Private rents and owner-occupier housing aggregates in consumer prices

How we construct private rented property and owner occupiers' housing costs indices from private rental data. This is part of our technical guidance on consumer prices indices.

Contact:
Consumer Price Inflation team
cpi@ons.gov.uk
+44 1633 456900

Release date:
25 March 2026

Next release:
To be announced

Table of contents

1 . Overview

Consumer prices statistics measure the change in the price of the goods and services that consumers buy over time. Another way to understand this is as a very large shopping “basket” comprising the various goods and services bought by a typical household. We measure the monthly change in the total cost of this basket.

Since 2013, we have used large private rental datasets in the construction of private rented property and owner occupiers’ housing costs components of the basket. These datasets are collected by the Valuation Office Agency in England and the devolved administrations, as part of their responsibilities to administer functions relating to Housing Benefit and Universal Credit.

As described in our Scope and coverage of consumer prices indices methodology article, our inflation measures are separated into components called “aggregates” (or sometimes “strata”). These exist in a hierarchy where “elementary aggregates” form the lowest level. Higher-level aggregates are constructed by weighting together lower-level components.

In this article, we describe the elementary aggregate indices that draw on these private rental data sources. We describe the data, how we process them, and how we use them to calculate price indices.

How we compile measures of inflation

This article is part of a set explaining how consumer price inflation and associated indices are compiled. Other related guidance articles include:

- Consumer prices indices technical guidance
- Scope and coverage of consumer prices indices
- Traditional data aggregates in consumer prices
- Special case aggregates in consumer prices
- Alternative data aggregates in consumer prices
- Higher-level aggregation and weights in consumer prices
- Calculating the Household Costs Indices
- Calculating the Retail Prices Index
- How we publish our consumer price outputs

This set of related articles replaces components of the Consumer Prices Indices Technical Manual, 2019.

2 . Overview of housing costs in consumer prices statistics

The Consumer Prices Index including owner occupiers' housing costs (CPIH) is the same as the Consumer Prices Index (CPI) but with the added measure of owner occupiers' housing costs (OOH). OOH reflects the housing services associated with owning, maintaining and living in one's home. Households that are not owner-occupiers will pay for housing through rental payments to a private landlord, registered social landlord, or local authority. Unlike OOH, actual rentals are included in both CPIH and CPI.

These costs represent a large proportion of consumption expenditure, typically just under a fifth of the CPIH basket. OOH measures do not seek to capture increases in house prices. The inclusion of an asset price and therefore capital gains are generally defined as being out of scope of any kind of consumer price index. This is because they are an investment that adds to household wealth, rather than spending on consumption. Property price changes are instead measured in the UK House Price Index. Further information is available in our Private rent and house prices bulletin.

OOH costs in CPIH are measured using the rental equivalence method, which uses the rent of an equivalent property as a proxy for the cost of owning, maintaining and living in one's own home. The UK Statistics Authority Board accepted the National Statistician's recommendation to use the rental equivalence approach in September 2012, following a report from the Consumer Prices Advisory Committee (PDF, 422KB) and a public consultation.

The measure of rental equivalence used in CPIH uses the same elementary aggregate indices as the Private rented property index, which is a component of both the CPI and CPIH baskets. Both private rentals and OOH are classified to the "Housing, water, electricity, gas and other fuels" division and, within that, to the classes "Actual rentals" and "Imputed rentals for housing" categories, respectively. The categories follow the standard international Classification of Individual Consumption According to Purpose (COICOP) classification system.

In this article, we summarise the construction of private rental property price indices, which is consistent with the Price Index of Private Rents (PIPR). We then discuss how OOH are measured in practice, including the rationale for using the rental equivalence approach.

3 . Private rented property price index

The "Actual rentals" class in the Consumer Prices Index (CPI) and the Consumer Prices Index including owner occupiers' housing costs (CPIH) comprises:

- local authority rents
- registered social landlord rents
- private rented property (that is, housing that households rent from private landlords)
- UK self-catering holiday

This section explains how we measure the private rented property component of the "Actual rentals" class. Our CPI methodology is consistent with:

- the Price Index of Private Rents (PIPR) from February 2024 (and from February 2025 for Northern Ireland private rentals, with an additional element of nowcasting)
- the Index of Private Housing Rental Prices (IPHRP) for Great Britain between February 2013 and January 2024
- locally collected price quote data for Great Britain to January 2013 (and to January 2025 for Northern Ireland private rentals);

Our PIPR methodology is described in more detail in our PIPR QMI. For more information on local collection, please refer to our Traditional data aggregates in consumer prices article.

Data sources

Private rents data are collected separately in England, Scotland and Wales by rent officers, as part of their responsibilities to administer functions relating to Housing Benefit and Universal Credit. This includes the Local Housing Allowance (LHA) and Local Reference Rent (LRR) schemes. In administrations across Great Britain, rent officers collect achieved rental prices from agents and landlords who are willing to provide data. In administrations in Scotland and Northern Ireland, advertised rents data are collected. The sample is purposive rather than random but collection procedures ensure that it is representative of the private rental market. Further information on how we mitigate for potential biases is available in the “Stratum weights” subsection, later in Section 3: Private rented property price index.

Data are collected by rental officers in the Valuation Office Agency (VOA) for all regions of England, providing prices for over 450,000 properties annually. Rent Officers Wales, part of the Housing and Regeneration Division of the Welsh Government, provides around 30,000 prices for Wales. Rent Service Scotland, part of the Communities Analysis Division of Scottish Government, provides up to 40,000 property prices for Scotland. The Northern Ireland Housing Executive provides prices for around 10,000 rental properties in Northern Ireland.

The data sources also include limited information on property attributes. The price data are combined with other existing data sources to obtain further property attributes, such as the age of the property and floor area. We link rental price data to property attributes data using each property’s Unique Property Reference Number (UPRN). Separately, we also link to a geo-demographic segmentation (ACORN) using property postcode, which allows us to control for differences between smaller areas.

More information on the quality of these data sources and the collection methodology can be found in our Quality assurance of administrative data used in the PIPR methodology.

Processing

Fixed basket

Our methodology controls for different types of rental properties being collected in different months, ensuring that we are comparing like with like throughout the year. Each January, a fixed basket of properties is created using all the collected rental properties in the previous year. Within this process, duplicate records for the same property are removed so that only the most recent record collected is used. Prices to rent a single room in a house of multiple occupancy (HMO) are also removed as they are out of scope. A decision tree is used to impute any missing data in price-determining characteristics of rental properties. More information on imputation can be found in our PIPR QMI.

Monthly samples

The Private rented property index uses a stock measure of rental prices; that is, both new and existing rentals are accounted for. A stock measure better reflects the average rental inflation across all private renters, as opposed to a flow measure, which only consists of new lets data. A flow measure does not capture private rent inflation for tenants who have been in the same tenancy for a sustained period.

Each month’s calculation uses rents collected between the 28th of the previous month and the 27th of the current month. Newly collected data include updates for existing properties and information for properties not previously captured. A 14-month validity period is applied to balance typical fixed-term contract lengths (during which rents remain fixed for 6, 12, 18 or 24 months) with operational practice, (where updates usually occur every 12 to 14 months). Using a 14-month time period improves the number of property updates compared with shorter periods.

New properties are added to the current month’s dataset and matched properties in the sample are updated with any price or attribute updates. Only rental price updates that are less than 1.49995 times the previous price and greater than 0.6667 times the previous price are considered valid. Any properties without a price update for over 14 months are removed from the sample. Prices to rent a single room in a house of multiple occupancy (HMO) are also removed.

Any properties that are missing one or more of their price-determining characteristics are imputed. We use a decision tree regressor for missing floor area (for more information please refer to our PIPR QMI). Other missing variables are categorical and are assigned to a "missing" category, which is controlled for.

Calculation of indices and aggregation

Elementary aggregate indices

Our monthly dataset is fitted to a hedonic regression model to estimate the contribution of each characteristic to the natural logarithm of the rental price of a property. This approach controls for changes in the mix of properties in the sample in each month. A separate regression model is run for each month, and for each country. Hedonic regression is the same approach that is used for computers, smartphones and smart watches, as described in our Special case aggregates in consumer prices methodology article. The approach is appropriate where there is frequent turnover in the sample, whether this is because of fast-paced innovation in technological goods or the availability of rental properties. Further information about the model used for private rented properties can be found in our PIPR QMI.

The Ordinary least squares model produces coefficients, which are used to calculate an imputed rental price for each property in the annual fixed basket for each month of the year. This allows the calculation of a price relative of imputed rents for each property between every month and the base month, January.

From there, a Jevons index (described in our Traditional data aggregates in consumer prices methodology article) can be calculated for imputed rental prices within each stratum (local authority by property type by furnished status). When calculating the statistics used for the Retail Prices Index (RPI), we use a Carli index instead. This is the elementary aggregate.

Strata that have low property counts (less than five properties) in the fixed basket are imputed using the local authority level aggregate as a donor, because we judge strata with low counts to have sample sizes too small to provide a reliable estimate for an index.

Rental price data for Northern Ireland are delivered to us with a two-month lag, meaning that while data for Great Britain are available for the published month, Northern Ireland data are not available for the published and previous month.

We therefore impute the Northern Ireland index by carrying forward the latest available two-month inflation rate (from the two previous periods) for Northern Ireland. From our analysis, we have found this method provides accurate forecasts and reduces bias. For example, when creating the Private rented property index for June, data for Northern Ireland will only be available up to April. We will impute the June index for Northern Ireland, by using the April data to calculate an index for April and then inflating it by the growth rate between February and April for that index.

Stratum weights

To ensure that the index is representative of the UK rental market, expenditure weights are used when aggregating data. These weights allow us to reduce the impact of our rental price data being a purposive sample.

Stratum weights are calculated for every local authority (England and Wales) or broad rental market area (Scotland and Northern Ireland), by:

- property type
- furnished status

To calculate expenditure, we multiply the latest estimate of the dwelling stock for each stratum with its average observed rental price. The distribution of expenditure across the UK, as a proportion, is the expenditure weight. Dwelling stock data come from the Office for National Statistics, the Scottish Government, the Welsh Government and the Department of Finance (Northern Ireland).

Estimates for observed rental prices are produced using the rental price data supplied by the VOA, Scottish Government, Welsh Government and Northern Ireland Housing Executive.

Dwelling stock estimates for England, Scotland and Wales are broken down by local authority and tenure type. For the PIPR we only use dwelling stock estimates for privately rented properties. Dwelling stock estimates are split by the proportion of property types rented privately in Wales, Scotland and the nine regions of England using data from the English Housing Survey, Scottish Housing Conditions Survey, and the census (for properties in Wales, as timelier sources do not exist). Dwelling stock estimates are also split by property furnished status using the national-level split estimated by the Living Costs and Food Survey.

For Northern Ireland, dwelling stock estimates are broken down by property type. Data from the Northern Ireland House Conditions Survey are then used to calculate the number of properties of that type that are privately rented.

Expenditure weights are calculated annually in line with other below-COICOP weights in CPI and CPIH. To ensure our weights are timely, we use the most recently published data from each source. Broadly, dwelling stock data tend to be available at a lag of three years, and average prices are available at a lag of one year (equivalent to price uprating expenditure from three years before the index).

The annual expenditure weights are used to aggregate indices and price level data up to the consumption segment level. This is consistent with the approach described in our Higher-level aggregation and weights in consumer prices article.

The Index of Private Housing Rental Prices

Between February 2013 and January 2024, the Private rented property index for Great Britain was based on the Index of Private Housing Rental Prices (IPHRP) for Great Britain, the forerunner to the PIPR.

The monthly dataset described in the “Monthly samples” subsection, earlier in Section 3: Private rented property price index, is consistent with the IPHRP dataset. However, a hedonic model was not used. Instead, half of the data were sampled, with the remaining half forming a “substitution pool” for replacement properties. When the IPHRP was developed, this was the most suitable method available given our limited access to the VOA microdata. However, PIPR’s hedonic approach allows us to make use of all the data, while more effectively controlling for the mix of available properties.

A stratified random sample was drawn from across Great Britain each January using half of all records collected over the previous 14 months. The most recent record was used in the case of duplicates.

Each month, if a property in the sample had reached the end of its 14-month validity period, and no price update had been made, a replacement property of comparable quality was sought from the substitution pool. A replacement was defined as comparable if it had the same property type, postcode sector, number of bedrooms and furnished status. If there was more than one potential replacement property, then the property collected most recently was chosen. This replacement property maintained its original entry date into the system.

If a comparable replacement could not be found, then the property was replaced by a non-comparable property in the substitution pool from within the same stratum. Although the replacement was non-comparable, an effort was still made to make the replacement property as comparable as possible using the following priority order:

1. Match on stratum, number of bedrooms and local authority.
2. Match on stratum and number of bedrooms.
3. Match on stratum and postcode sector.
4. Match on stratum and local authority.
5. Match on stratum only.

Because the replacement property was deemed to be a different quality to the one it was replacing, a new January (base) price was imputed for the new property in the manner described in our Traditional data aggregates in consumer prices methodology article. The non-comparable replacement maintained its entry date into the system. If there was no non-comparable match available, then the property was removed from the sample.

The Jevons formula was used to aggregate private rent prices below the stratum level for CPIH and CPI, and private rents for the RPI were aggregated using the Carli formula, as described in our Traditional data aggregates methodology article.

4 . The measurement of owner-occupiers' housing costs

About owner-occupiers' housing costs

Owner-occupiers' housing costs (OOH) are the costs of housing services associated with owning, maintaining and living in one's own home. This encompasses the shelter and security the home provides. This is distinct from the value of a home as an asset, and the associated capital gains. Changes in asset value are out of scope of measures of consumer price inflation. This is in line with international guidance, for example, Paragraph 2.8 of the International Labour Organisation's Consumer Price Index (CPI) Manual, Concepts and Methods 2020 (PDF, 8.9 MB), which states that "a CPI does not cover capital goods, such as houses".

Determining how best to measure OOH is one of the most contentious issues in the field of inflation measurement. The reasons for this stem from conceptual, methodological and practical considerations. There are several ways in which OOH might be measured, each with methodological strengths and weaknesses.

When constructing a measure of inflation, a decision must be made on the point at which to observe price change. The three choices are:

- the point at which a good or service is acquired
- the point at which it is used
- the point at which it is paid for

Whilst an apple, for example, would generally be acquired, paid for and used in the same period (month), owner-occupied housing is acquired at a single point in time, used for many years and can be paid for (for example, through a mortgage) over much of a lifetime. This means that, for OOH costs, depending on when we choose to observe price change, we will be measuring a different target.

The purpose of consumer price indices is to measure the change in price of consumption goods and services within the target population (in the case of the Consumer Prices Index including owner occupiers' housing costs (CPIH), this is the UK's economic territory). The "use" approach measures the consumption of a good or service directly, whereas the acquisition approach measures the cost of acquiring goods and services for the purpose of consumption.

For the most part, prices in CPI and CPIH are collected on an acquisition basis. However, the rental equivalence approach to measuring OOH reflects the use of owner-occupied housing services.

This approach is consistent with a resolution passed by the 17th International Conference of Labour Statisticians which recognised that "because of the practical difficulties in uniformly defining consumption and estimating the flow of services provided by other durable goods in terms of "use", it may be necessary to adopt a mixed approach – for example "use" for owner-occupied housing and "acquisition" or "payments" basis for other consumer durables."

Different approaches to measuring OOH

Statisticians and economists have developed theoretical methods to measure OOH from each of the perspectives in the following bullet points. Each of these approaches is measuring a different target. Even if we had "perfect" data, we would not expect the indices to give the same result. Broadly, the different approaches are:

- the payments approach, which directly measures what households pay as owner occupiers when consuming housing services; this includes mortgage interest payments, transaction costs and running costs
- the net acquisitions approach, which captures the price of housing stock newly acquired by the household sector; the cost of OOH services are isolated through the cost of the building, whilst the price of the land is treated as an asset and removed
- a use-based approach that decomposes the user cost into component parts, specifically mortgage interest payments, the opportunity cost of forgoing interest on the capital used, depreciation, and running costs, which are offset by capital gains; however, to use this approach in practice the model must be simplified (the "narrow user cost" model)
- a use-based approach that imputes the rent for an equivalent property ("rental equivalence") as an estimate of the cost of housing services consumed by the owner occupier

Both use-based approaches assume that the dwelling provides a flow of services that are consumed each period.

Chapter 9 of the UK consumer prices statistics review (PDF, 2.5MB) describes these different approaches in more detail.

The measure of OOH used in the CPIH is based on the rental equivalence approach, which is the most appropriate measure for this index. However, there are measurement challenges associated with all these approaches. Other approaches are more appropriate for other indices. The Household Costs Indices use the payments approach, while the Retail Prices Index uses an alternative use-based approach. In the following section, we describe the reasons for the choice of measurement approach used in CPIH.

The rationale for the rental equivalence approach

We considered each methodological approach when determining which approach to use for OOH in the CPIH, both in terms of their theoretical appropriateness, and how they can be measured in practice.

The inclusion of mortgage interest payments under the payments approach is not consistent with CPIH's "use case" as a macroeconomic measure of inflation. Further information is available in our Measuring changing prices and costs for consumers and households: December 2023 article. Interest payments capture the cost of borrowing money, rather than the cost of OOH services. Interest is not consumed in the same way as goods and services are. Moreover, the household sector will benefit from interest received (for example, through savings) as well as lose through interest paid. The treatment of such items in CPIH is usually to capture the net expenditure; for example, for insurance categories, we take insurance payments and remove the claims paid out to arrive at an aggregate expenditure for the household sector. Therefore, the payments approach is not suitable for use in CPIH.

The narrow user cost method is also not a suitable approach, because of the subjectivity involved in selecting the methodology for determining and changing the real rate of interest, an important component in calculating the opportunity cost of home ownership. Previous research by the Consumer Prices Advisory Committee (CPAC) has shown that this method is particularly sensitive to the choice of the real rate of interest. Moreover, this method can result in negative index values.

The choice between net acquisitions and rental equivalence is less clear, and the arguments for both require careful evaluation. Our CPAC therefore considered these approaches against the quality dimensions, to which the Government Statistical Service adheres. This was the basis for its advice to the National Statistician in 2012 on the best approach for measuring OOH costs. The following subsections outline our assessment of each measure against the more crucial quality dimensions.

Accuracy

With respect to accuracy, both net acquisitions and rental equivalence meet most of the conceptual requirements of an OOH index.

As a consumer prices index, CPIH is a measure of the changing cost of consumption. Therefore, the choice of method for measuring OOH should be based on the most statistically accurate method for measuring the changing cost of consumption goods and services in the UK. This means that asset prices should not be included, as an asset is not consumed in the same way that other goods and services are.

However, in our net acquisitions index (published in our Measures of owner occupiers' housing costs, UK: January to March 2020 article but discontinued from March 2020) it was impossible to disentangle the asset element from the consumption element, as we cannot separate land and building prices. Instead, the UK House Price Index was used as a proxy for the change in price of the consumption element.

It is theoretically possible for the weights for existing dwellings new to the household sector (part of the net acquisitions measure) to be negative. This would occur if the expenditure on existing dwellings sold to the household sector were less than that of existing dwellings sold by the household sector. In practice, it is not feasible to construct a consumer price index using a negative weight. Moreover, the way the index is constructed also means that we could see counter intuitive movements. For example, we might see house prices falling but the index increasing.

A limitation of the rental equivalence approach is that it relies on the use of “imputed” rents to represent the cost of OOH services. However, we have access to large, reliable sources of private rental data for England and the devolved nations, as described in the “Data sources” subsection of Section 3: Private rented property price index. For more information, please refer to our Quality assurance of administrative data used in the Price Index of Private Rents (PIPR) methodology.

Comparability and coherence

Without a complete international inventory, it is difficult to identify the most common approach to measuring OOH costs. However our research shows that rental equivalence (or similar use-based methods) is most widely used among countries with inflation-targeting regimes. Further information is available in our Coverage differences between the Harmonised Index of Consumer Prices and national Consumer Prices Indices article.

Although exclusion is technically the most common global approach, CPIH explicitly includes OOH. For example, the USA, Switzerland, the Netherlands, Germany and Norway all use rental equivalence. In countries where the inflation target uses a net acquisitions OOH approach, the asset component is excluded. Australia and NewZealand, for example, price dwelling structures separately from land.

Eurostat requires member states to produce an OOH Price Index (OOHPI), in addition to a Harmonised Index of Consumer Prices (HICP). Our Consumer Prices Index (CPI) is based on the HICP methodology.

Eurostat's preferred OOH method for the HICP is the net acquisitions approach. The main reasons for this are that HICP principles exclude the use of imputation (which the rental equivalence and user costs approaches both make use of), and that rental equivalence is invalid where countries do not have a sufficiently large rental market. However, CPIH does not need to be consistent with HICP principles, as it is being developed for UK purposes. As such, our primary focus is to produce the best quality OOH measure for UK users of consumer price inflation statistics, rather than harmonisation, which necessarily trades off quality against the practicalities of measurement across multiple countries.

In terms of coherence with national accounting principles, the System of National Accounts (SNA) treats housing as an investment asset that provides a flow of dwelling related services. The cost of consuming those dwelling related services is measured using a rental equivalence approach (known as imputed rents). The net acquisitions approach would therefore be inconsistent with the approach used in the national accounts.

Relevance, and accessibility and clarity

Many users expect a measure of OOH to move in line with house prices. However this is not appropriate in a measure of OOH.

The calculation of a net acquisitions index includes asset prices through the cost of land, which would make it less suitable for some uses, such as monetary policy decisions. While house price bubbles may be a concern, house prices do not need to be included in the measure of inflation for monetary policy to address the issue. The Monetary Policy Committee considers a wide range of indicators. The UK House Price Index can be used to assess and monitor house price inflation. On the other hand, the rental equivalence measure reflects just the consumption cost of OOH, making it suitable for this purpose.

While many users found the net acquisition concept easier to grasp than rental equivalence, measuring OOH is a complex problem and none of the approaches are straightforward to understand.

Summary of our rationale for choosing the rental equivalence method

As there are arguments for and against both approaches to measuring OOH, we have to choose which criteria are most relevant to our purposes. In summary, our preferred method for measuring OOH in CPIH is the rental equivalence method because:

- the exclusion of asset prices makes it more appropriate as a measure of consumption
- the underlying data are of good quality and of sufficient volume to allow the measure to be reliably estimated
- rental equivalence is consistent with national accounts methodology and is widely used internationally

This choice is supported by the Consumer Prices Advisory Committee (CPAC) which, in 2012, also recommended using the rental equivalence approach and the 2015 review of UK consumer prices statistics, which recommended that we should continue to use this approach to measure OOH.

The construction of equivalent rent indices

The PIPR elementary aggregate indices (as described in the “Elementary aggregate indices” subsection of Section 3: Private rented property price index) are used as the starting point for the construction of OOH equivalent rent indices. We use private rents indices disaggregated by region and property type, for unfurnished dwellings only.

Because the composition of the rental market differs from the owner-occupied housing (OOH) market, it is necessary to “mix adjust” the private rented property indices to reflect the OOH market. In practice this is done using stratum weights that reflect the owner-occupied population of housing stock.

The stratum weights are calculated in the same way as described in the "Stratum weights" subsection of Section 3: Private rented property price index. However, dwelling stock counts for the OOH population are used in place of the private renter population. OOH dwelling stock counts are multiplied by average rental prices for each region and property type (detached, semi-detached, terraced, and flat or maisonette) combination, for unfurnished properties only.

Until January 2025, Northern Ireland rental equivalence indices were based on locally collected data and so were not mix adjusted to reflect the OOH market.

5 . Quality considerations for owner-occupied housing costs and private rented property indices

Source data

Before September 2019, we did not have direct access to the Valuation Office Agency (VOA) rent price microdata. Robust procedures were put in place to ensure that the potential for errors was minimised:

- Our staff were involved in designing the methodology and systems for VOAs production of the elementary aggregate indices.
- Service Level Agreements (SLAs) were set up (and remain in place) between ourselves and VOA, and we were notified of any changes to systems.
- Changes were quality assured by our staff and VOA also provided us with quality assurance documentation.

As with other administrative data sources, the data collected may not be perfectly suited to the measurement of private rental prices, as the primary purpose of the data is for the setting of Local Authority rents. However, the sample is large and representative of the target markets, and stratum weights are used to mix adjust the sample to reflect the relevant populations.

Before January 2025, the sample for the Northern Ireland stratum was based on local collected data, resulting in very small samples. However, “elementary aggregate indices” describes recent improvements to the measurement of private rental property prices in Northern Ireland.

Scotland rents data are predominantly for advertised new lets, with only a small proportion based on existing lets data. Therefore, price changes for existing tenancies are largely estimated for Scotland. More information is available in Section 5: Scottish Government private rental data in our Quality assurance of administrative data used in the Price Index of Private Rents methodology.

Rental data may contain biases because they are collected through purposive rather than probability sampling. Collectors aim to cover at least 10% of private rentals. As with the local price collection, where price collectors use market knowledge to select an item that is representative of consumer expenditure, rent collectors use their knowledge of the rental market to select rents that are as representative as possible.

However, the rental market differs from the owner-occupier market. For example, the rental market may include more flats and smaller houses, whereas the owner occupiers’ market may have a greater share of standard and larger-sized houses. Mix adjustment mitigates for this by weighting rental data using stratum weights so they reflect the owner-occupier population. The large sample ensures sufficient observations even in small strata.

Potential limitations of our approach to owner-occupiers' housing costs

The continuity of data sources is crucial in the compilation of a long-term credible price index. The rental equivalence method in CPIH depends on the collection of private rents data by the VOA in England, and by the Scottish and Welsh Governments in Scotland and Wales, respectively.

Rent controls are government-mandated controls that place a maximum price on what landlords may charge tenants. To have an impact, they need to be set at a level below the market rate. Given the general economic principles and assumptions that underlie the rental equivalence approach as a concept, using this approach to measure owner-occupiers' housing costs (OOH) could introduce a downward bias on the index under rent controls. Rent controls were in place in Scotland between September 2022 and March 2024, however, this has not been the case in the other UK nations.

Government policies may affect the number of rental properties on the market. In an extreme case, this could affect the collection of data because of the need to sample enough properties for a representative mix of housing.

Government policy on housing benefit may also change in a way that would mean rental prices would no longer be needed to calculate the levels of benefit awarded, removing the need for data collection by the VOA and devolved administrations. We would be notified in advance of any change in data collection through our Service Level Agreements (SLAs).

6 . Definitions

Aggregates

Aggregates (or “strata”) are classifications into which the raw data can be separated. The strata “region” and “shop type” within item are generally used for the Consumer Prices Index including owner occupiers' housing costs (CPIH), Consumer Prices Index (CPI), Retail Prices Index (RPI) and the Household Costs Indices (HCIs). The data within each stratum are combined, and the resulting indices for each of the strata are then combined using stratum weights.

Basket

A convenient way to understand the nature of consumer price inflation statistics is to envisage a very large shopping basket comprising all the different kinds of goods and services bought by a typical household. As the prices of individual items in this basket vary, the total cost of the basket will also vary – consumer price statistics measure the change from month to month in this total cost.

Base prices

Our index methods measure price change between two months: the base month and the current month. Base prices are the prices that are used to represent the price of a product in the base month. This representative price may be a single sampled price, or an average of many different prices.

Carli Index

In line with international best practice, we consider the use of Carli to be inappropriate. The Carli index is an unweighted index number formula, which is the arithmetic mean of price relatives.

Coverage

Those transactions that can be identified and measured in practice. This is determined by the expenditure categories for which weights are compiled.

Current price

Our index methods measure price change between two months: the base month and the current month. Current prices are the prices that are used to represent the price of a product in the current month. This representative price may be a single sampled price, or an average of many different prices.

Division

In the CPIH, CPI and HCIs, all categories of expenditure on which significant amounts of money are spent are arranged into 12 divisions, such as clothing and footwear, transport, and recreation and culture.

We publish price indices for each division.

Elementary aggregates

The set of indices calculated at the very first stage of aggregation.

Items

Any type of consumer good or service that can be purchased, for example, apples. Several different varieties of that item may be available, for example, Granny Smith and Braeburn apples.

Jevons Index

An unweighted index number formula, which is the geometric mean of price relatives.

Local collection items

Prices for items collected either in-store, online or by phone by price collectors in various locations across the country. These are supplemented by prices collected by head office staff for shops with national pricing policies, and regional services collection prices collected by phone, email or online for local services, such as plumbers, taxi hire and hotels.

Price quotes

Individual prices collected through traditional data collection for specific products or varieties that households buy.

Scope

All transactions that one would ideally want to measure.

Strata (stratum)

Strata (or “aggregates”) are classifications into which the raw data can be separated. The strata “region” and “shop type” within item are generally used for the CPIH, CPI, RPI and HCIs. The data within each stratum are combined, and the resulting indices for each of the strata are then combined using stratum weights.

Weight

A factor by which a component is multiplied to reflect the level of consumers’ expenditure on that component.

7 . Related links

Consumer prices indices technical guidance
Methodology | Last revised 25 March 2026
How measures of consumer price inflation and associated indices are compiled.

Consumer price inflation, UK
Bulletin | Released monthly
Price indices, percentage changes, and weights for the different measures of consumer price inflation.

Household Costs Indices for UK household groups
Bulletin | Released quarterly
Household Costs Indices, 12-month growth rates, expenditure shares, and contributions for UK household groups and all households.

8 . Cite this methodology article

Office for National Statistics (ONS), published 25 March 2026, ONS website, methodology article, Private rents and owner-occupier housing aggregates in consumer prices.