1.1	255	1.1
		Shek Yam East Estate	2 347	0.3	67	0.3
		Shek Yam Estate	2 624	0.3	84	0.4**
		Tai Wo Hau Estate	7 542	1.0	238	1.0
		Tsing Yi Estate	517	0.1	14	0.1
		Wah Lai Estate	1 423	0.2	42	0.2
11.	NORTH	Cheung Lung Wai Estate	1 354	0.2	47	0.2
		Cheung Wah Estate	1 336	0.2	35	0.1**
		Ching Ho Estate	7 116	0.9	220	0.9
		Choi Yuen Estate	4 996	0.6	158	0.7**
		Ka Fuk Estate	1 933	0.2	60	0.3**
		Po Shek Wu Estate***	149	0.0	6	0.0
		Tai Ping Estate	165	0.0	1	0.0
		Tin Ping Estate	807	0.1	22	0.1
		Wah Ming Estate	1 117	0.1	31	0.1
		Wah Sum Estate	1 476	0.2	51	0.2
		Yung Shing Court	1 688	0.2	51	0.2
12.	SAI KUNG	Choi Ming Court	2 784	0.4	87	0.4
		Hau Tak Estate	4 139	0.5	131	0.5
		Kin Ming Estate	6 982	0.9	214	0.9
		King Lam Estate	1 258	0.2	45	0.2
		Ming Tak Estate	1 462	0.2	48	0.2
		Po Lam Estate	1 262	0.2	38	0.2
		Sheung Tak Estate	5 474	0.7	168	0.7
		Shin Ming Estate	1 958	0.3	56	0.2**
		Tsui Lam Estate	1 114	0.1	33	0.1

	District *	Name of estate	Actual overall tenant households^		Tenant household Sample	
			No.	%	No.	%
13.	SHATIN	Yee Ming Estate	2 042	0.3	66	0.3
		Chun Shek Estate	2 116	0.3	63	0.3
		Chung On Estate	2 726	0.4	84	0.4
		Fung Wo Estate	1 596	0.2	45	0.2
		Heng On Estate	563	0.1	17	0.1
		Hin Keng Estate	445	0.1	11	0.0**
		Hin Yiu Estate	794	0.1	25	0.1
		Kwong Yuen Estate	939	0.1	28	0.1
		Lee On Estate	3 606	0.5	114	0.5
		Lek Yuen Estate	3 195	0.4	100	0.4
		Lung Hang Estate	4 323	0.6	132	0.6
		Mei Lam Estate	4 076	0.5	122	0.5
		Mei Tin Estate	6 678	0.9	205	0.9
		Pok Hong Estate	911	0.1	24	0.1
		Sha Kok Estate	6 231	0.8	194	0.8
		Shek Mun Estate	4 111	0.5	130	0.5
		Shui Chuen O Estate	11 046	1.4	345	1.4
		Sun Chui Estate	6 570	0.8	201	0.8
		Sun Tin Wai Estate	3 371	0.4	103	0.4
		Wo Che Estate	6 210	0.8	195	0.8
		Yan On Estate	2 569	0.3	77	0.3
		Yiu On Estate	754	0.1	25	0.1
14.	TAI PO	Fu Heng Estate	1 342	0.2	37	0.2
		Fu Shin Estate	1 739	0.2	50	0.2
		Kwong Fuk Estate	6 144	0.8	189	0.8
		Po Heung Estate	476	0.1	17	0.1
		Tai Wo Estate	1 411	0.2	45	0.2
		Tai Yuen Estate	4 713	0.6	141	0.6
		Wan Tau Tong Estate	455	0.1	15	0.1
15.	TSUEN WAN	Cheung Shan Estate	1 590	0.2	49	0.2
		Fuk Loi Estate	3 099	0.4	94	0.4
		Lei Muk Shue (1) Estate	2 281	0.3	67	0.3
		Lei Muk Shue (2) Estate	4 242	0.5	134	0.6**
		Lei Muk Shue Estate	3 876	0.5	122	0.5
		Shek Wai Kok Estate	6 301	0.8	192	0.8
16.	TUEN MUN	Butterfly Estate	5 289	0.7	165	0.7
		Fu Tai Estate	5 017	0.6	157	0.7**
		Kin Sang Estate	423	0.1	18	0.1
		Leung King Estate	2 106	0.3	65	0.3
		Lung Yat Estate	984	0.1	33	0.1
		On Ting Estate	4 961	0.6	153	0.6
		Po Tin Estate	4 776	0.6	147	0.6
		Sam Shing Estate	1 787	0.2	59	0.2
		Shan King Estate	4 777	0.6	148	0.6
		Tai Hing Estate	8 351	1.1	262	1.1
		Tin King Estate	634	0.1	19	0.1
		Wu King Estate	4 309	0.6	137	0.6
		Yan Tin Estate***	4 569	0.6	143	0.6
		Yau Oi Estate	9 061	1.2	282	1.2
17.	YUEN LONG	Grandeur Terrace	4 083	0.5	130	0.5
		Hung Fuk Estate	4 865	0.6	151	0.6
		Long Ching Estate	436	0.1	19	0.1
		Long Ping Estate	2 509	0.3	75	0.3
		Long Shin Estate	1 192	0.2	40	0.2
		Shui Pin Wai Estate	2 345	0.3	66	0.3

	District *	Name of estate	Actual overall tenant households [^]		Tenant household Sample	
			No.	%	No.	%
		Tin Chak Estate	3 968	0.5	124	0.5
		Tin Ching Estate	6 160	0.8	186	0.8
		Tin Heng Estate	5 736	0.7	179	0.7
		Tin Shui (1) Estate	4 579	0.6	141	0.6
		Tin Shui (2) Estate	3 152	0.4	95	0.4
		Tin Tsz Estate	3 257	0.4	94	0.4
		Tin Wah Estate	3 646	0.5	111	0.5
		Tin Yan Estate	5 494	0.7	172	0.7
		Tin Yat Estate	3 317	0.4	103	0.4
		Tin Yiu (1) Estate	4 594	0.6	139	0.6
		Tin Yiu (2) Estate	3 798	0.5	121	0.5
		Tin Yuet Estate	4 117	0.5	129	0.5
		OVERALL	775 833	100.0	24 000	100.0

* The estates are grouped according to 17 districts for easy reference. There are no PRH estates in Wan Chai district.

** Chi-square tests were conducted to compare the actual overall distribution of the sample and that of the tenancy records by district and by estate. The results indicated that the differences between the actual and sampled distribution are insignificant.

*** Denotes new estates not included in Annex C1.

[^] Refers to the average number of households for the 12 months in 2019.

Note:

Statistically, the sample distribution tallies with the actual distribution by design of the proportionate stratified systematic random sampling method. In other words, the sample effectively reflects the distribution of all PRH tenants by district and by estate.

**Distribution of Households in relation to
the Computation of Income Index in the First Period (2017)**

Household size	No. of sampling units	Non-representative households			Sampling units for computation of the income index ⁽¹⁾	No. of households after grossing up ⁽²⁾	Weighting after grossing up
		“Well-off tenants”	Other households with high outlying income	CSSA households			
1P	4 478	57	231	1 712	2 450	76 459	13.298%
2P	6 335	170	154	1 260	4 700	148 441	25.817%
3P	6 374	244	89	650	5 265	168 404	29.290%
4P	4 732	224	41	352	3 980	128 501	22.349%
5P or above	2 081	112	10	242	1 605	53 160	9.246%
Overall	24 000	807	525	4 216	18 000	574 964	100%

- (1) Figures are calculated by excluding non-representative households (i.e. “well-off tenants”, other households with high outlying income and CSSA households), the 356 incomplete cases and the 96 invalid sampling units (see paragraphs 9 and 10 of the main paper).
- (2) A standard grossing up statistical method is applied to calculate the number of PRH households of different sizes. The proportion of PRH households of each size would be used as weights to compute the monthly average household income of PRH tenants as a whole.

Distribution of Households in relation to the Computation of Income Index in the Second Period (2019)

Household size	No. of sampling units	Non-representative households			Sampling units for computation of the income index ⁽¹⁾	No. of households after grossing up ⁽²⁾	Weighting after grossing up
		“Well-off tenants”	Other households with high outlying income	CSSA households			
1P	4 639	65	224	1 575	2 782	88 549	14.579%
2P	6 512	199	109	1 083	5 049	164 588	27.098%
3P	6 369	295	66	551	5 359	175 696	28.927%
4P	4 551	253	32	323	3 827	126 735	20.866%
5P or above	1 929	96	13	200	1 541	51 817	8.531%
Overall	24 000	908	444	3 732	18 558	607 384	100%

- (1) Figures are calculated by excluding non-representative households (i.e. “well-off tenants”, other households with high outlying income and CSSA households), the 255 incomplete cases and the 103 invalid sampling units (see paragraphs 9 and 11 of the main paper).
- (2) A standard grossing up statistical method is applied to calculate the number of PRH households of different sizes. The proportion of PRH households of each size would be used as weights to compute the monthly average household income of PRH tenants as a whole.

As stipulated in section 16A(8) of the Housing Ordinance, “adjusted mean monthly household income” refers to the mean monthly income of tenants assessed on the basis of the distribution of the household size of those tenants over the first period. Hence for this rent review, the weighting in **Annex D1** will be used instead of the weighting in this Annex for computing the adjusted overall mean monthly household income (see Table 3 of **Annex E**). The weighting in this Annex will be used in the next rent review exercise.

Report on Quality Check on Survey Data and Computation of Income Index for the 2020 Rent Review Performed by the Census and Statistics Department

In accordance with section 16A(7)(b) of the Housing Ordinance, the Commissioner for Census and Statistics shall compute the income index for the purpose of the rent review. Data for computing the income index are obtained from the “Survey on Household Income of Public Rental Housing (PRH) Tenants” (the Income Survey) conducted by the Hong Kong Housing Authority (HA).

Quality checks on the income data

2. The Census and Statistics Department (C&SD) has implemented a host of quality check measures to ensure impartiality, objectiveness and accuracy during the data collection and data processing of the Income Survey. The purpose is to evaluate and confirm the data quality of the Income Survey including representativeness of the samples, correctness of the declared income data and accuracy of data input.

3. A summary of the quality checks on the income data performed by C&SD for the first period (i.e. 2017) and the second period (i.e. 2019) of the 2020 rent review is provided in **Table 1**.

4. Based on the evidence obtained in the quality checks, C&SD concludes that the survey data accurately reflect the household income of PRH tenants in both 2017 and 2019. The survey data can be used to compute the income index for PRH tenants for the 2020 rent review.

Computation of income index for the 2020 rent review

5. In accordance with section 16A(7)(b) of the Housing Ordinance, C&SD has computed for the 2020 rent review the mean monthly household income for the first period (i.e. 2017) and the mean monthly household income for the second period (i.e. 2019) with reference to the distribution of households by size in 2017, using the data of the Income Surveys for the respective years. The results are presented in **Table 2** and **Table 3** respectively. The income indices for PRH tenants in both 2017 and 2019 are also computed and presented in the tables. For ease of reference, the mean monthly household income for 2019 computed with reference to the distribution of households by size in 2017 will be referred to as the “adjusted mean monthly household income for 2019” in **Table 3**.

Table 1 of Annex E

**Quality Checks on Income Data
Performed by Census and Statistics Department**

No.	Check	Description	Checking Results
(1)	Evaluation of the representativeness of the sample in terms of household size and geographical distribution	<ul style="list-style-type: none"> ● The samples of PRH households selected in 2017 and 2019 were studied and compared with the overall distribution of the tenancy records of the Housing Department (HD) of the respective years by household size and by district and estate. ● Statistical tests (Chi-square test) were conducted and the results showed that the distribution of the sample was basically the same as that of the tenancy records, and hence the samples of the Income Survey in both 2017 and 2019 were representative. 	<p>Conclusion: Checked in order</p> <p>Remarks:</p> <ul style="list-style-type: none"> ● Distribution of the sample was statistically comparable to that of tenancy records.

No.	Check	Description	Checking Results
(2)	Correctness of declared income data against documentary proof	<ul style="list-style-type: none"> ● A 5% sample of households who had declared income were randomly selected by C&SD for the checking. ● HD then requested these households to submit income documentary proof to support that the information declared was true and correct. ● To verify whether the checking by HD was carried out properly, C&SD randomly selected those cases checked by HD to see if the checking was in order. 	<p>Conclusion: Checked in order</p> <p>Remarks:</p> <ul style="list-style-type: none"> ● No tenants knowingly made false statements in the Income Survey. ● The differences between the declared income data and the data obtained from documentary proof, which had been suitably rectified for inclusion in the computation of income index, were of very small and similar magnitudes in 2017 and 2019, hence had virtually no impact on the computation of income index. ● No irregularities on the checking performed by HD had been found.

No.	Check	Description	Checking Results
(3)	Accuracy of data input by HD	<ul style="list-style-type: none"> ● A double data entry approach, i.e. the same set of data being input into the computer by two staff members independently, was implemented. These two sets of data were then compared and matched with each other for verification to avoid manual input errors. ● A 2% sample was randomly selected by C&SD for checking the accuracy of data input performed by HD. 	<p>Conclusion: Checked in order</p> <p>Remarks:</p> <ul style="list-style-type: none"> ● No data input errors had been found.
(4)	Evaluation of data validation conducted by HD	<ul style="list-style-type: none"> ● Computerised validation checks were performed by HD on the inputted data so as to identify those data in need of further clarification with the households concerned. ● C&SD carried out an independent round of data validation and checks to see if HD had verified all those cases in need of further clarification with the households concerned. 	<p>Conclusion: Checked in order</p> <p>Remarks:</p> <ul style="list-style-type: none"> ● HD had confirmed/clarified all cases in need of further clarification with the households concerned before preparing the dataset for computation of income index by C&SD.

Table 2 of Annex E

**Mean Monthly Household Income of PRH Tenants
in the First Period of the 2020 Rent Review** ^{Note}

Household size	Mean monthly household income	% distribution of household size (weights)
1-person	\$6,402	13.298%
2-person	\$14,934	25.817%
3-person	\$24,389	29.290%
4-person	\$32,068	22.349%
5-person or above	\$39,085	9.246%
		100.0%

Overall mean monthly household income

\$22,631

Computed as follows:

$$\begin{aligned}
 & \$6,402 \times 13.298\% + \$14,934 \times 25.817\% + \$24,389 \times 29.290\% + \\
 & \$32,068 \times 22.349\% + \$39,085 \times 9.246\% \\
 & = \mathbf{\$22,631}
 \end{aligned}$$

Index for the first period is set at 100.

Note:

Please note that income figures in the above table have been rounded to the nearest integer and the weights presented in percentage have been rounded to the nearest three decimal places. Such arrangement is solely for presentation purpose. In practice, income figures and weights are all computed in full figures.

Table 3 of Annex E

**Adjusted Mean Monthly Household Income of PRH Tenants
in the Second Period of the 2020 Rent Review**^{Notes}

Household size	Mean monthly household income	% distribution of household size (weights of the first period)
1-person	\$6,741	13.298%
2-person	\$16,556	25.817%
3-person	\$26,960	29.290%
4-person	\$34,808	22.349%
5-person or above	\$42,938	9.246%
		100.0%

Overall adjusted mean monthly household income **\$24,817**

Computed as follows:

$$\begin{aligned} & \$6,741 \times 13.298\% + \$16,556 \times 25.817\% + \$26,960 \times 29.290\% + \\ & \$34,808 \times 22.349\% + \$42,938 \times 9.246\% \\ & = \mathbf{\$24,817} \end{aligned}$$

Index for the second period

$$\begin{aligned} & = \$24,817 / \$22,631 \times 100 \\ & = \mathbf{109.66} \end{aligned}$$

Notes:

- (1) Please note that income figures in the above table have been rounded to the nearest integer and the weights presented in percentage have been rounded to the nearest three decimal places. Such arrangement is solely for presentation purpose. In practice, income figures and weights are all computed in full figures.
- (2) As stipulated in section 16A(4) of the Housing Ordinance, if the income index for the second period is higher than that for the first period by more than 0.1%, HA shall increase the PRH rent by the rate of increase of the income index or 10%, whichever is less. If the income index for the second period is lower than that for the first period by more than 0.1%, HA shall reduce the PRH rent by the rate of reduction of the income index. The computation on the rate of change is based on the default number of decimal places in the computer system. In order to show with certainty whether the rate of change is more than 0.1%, the income index is rounded to the nearest two decimal places.

Rent Assistance Scheme

Eligibility criteria

HA offers assistance to PRH tenants facing temporary financial difficulties through the Rent Assistance Scheme (RAS). Non-elderly households whose income levels meet the two different sets of thresholds will be eligible for rent reduction of either 25% or 50%. Elderly households meeting the eligibility criteria are eligible for rent reduction of 50%. The detailed criteria are as follows –

	Non-elderly Households		Elderly Households (All members aged 60 or above)
Rent reduction	50%	25%	50%
Income	(a) <50% PRHIL <u>or</u> (b) RIR>25% <u>or</u> (c) 50% - 70% PRHIL <u>and</u> RIR>15%	(a) 50% - <70% PRHIL <u>or</u> (b) RIR >18.5% - 25%	(a) <70% PRHIL <u>or</u> (b) RIR>18.5%

Notes:

PRHIL = PRH income limit

RIR = Rent-to-income ratio

Administrative arrangements

2. HD actively renders assistance to eligible tenants via the following actions –

- (a) upon receipt of the application form and requisite information, HD will complete the processing of applications and notify the tenants within two weeks;
- (b) reminds tenants with rent arrears on the availability of RAS in the rent chasing letters. It is also stated in the rent adjustment notification letters to tenants that RAS is available. In this respect, HD in particular reaches out to households with elderly and disabled members. HD highlights in the notification letters that staff of HD stand ready to assist tenant households with elderly and disabled family members in their RAS applications where necessary;

- (c) widely publicises RAS through various channels, e.g. social media (such as YouTube, Facebook and Instagram); posters and leaflets; the radio; Housing Channel; HA/HD's web site; HA's mobile app "iHousing"; and the Estate Management Advisory Committee (EMAC) newsletter, etc.; and
- (d) according to the prevailing stipulation, applicants should provide income proof for confirming their eligibilities based on income computation of the average household income for the three preceding the month of the application for rent assistance. However, for some hardship cases with drastic change of family circumstances (e.g. death of an income earner, sudden unemployment of the sole breadwinner, serious illness/disability/hospitalization of an income earner due to accident, etc.) supported by relevant documentary proofs, discretion has been exercised to count only the current assessable income (i.e. the household income for the month of application) instead of the average household income for the past three months.

Continual Effort for RAS

3. We review the operation of RAS and publicise RAS and its application process from time to time so that more tenants who are in need would know about the scheme and benefit from it. Details are set out in the ensuing paragraphs.

More Focusing on the publicity of RAS

4. We have already rolled out the following measures and will continue to further publicise RAS –

- (a) distributed RAS leaflets (which set out in detail the eligibility criteria and application procedures) to all PRH tenants paying normal rent together with the rent adjustment notification letters issued for the rent adjustment in 2014, 2016 and 2018;
- (b) publicised the availability and policy of RAS at EMAC meetings, and solicited assistance from non-government organisations, local District Council members and EMAC members to refer tenants in need to estate offices for rent assistance;

- (c) displayed eye-catching stands/notices publicising RAS at conspicuous location at the Customer Service Counter/waiting hall of estate offices;
- (d) adopted a caring and proactive approach in reaching out to tenants in need, in particular the elderly and single parent families, during the biennial flat inspection or during other home visits for tenancy management, checking of repairs etc.; and
- (e) arranged easy pull banners on RAS to be placed in EMAC activities in 2020-21, while bookmarks of RAS would be distributed to participants for further enhancing tenants' awareness on RAS.

Facilitating the application process

5. To facilitate tenants' application for RAS, we have implemented the following measures to provide assistance to applicants –

- (a) upon receipt of enquiry on RAS, estate staff would explain to the applicant the details of the policy, eligibility criteria, procedures, and supporting documents required for vetting; and
- (b) estate staff would also explain and provide assistance to tenants, in particular the elderly, who may have difficulties in understanding the application form.

Helping existing RAS beneficiaries

(a) Effective date of rent relief

6. Prior to August 2014, for applications received on or after 16th of a month, RAS would be effective from the first day of the following month. To enable tenants in need to receive timely rent assistance, from September 2014 onwards, rent assistance has been granted to all successful applicants with retrospective effect from the first day of the month, regardless of whether the applications are received in the first or second half of the month.

(b) Reducing the frequency of eligibility review

7. Starting from September 2016, **the frequency of review of RAS eligibility has been reduced from once every year to once every two years**^{Note 1}. The arrangement relieves households from preparing income documents for vetting of their eligibility every year. It also reduces the chance of tenants with financial difficulties considering the application procedures too complicated and thus refraining from applying. With the less frequent eligibility review, random checking of eligibility of households has been conducted to guard against possible abuse of RAS.

(c) Relaxing the requirement to move to cheaper accommodation

8. In the past, after receiving rent assistance for three consecutive years, non-elderly RAS beneficiaries living in newer block types^{Note 2} were required to move to cheaper accommodation in the same district, if suitable flats were available. Starting from September 2016, **the requirement of moving to cheaper accommodation has been relaxed from three to four consecutive years**^{Note 1}.

Note 1 As endorsed by SHC at its meeting on 8 July 2016 (vide SHC Paper No. 33/2016).

Note 2 These refer to Harmony blocks and rental flats converted from the Home Ownership Scheme/Private Sector Participation Scheme/Buy-or-Rent Option and blocks completed in or after 1992.