

Article

Understanding the different approaches of measuring owner occupiers' housing costs (OOH): October to December 2017

Owner occupiers' housing costs (OOH) are the costs of housing services associated with owning, maintaining and living in one's own home. There is not a single defined measure of OOH because they can be calculated differently depending on what the target is.

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1 . Main points

Owner occupiers' housing costs (OOH) in the UK under the rental equivalence approach have grown by 1.5% in Quarter 4 (Oct to Dec) 2017 compared with the corresponding quarter of the previous year.

OOH according to the net acquisitions approach have grown by 2.9% in Quarter 4 2017 compared with the corresponding quarter of the previous year.

OOH compiled using the payments approach experienced growth of 2.3% in Quarter 4 2017 compared with the corresponding quarter of the previous year.

2 . Things you need to know about this release

Owner occupiers' housing costs (OOH) are the costs of housing services associated with owning, maintaining and living in one's own home. This is distinct from the cost of purchasing a house, which is partly for the accumulation of wealth and partly for housing services.

In this article, we focus on three approaches to measuring OOH: payments, rental equivalence and net acquisitions, and evaluate the performance of the different measures over time, in prevailing economic conditions. The series will be updated on a quarterly basis. We invite you to submit feedback on this release to cpi@ons.gsi.gov.uk.

The first article in the series provides more information about the [different approaches to measuring owner occupiers' housing costs](#) to aid your understanding of the differences in concept and underlying methodology. There have also been a number of "Spotlight" sections produced, which focus in on a particular topic. For a list of subjects covered, please see Annex 1. We will continue to produce these Spotlights as and when there is need.

You should note that the payments approach and net acquisitions are both experimental indices and therefore we would caution against any use other than for research purposes. More information on the methodology for each approach can also be found in the [CPIH compendium](#).

3 . Results

Figure 1 presents the indices for each approach indexed to 2005 equals 100, with the 12-month growth rates presented in Figure 2.

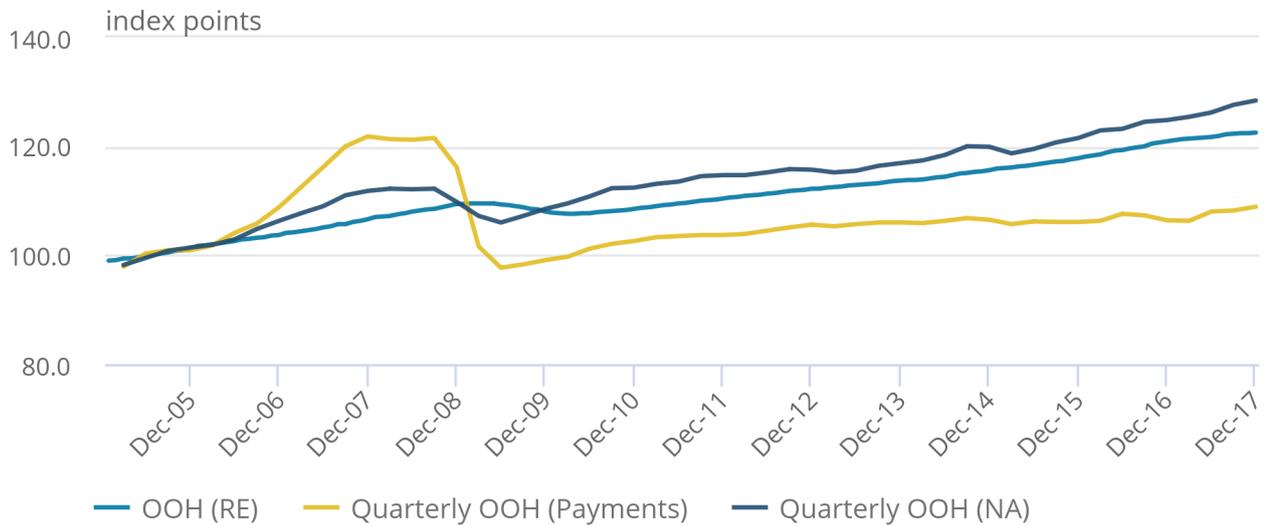
The net acquisitions approach – OOH(NA) – has shown the strongest growth of the three approaches over the period since 2005. In more recent years, the annual rate of growth for OOH(NA) has also been higher than for the rental equivalence approach, suggesting [house prices have been increasing faster than renting costs](#). In comparison, the payments approach has seen more extreme fluctuations around the economic downturn driven by changes to mortgage interest payments.

Figure 1: OOH (RE), OOH (NA) and OOH (Payments) indices, Index 2005 = 100

UK, Quarter 1 (Jan to Mar) 2005 to Quarter 4 (Oct to Dec) 2017

Figure 1: OOH (RE), OOH (NA) and OOH (Payments) indices, Index 2005 = 100

UK, Quarter 1 (Jan to Mar) 2005 to Quarter 4 (Oct to Dec) 2017



Source: Office for National Statistics

Notes:

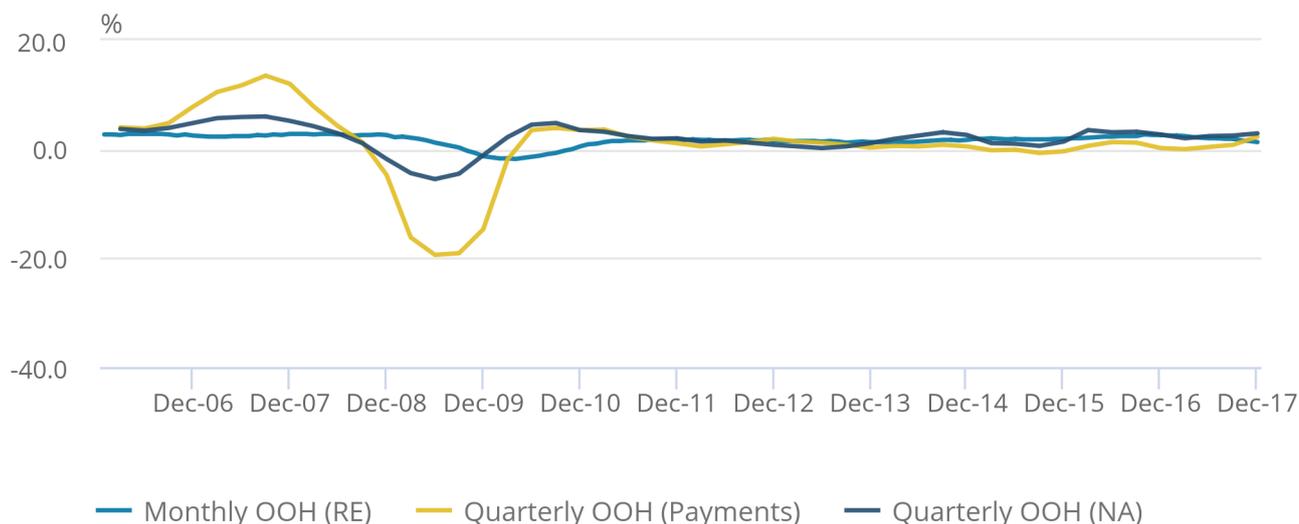
1. Q1 refers to Quarter 1 (Jan to Mar); Q2 refers to Quarter 2 (Apr to June); Q3 refers to Quarter 3 (July to Sept); and Q4 refers to Quarter 4 (Oct to Dec).

Figure 2: 12-month growth rate OOH (RE); OOH (NA) and OOH (Payments) growth rate, quarter on corresponding quarter of previous year

UK, Quarter 1 (Jan to Mar) 2006 to Quarter 4 (Oct to Dec) 2017

Figure 2: 12-month growth rate OOH (RE); OOH (NA) and OOH (Payments) growth rate, quarter on corresponding quarter of previous year

UK, Quarter 1 (Jan to Mar) 2006 to Quarter 4 (Oct to Dec) 2017



Source: Office for National Statistics

Notes:

1. Q1 refers to Quarter 1 (Jan to Mar); Q2 refers to Quarter 2 (Apr to June); Q3 refers to Quarter 3 (July to Sept); and Q4 refers to Quarter 4 (Oct to Dec).

4 . What are the main contributions to these results?

This section shows which components are contributing the most to the year-on-year quarterly growth rate for the payments approach and the net acquisitions approach. Because of the methodology used to calculate the rental equivalence approach – OOH(RE) – it is not possible to present a contributions chart for this approach. This is mainly because OOH(RE) is not constructed using a set of sub-indices that measure different concepts (maintenance costs, Stamp Duty and so on), but instead is aggregated from indices measuring the same concept across regions.

Payments approach

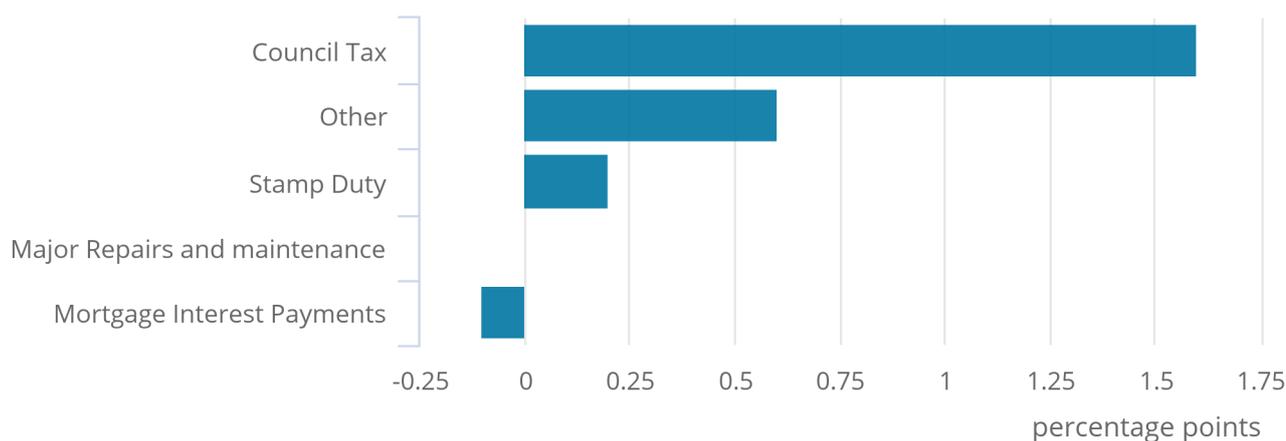
Figure 3 presents the contributions to the quarterly growth rate of OOH(payments) from the sub-indices used in its construction. Mortgage interest payments remain the largest negative contributor, however, their contribution has changed from negative 1.3 percentage points to negative 0.1 percentage points between Quarter 3 (July to Sept) and Quarter 4 (Oct to Dec) 2017, reflecting the increase in the base rate to 0.5% announced by the Bank of England in November 2017. Council Tax remains the highest positive contributor.

Figure 3: Contributions to percentage change in OOH (Payments) from component sub-indices, latest quarter on corresponding quarter of previous year

UK, Quarter 4 (Oct to Dec) 2017

Figure 3: Contributions to percentage change in OOH (Payments) from component sub-indices, latest quarter on corresponding quarter of previous year

UK, Quarter 4 (Oct to Dec) 2017



Source: Office for National Statistics

Notes:

- Contributions may not sum due to rounding. Council Tax includes Council Tax in Great Britain and Northern Ireland rates. Other includes dwelling insurance, ground rent, estate agent fees, home-buyers survey and house conveyancing.
- Q1 refers to Quarter 1 (Jan to Mar); Q2 refers to Quarter 2 (Apr to June); Q3 refers to Quarter 3 (July to Sept); and Q4 refers to Quarter 4 (Oct to Dec).

Net acquisitions approach

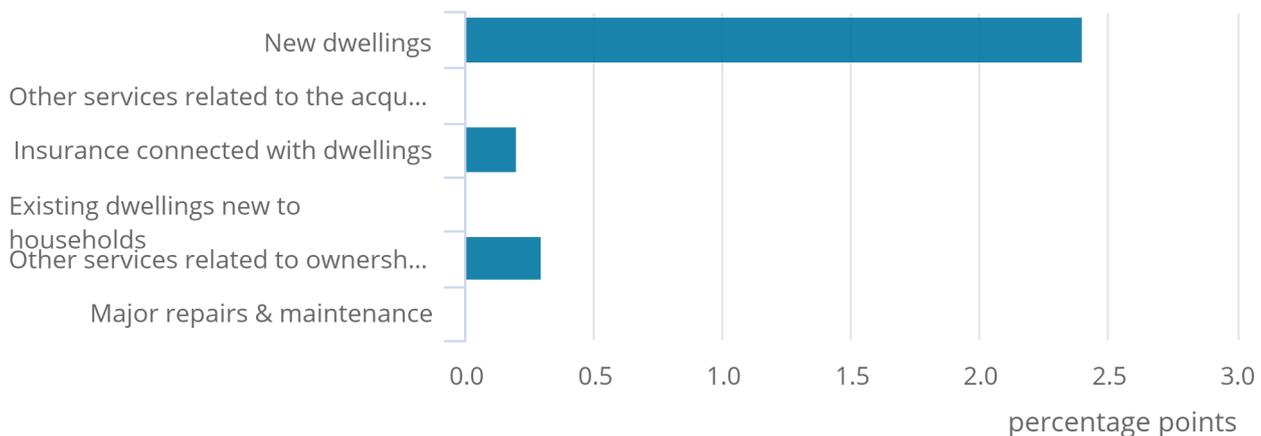
Figure 4 shows the contributions to quarter on corresponding quarter of previous year growth rate for OOH net acquisitions – OOH(NA). The new dwellings component remains the largest contributor to OOH(NA) growth, contributing 2.4 percentage points to the overall growth rate. This has increased from the previous quarter’s contribution of 2.2 percentage points. The components “existing dwellings new to households” and “other services related to ownership of dwellings” are not included due to lack of data and therefore contribute 0 percentage points.

Figure 4: Contributions to percentage change in OOH (NA) from component sub-indices, latest quarter on corresponding quarter of previous year

UK, Quarter 4 (Oct to Dec) 2017

Figure 4: Contributions to percentage change in OOH (NA) from component sub-indices, latest quarter on corresponding quarter of previous year

UK, Quarter 4 (Oct to Dec) 2017



Source: Office for National Statistics

Notes:

- Contributions may not sum due to rounding.
- Q1 refers to Quarter 1 (Jan to Mar); Q2 refers to Quarter 2 (Apr to June); Q3 refers to Quarter 3 (July to Sept); and Q4 refers to Quarter 4 (Oct to Dec).

How do the approaches differ?

The rental equivalence approach – OOH(RE) – uses the rent paid for an equivalent house as an estimate of the cost of housing services that are consumed. In other words, we value housing services by looking at the cost of the next best alternative to home ownership, namely renting a property. Importantly, OOH(RE) does not capture changes in asset value; rather it measures the change in price of housing services provided.

The payments approach – OOH(payments) – aims to measure the payments related to the ownership of owner occupied housing. This means that all payments that households make as owner occupiers when consuming housing should be included, such as mortgage interest payments, transaction costs and running costs.

OOH(payments) is not our favoured method to measuring owner occupiers' housing costs (OOH) in the Consumer Prices Index including owner occupiers' housing costs (CPIH). This is because a consumer price index aims to measure consumption and interest payments represent the cost of borrowing money rather than the cost of consumption. However, OOH(payments) is our preferred measure for the Household Costs Indices (HCIs), which depart from consumption principles, and aim to capture households' experience of changing prices and costs. For more information about the HCIs please see the article, [Developing the Household Costs Indices \(HCIs\)](#).

The net acquisitions approach – OOH(NA) – aims to measure the costs of acquiring a house with household to household transactions netted off. The approach theoretically treats a home as the purchase of a good that is part asset (the land) and part consumable (the house) and excludes the land component from the index. OOH (NA) also includes costs associated with buying and maintaining a house; for example, self-builds and renovations, repairs and maintenance, transfer costs and dwelling insurance.

In practice, while the measure presented here is the best measure of OOH(NA) that we can currently produce, the lack of available source data means that some components are not recorded fully. We therefore advise that OOH(NA) should be used and referred to with caution and it is consequently not our favoured approach of measuring OOH in the Consumer Prices Index including owner occupiers' housing costs (CPIH).

Table 1 shows the components of these different approaches. For more information about each please see the [CPIH compendium](#) or the [first article](#) in this series.

Table 1: Components of the three approaches of measuring owner occupiers' housing

Rental Equivalence	Payments	Net Acquisitions
Imputed rents	Mortgage interest payments	Acquisition of new dwellings
	Council Tax (Great Britain)	Self-builds and renovations
	Northern Ireland rates	Existing dwellings new to the OOH sector
	Dwelling insurance	Services related to acquisition
	Ground Rent	Major repairs and maintenance
	Stamp Duty	Insurance connected with the dwelling
	Estate Agent Fees	Other Services related to ownership of dwellings
	Home-Buyers Survey	
	Major repairs and maintenance	
	House conveyancing	

Source: Office for National Statistics

5 . Annex 1: List of spotlight articles

This is a list of topics that we have focused on in previous publications:

[Spotlight: the relationship between private rents and house prices](#)

[Spotlight: owner occupiers' housing costs in the RPI](#)

[Spotlight: analysis of revisions to OOH\(RE\) expenditure weights](#)

[Spotlight: changes to methodology](#)

[Spotlight: exploratory analysis of the impact of errors in the OOH stratum weights](#)

6 . Annex 2: Weights analysis

In January 2017, we published a stand-alone piece of analysis [Understanding the different approaches of measuring owner occupiers' housing costs \(OOH\): Weights analysis](#) that aggregated the different approaches to measuring owner occupiers' housing costs (OOH) with the Consumer Prices Index (CPI) to create a hybrid aggregate inflation measure, which includes OOH as measured by each approach.

From March 2017, the Consumer Prices Index including owner occupiers' housing costs (CPIH) was extended to include Council Tax. To ensure that CPIH is of the best possible quality, the full back series of CPIH has been revised to incorporate Council Tax and revised weights for OOH using the rental equivalence approach. This means that the CPIH series published in the dataset alongside this release will be different to that published in the January article.

There are also changes to the CPI-H(payments) and CPI-H (net acquisitions) series. To ensure coherence with the new CPIH series, CPI-H(NA) has been revised to include Council Tax. OOH (net acquisitions) remains the same.

For reference, the formula used to calculate the aggregate indices for CPI-H(payments) and CPI-H(NA) is as follows:

$$CPI - H (Payments)_r^t = \frac{\sum_{i=1}^n p_i^t q_i^r + p_{OOH(Payments)}^t q_{OOH(Payments)}^r}{\sum_{i=1}^n p_i^r q_i^r + p_{OOH(Payments)}^r q_{OOH(Payments)}^r}$$
$$CPI - H (NA)_r^t = \frac{\sum_{i=1}^n p_i^t q_i^r + p_{CT}^t q_{CT}^r + p_{OOH(NA)}^t q_{OOH(NA)}^r}{\sum_{i=1}^n p_i^r q_i^r + p_{CT}^r q_{CT}^r + p_{OOH(NA)}^r q_{OOH(NA)}^r}$$

Equation notes:

p is the price level.

q is the volume purchased.

r is the reference period.

t is the time period.

i is the items in the Consumer Prices Index basket.

CT is Council Tax.

CPIH is as published.