

Scope and coverage of consumer prices indices

What CPI and CPIH measure, how expenditure items are classified, and how representative items and prices are sampled and combined to produce inflation measures, part of technical guidance on consumer prices indices.

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1 . A brief description of consumer price statistics

Everything that consumers buy has a price; the price may vary over time. Consumer price statistics are designed to measure such changes. A convenient way to understand the nature of these 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.

No two households spend their money in the same way. Each household's or person's experience of inflation will be different. UK consumer price statistics are measures of average inflation, based on household expenditure on the items in the shopping basket.

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 price indices technical guidance](#)
- [Traditional data aggregates in consumer prices](#)
- [Special case aggregates in consumer prices](#)
- [Alternative data aggregates in consumer prices](#)
- [Private rents and owner-occupier housing aggregates in consumer prices](#)
- [Higher-level aggregation and weights in consumer prices](#)
- [Calculating the Household Costs Indices](#)
- [Calculating the Retail Price 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 the CPIH and CPI

Definition of the CPIH and CPI

The Consumer Prices Index including owner occupiers' housing costs (CPIH) and Consumer Prices Index (CPI) are consumer inflation or pure price indices defined as an average measure of change in the prices of goods and services bought within the domestic territory for consumption by households in the UK and foreign visitors to the UK.

The Consumer Prices Index including owner occupiers' housing costs (CPIH) and the Consumer Prices Index (CPI) are our primary consumer inflation measures.

There are several important points to note in this definition:

- average measure: a single summary that combines, or averages, all the price changes covered
- change in the prices: its purpose is to measure how prices change over time rather than the absolute level of prices at a point in time
- goods and services: it does not just measure price changes for necessities that are purchased frequently, such as food, heating and clothing, but a wide variety of things purchased by most households, including leisure goods and services, that may be purchased on a less frequent basis
- consumption: the CPIH and CPI do not cover investment spending. For example, in the CPIH, owner occupiers' housing costs are included but the cost of the house, an investment, is excluded; likewise, because they are not consumed, savings and direct taxes are also excluded
- households: it measures price changes affecting private households, but it excludes price changes that affect only business or government
- in the UK: coverage extends to the whole of the UK (see the Geographical subsection)
- foreign visitors: the expenditure of foreign visitors to the UK is included in the reference population (see the Reference population subsection)

Scope and coverage of the CPIH and CPI

The scope and coverage can be defined as follows.

Scope: All those household transactions that we would ideally want to measure.

Coverage: Those household transactions within the scope that it is possible to identify and measure in practice. This is determined by the expenditure categories for which weights are compiled, as explained in our [Higher-level aggregation and weights in consumer prices article](#).

The scope of the CPIH and CPI are those goods and services that are included in the household final consumption expenditure (HHFCE) component of the national accounts.

The UK is aligned with conventions specified in the [Harmonised Index of Consumer Prices \(HICP\)](#). As a result, UK coverage is consistent with the HICP version of the international classification framework – the [Classification of Individual Consumption According to Purpose \(COICOP\)](#).

In the CPIH, owner occupiers' housing costs (OOH) are included in the "Housing, water, electricity, gas and other fuels" division in their own class, which is called "Imputed rentals for housing". Council Tax is also included in its own eponymous class, which sits in the Housing division.

The CPI coverage excludes owner occupiers' housing costs (OOH) such as mortgage interest payments, house depreciation, buildings insurance, ground rent, and other house purchase costs such as conveyancing and estate agents' fees. These are also not included in the CPIH, which measures owner occupiers' housing costs in a different way. More information is available in our [Private rents and owner-occupier housing aggregates in consumer prices article](#).

Prior to 2012, trade unions subscriptions, vehicle excise duty and TV licence fees were also excluded from the CPI, since none of these categories were included in the HHFCE. However, in 2011 it was agreed that these items were within the scope of the CPI and should be included in the CPI from early 2012. Similarly, in March 2017, as a result of the consultation following [Paul Johnson's UK Consumer Price Statistics: A Review \(PDF, 175KB\)](#), Council Tax was introduced into the CPIH and the series was revised to include it from the CPIH's inception in 2005. The only difference between the CPIH and the CPI is the inclusion of OOH and Council Tax in the former.

Geographical

The geographical coverage of the CPIH and CPI is the economic territory of the UK (England, Wales, Scotland and Northern Ireland), but not the offshore islands (the Channel Islands and the Isle of Man), which, strictly speaking, are not in the UK.

Reference population

This comprises all private households, foreign visitors to the UK and residents of communal establishments such as university halls of residence, retirement homes and nursing homes. Expenditure by UK households abroad is excluded.

Expenditure items

Expenditure items are the goods and services bought by the reference population for the purposes of consumption. Thus, expenditure for savings and investment purposes, most direct taxes, national insurance contributions, cash gifts, and gambling are excluded from the scope of the CPIH and CPI. Expenditure on illegal transactions is included in the scope but excluded from the coverage. However, expenditure at legitimate outlets on goods that may have been subject to illegal avoidance of tax or duty at some point in the supply chain will generally be covered. For instance, some smuggled alcohol and tobacco is thought to be sold through outlets such as bars, off-licences and similar outlets.

The CPIH and CPI measure the price of goods and services paid for by consumers. Typically, no account is taken of services free at the point of consumption, even if consumers have paid for them indirectly through taxes or National Insurance contributions. The exception to this rule is Council Tax, which is included in the CPIH. For some goods and services provided or partly paid for by the government, a charge is made at the point of consumption, such as the supply of prescription medicines and dental treatment under the NHS. These charges are included in the CPIH and CPI but not the full economic cost of goods or services. When deriving the weights, only the costs paid by the consumer at the point of delivery are included.

Transaction prices

The prices used in the calculation of the CPIH and CPI should reflect purchasers' prices typically paid by the reference population for the goods and services within the scope of the CPIH and CPI. Consumption expenditure can be measured in three ways, which it is important to distinguish. These ways are:

- acquisition, which means that the total value of all goods and services delivered during a given period is considered, whether or not they were wholly paid for during the period
- use, which means that the total value of all goods and services consumed during a given period is considered
- payment, which means that the total payments made for goods and services during a given period is considered, whether or not they were delivered

For practical purposes, these three concepts cannot be distinguished in the case of non-durable items bought for cash, and they do not need to be distinguished for many durable items bought for cash. The distinction is, however, important for purchases financed by some form of credit, notably major durable goods, which are acquired at a certain point of time, used over a considerable number of years, and paid for, at least partly, sometime after they were acquired, possibly in a series of instalments.

The difference between the three concepts of consumption is not just a matter of timing. If payment follows acquisition, interest may be charged on top of the equivalent of the cash price. When use extends over many years, the value of this use will reflect the price level of those years, not the price at the date of acquisition.

There is no simple answer as to which definition of consumption should be used. The CPIH and CPI mostly measure the acquisition of goods and services, but there are exceptions where it has been decided that this is not the most appropriate approach, most notably in the measure of owner-occupiers' housing costs used in the CPIH.

Subsidies and discounts

There is a long-standing principle that the prices used in calculating consumer price indices are those actually paid by households. This may appear simple, but in practice it is difficult to implement in a completely consistent way due to how subsidies and discounts are captured in the different data sources. In particular, discounts that are exclusively available to a limited consumer group (discriminatory discount) or other types of discounts (for example, lower prices associated with loyalty cards) should be taken into account if allowed by data characteristics.

With scanner data, the prices (unit values) typically include the discounted prices in proportion to their sales, namely discounted prices that are only available to loyalty card holders. More information is available in our [Alternative data aggregates in consumer prices article](#).

In traditional price collection however, it may not be feasible to estimate the proportion of a specific group of households that benefited from a discounted price and therefore such types of discounts are generally not included. More information is available in our [Traditional data aggregates in consumer prices article](#).

The treatment of rebates is made on a case-by-case basis, with reference to historical precedents and available statistical guidelines. For instance, they are sometimes treated as subventions to income and hence not allowed as a price change, as in the case of rent rebates; in other cases, they are treated as price changes. Two examples come from electricity charges. Regional electricity companies made a one-off reduction of about £50 on their charges on the first bill of 1996 to all domestic customers in England and Wales, as a result of the flotation of the National Grid in December 1995. Its main economic impact was considered to be to raise household incomes (that is, electricity consumption was not expected to increase markedly) and so it was not treated as a price reduction. This was consistent with the UK National Accounts treatment of the rebate according to international guidelines of national accounts compilation (the European System of Accounts) where a price change is expected to "[have a significant influence on the amounts producers are willing to supply and on the amounts purchasers wish to buy](#)". However, more recently, there was a further reduction on electricity bills as a result of the abolition of the fossil fuel levy. In this case, it was decided, because of the payment method of the rebate (reducing bills rather than sent as a separate cheque) and in accordance with historical precedents that this would be treated as a price change.

Responsibility for the CPI

The rules underlying the construction of the Harmonised Index of Consumer Prices (HICP) (known as the Consumer Prices Index (CPI) in the UK) are specified in a series of European regulations. These have been developed by Eurostat (the Statistical Office of the EU) in conjunction with the National Statistical Institutes of member states of the EU. The UK formally left the EU on 31 January 2020, which also meant the CPI was no longer a component part of the HICP. Despite this, as far as possible, the methods used in the compilation of the UK CPI continue to align with the HICP to maintain comparability of the UK CPI with both HICP and EU countries.

Since November 2015, the development of our consumer price statistics has been guided by our two [Advisory Panels for Consumer Prices \(APCPs\)](#) – Technical and Stakeholder.

3 . Structure of UK consumer price indices

The coverage and classification of item indices are based on the international classification system for household consumption expenditures known as Classification of Individual Consumption According to Purpose (COICOP).

COICOP and household final consumption expenditure (HHFCE) are the starting points for defining which expenditures, in principle, should be included in consumer price indices. This is because COICOP and HHFCE define which transactions constitute household final consumption as opposed to other flows such as taxes, other transfers, or capital and financial transactions.

However, consumer price indices currently deviate from COICOP and HHFCE in several areas. For example, the CPI does not cover owner occupiers' housing costs (OOH), and neither the CPIH nor the CPI include financial intermediation services indirectly measured (where some of the cost of financial services is captured in an interest rate difference) or games of chance.

The COICOP classification that underpins the CPIH and CPI saw an update in 2018, to reflect changes in household expenditure patterns since its inception in the late 1990s. The UK currently uses the [version of COICOP introduced in 1999, which was updated in 2017](#) to add additional detail at the sub-class level, but we plan to have implemented the updated COICOP 2018 by 2029.

COICOP is a hierarchical classification system comprising:

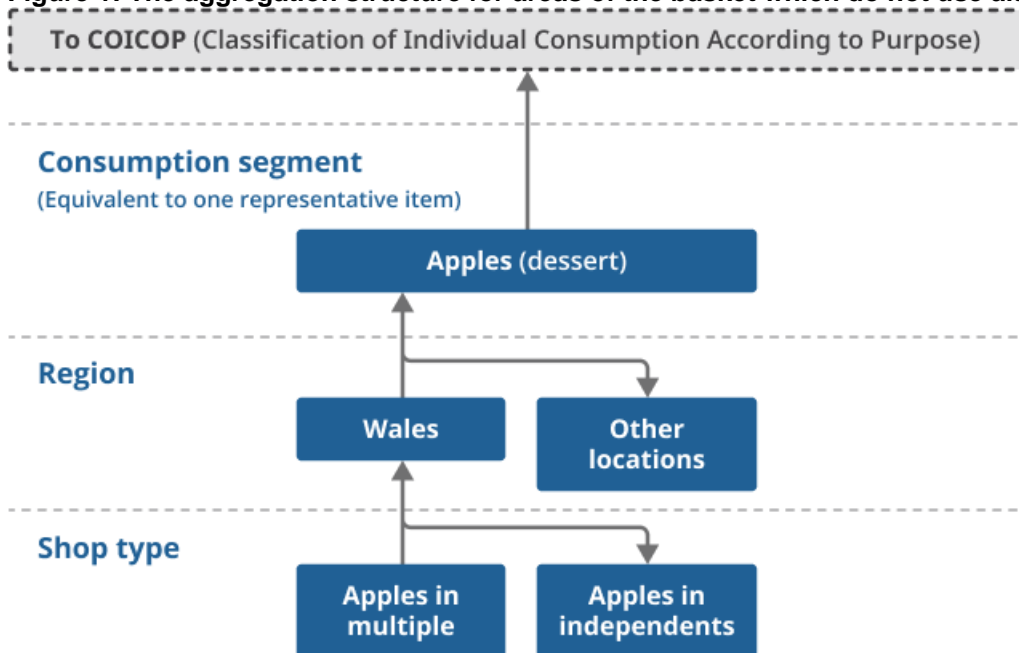
- divisions (for example: 01 food and non-alcoholic beverages)
- groups (for example: 01.1 food)
- classes (for example: 01.1.1 bread and cereals)
- subclasses (for example: 01.1.1.1 rice)

Subclasses are currently the lowest regularly published COICOP level, although some lower-level indices underlying the COICOP hierarchy are also published regularly.

As described in our [Impact analysis on transformation of UK consumer price statistics: January 2025 article](#), we introduced a new aggregation structure into our inflation statistics in 2025. The new structure gives us the flexibility to use traditional data sources, alternative data sources, or a dual collection of both types of data, for different areas of the basket of goods and services. This mainly relates to the introduction of an additional UK-defined level of granularity lower than COICOP, known as consumption segments. For areas where we are introducing alternative data sources (particularly groceries), consumption segments are defined to be broader than items but still relatively homogeneous. An example may be "rice", which encompasses various types of dry rice, microwavable rice, and rice snacks such as rice cakes. We can then maximise use of alternative data by incorporating a near-census of all rice variants within lower-level aggregates. By contrast, for traditional data, a consumption segment will either match a single item or be broader than and represented by one or more items.

Consumer price indices are produced in stages, with indices derived at each stage weighted together to produce higher-level indices. Figure 1 provides an example of this structure below the subclass level for traditional data sources, whereas Figure 2 provides an illustrative example of how consumption segments will feed into the structure. Full details are available in the April 2025 article ['introducing alternative data into consumer price statistics: aggregation and weights'](#).

Figure 1: The aggregation structure for areas of the basket which do not use alternative data

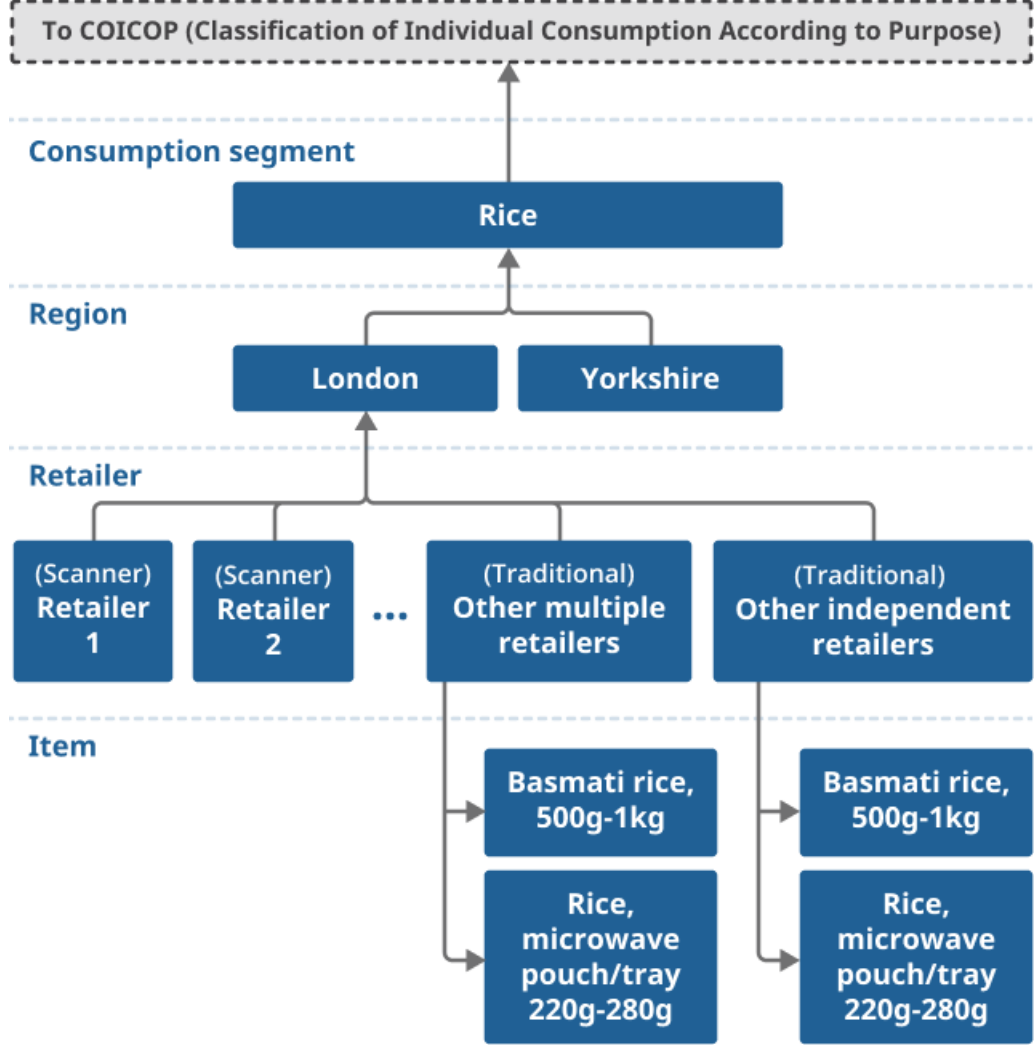


Source: Office for National Statistics

For alternative data consumption segments are broken down by region, retailer and additional strata. For traditional data, the breakdown instead occurs by region, retailer type and item.

Figure 2 shows an example of our aggregation structure when we use a combination of scanner (alternative) data and traditional data to measure food inflation.

Figure 2: The aggregation structure for areas of the basket which use alternative data



Source: Office for National Statistics

Some levels of the aggregation hierarchy are optional. For example, certain areas of the basket are not stratified by region or retailer.

Regardless of the lower-level aggregation structure, aggregation above the consumption segment level is the same. We aggregate through the Classification of Consumption According to Purpose (COICOP) international standard as follows:

- From Consumption segment to Subclass (COICOP5)
- From Subclass to Class (COICOP4)
- From Class to Group (COICOP3)
- From Group to Division (COICOP2)
- From Division to CPI/CPIH (COICOP1)

For traditional data CPIH collection, a sample of prices is collected in line with the COICOP classification system, from a selection of items that are representative of UK consumer expenditure; prices are only collected for those items selected. To use tea bags as an example, prices are collected for boxes of 80 tea bags and boxes of 240 tea bags. Other box sizes are not priced as it is assumed that their price movements are similar to those of the tea bags that are priced.

There are currently approximately 750 representative items listed in the CPIH basket of goods and services. This basket is updated yearly to account for changes in the consumption behaviour of UK consumers. The items usually have relatively broad specifications (such as a roll of wallpaper or women's jeans) and price collectors must choose a selection of products that conform to that item specification and that are believed to be representative of what consumers are purchasing. If goods come in various pack sizes, usually a size or weight range is given in the item specification.

There are now two types of price collection for consumer price indices:

1. "Traditional data sources" which cover "local collection items" and "central items" (more information on how these data are collected and processed is available in our [Traditional data aggregates in consumer prices article](#))
2. "Alternative data sources" such as "groceries scanner data", which are data that are collected by retailers at the point of sale in store or online (more information is available in our [Alternative data aggregates in consumer prices](#)).

4 . Sampling of representative items

It would be both impractical and unnecessary to measure price changes of every product bought by every household in compiling consumer price inflation statistics. There are some individual goods and services where expenditure is sufficiently large that they merit inclusion in consumer price indices in their own right; these include owner occupiers' housing costs (OOH), the television licence fee, car insurance and electricity supply. However, more commonly, it is necessary to select a sample of specific goods and services that give a reliable measure of price movements for a broad range of similar items. For example, price changes for garden spades might be considered representative of price changes for other similar garden tools.

The selection of these representative items in the measures of consumer price inflation is purposive or judgemental; the significant difficulties involved in defining an adequate sampling frame (that is, a list of all the individual goods and services bought by households) precludes the use of traditional random sampling methods.

A number of factors are taken into account when choosing representative items. Specific brands or varieties conforming to the item description must be easy to find by the price collectors, ensuring that estimates of price changes are based on an adequate number of price quotes throughout the UK. Since the measures of consumer price inflation in the UK are based on the cost of a fixed in-year basket of goods and services, they should also be available for purchase throughout the year (except for certain food and clothing products that are seasonal and so require a slightly different treatment).

The number of items chosen to represent price changes within each class depends both on the weight of the class (representing expenditure) and the variability of price changes between the various items that could be chosen to represent it (reflecting, for example, the diversity of products available). Intuitively, it makes sense to select more items in areas where spending is high; this helps to minimise volatility in estimates of price changes for high-weighted classes and therefore in the measures of consumer price inflation overall. However, if price movements for all possible items in a given section are very similar, it is sufficient to collect prices for only a few.

By contrast, if price movements within a class are very different, a much larger selection of representative items will be needed to obtain a reliable estimate of price change for that class. This helps to explain why a relatively large number of items are selected in areas such as food and clothing, whereas price changes for more homogenous product groupings, such as petrol, alcohol and tobacco, are based on fewer items.

In practice, relative expenditures on the different types of goods and services play the most important role in determining the selection of representative items used to compile the measures of consumer price inflation. This mainly reflects the wealth of data available describing household spending patterns. Two major sources of information come from household final consumption expenditure (HHFCE) and the Living Costs and Food Survey (LCF), which also underpin the calculation of the weights (more information is available in our [Higher-level aggregation and weights in consumer prices article](#)). This is supplemented by detailed analyses of trends provided by market research companies, trade journals and press reports. The price collectors and auditors also report developments in the retail environment to us.

Representative items are chosen centrally for the whole of the UK and, in order that the measures of consumer price inflation remain representative of consumer spending patterns over time, the selection of items is reviewed each year. Consistent with the principle of a fixed basket, the sample of items is held fixed within each year, with annual changes effective from the February index. At this point, revised item weights and chain-linking of indices are also applied, as explained in our [Higher-level aggregation and weights in consumer prices article](#).

New items may be introduced for a variety of reasons. These include:

- the development of new products, particularly in high technology sectors such as audiovisual equipment
- increasing household expenditure in specific spending areas such as leisure or personal services
- the need to improve coverage in areas where consumers already spend a significant proportion of their expenditure
- the replacement of existing items for very similar products that have become more popular

Additions to the basket of representative items each year are broadly matched by the number of items removed so that production costs and lags can be contained. There are currently approximately 750 items in the basket. In many cases, the decision to remove items from the basket reflects low or declining levels of household spending. However, where price changes for goods and services are very similar to other items within the same product grouping, items may be removed if they do not provide sufficient extra information to justify their continued inclusion; this does not necessarily imply that the consumer market for such items is small or declining.

The detailed contents of the consumer price inflation baskets, and changes to the sample from year to year, should not be afforded significance beyond their purpose as representative items. Indeed, within each product grouping there is usually a point at which the number, choice of items and the precise weights attached to them become a matter of judgement. At this detailed level, it is unlikely that such choices have any significant impact on the measures of consumer price inflation overall. For example, a selection of specific household appliances has been chosen to represent spending on small electrical goods, including irons, kettles and food processors. However, other representations would clearly be possible and equally valid.

In selecting the sample of items to represent distinct categories of household spending, those items must be well defined so that the product prices are reasonably homogeneous. However, sometimes a relatively wide definition is used to accommodate rapidly changing consumer tastes, for instance clothing, where fashions can change very quickly. If the definitions were too specific in these cases, it would be very difficult for the price collectors to find examples of the products in the shops. The diversity of products and therefore the range of possible price quotations that conform to a particular item's description have implications for the choice of elementary aggregation method.

Examples of typical item descriptions are:

- large loaf, white, unsliced
- home killed beef, braising steak, per kilogram
- spreadable butter, 40% to 70% butter content
- fresh vegetables, onions, per kilogram
- takeaway fish and chips
- bitter, four cans 3.4% to 7.5% ABV
- plumber, daytime hourly rate including call out and VAT
- single bed
- electric cooker four rings, grill and oven(s)
- dog kennel fees, boarding, daily charge
- child minder, hourly rate
- men's suit, ready made
- ultra-low sulphur petrol
- swimming pool admission, standard adult off peak

5 . 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.

Alternative data

These are larger, automatically collected data sources. We have introduced several alternative data sources into the calculation of our consumer price indices since the early 2020s.

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 price

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.

Consumption segment

A consumption segment is broader in scope than individual items but is still intended to be relatively homogenous, with respect to price change.

For example, the consumption segment "rice" includes various representative items, such as dry rice, microwaveable rice, and rice snacks (like rice cakes) from the traditional data collection. For alternative data sources, the consumption segment includes all rice products that have been sold.

In areas of the basket where we are not using alternative data, a consumption segment matches one of our representative items exactly.

Class

In the CPIH, the CPI and the HCIs, all categories of expenditure on which significant amounts of money are spent are arranged into 12 divisions, which are subdivided into groups and then into classes. Examples of classes are bread and cereals, water supply, and transport insurance.

We publish price indices for each class.

Coverage

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

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.

Group

In the CPIH and CPI, all categories of expenditure on which significant amounts of money are spent are arranged into 12 divisions, which are subdivided into groups. Examples of groups are food, postal services and insurance.

In the Retail Prices Index (RPI), all categories of expenditure on which significant amounts of money are spent are arranged into 14 groups, such as food, housing and motoring costs.

We publish price indices for each CPIH/CPI and RPI group.

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.

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.

Outlets

An outlet is anywhere from which goods or services can be purchased. For most items, it is usually a shop or market stall. However, for some items, outlets include restaurants, pubs, solicitors' offices, or a sole trader operating from home.

Price quotes

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

Sampling frame

A complete list of the objects to be sampled, together with sufficient information on each object to stratify, if required.

Scope

All transactions that one would ideally want to measure.

Traditional data

Prices that are manually collected through traditional sources (in-store, online and by phone). This applies to most areas of the consumer prices basket.

Weight

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

6 . 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.

7 . Cite this methodology article

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