



**An Phríomh-Oifig Staidrimh**  
Central Statistics Office

# information notice

## Consumer Price Index (CPI)

### Frequently Asked Questions

#### **Q 1 What is the CPI?**

The Consumer Price Index (CPI) is the official measure of inflation in Ireland. It measures the change, in index form, in the average level of prices (inclusive of all indirect taxes) paid for consumer goods and services by all private and institutional households in the country and by foreign tourists holidaying in Ireland. The index is a pure price index and therefore measures price change only.

#### **Q 2 Why are tourists included in the CPI and how is this done?**

Up to 2001, the CPI was based on the resident concept - covering all private households in the country - while the Harmonised Index of Consumer Prices (HICP) was based on the domestic concept which included residents of institutional households and foreign tourists on holiday within Ireland. In order to make the CPI and HICP more comparable, the CPI moved to this domestic concept in the December 2001 rebase. To achieve this, the expenditure of tourists was included from December 2001, while the expenditure of institutional households was included from December 2012.

#### **Q 3 What is the HICP?**

The HICP is the measure of price changes calculated by each Member State of the European Union. The index is based on a harmonisation and standardisation of practices within the EU and the purpose is to allow for the comparison of different consumer price trends in the different Member States. Weighted indices for the EU19 (Euro area) and the EU28 (28 member states) are calculated by Eurostat.

#### **Q 4 How does the HICP differ from the CPI?**

Certain items are excluded from the coverage of the HICP, which in essence makes the HICP a subset of the main CPI. The HICP expenditure covers under 93% of the total CPI expenditure and excludes mortgage interest, building materials, union subscriptions, motor taxation, house insurance (dwelling), and the non-service elements of motor and house insurance (contents). In addition, the treatment of insurance (home, health and motor) differs between the CPI and the HICP.

#### **Q 5 Which is the better measure of inflation, the CPI or the HICP?**

The CPI with greater coverage is a better measure for national purposes but for intra EU comparisons the HICP, based on harmonised practices, is the more correct measure. The CPI, however, remains the official measure of inflation in Ireland.

#### **Q 6 Who uses the CPI?**

The CPI is an important economic indicator in that it monitors price change in the economy. It also serves as a means of bench marking or setting changes in pay, social welfare, pensions, house insurance and other contracts. It can also be used to update or determine the value of a sum of money from the past e.g. the equivalent value of £2,000 in 1951 to today's level. In effect, the CPI shows the change in the value of money over time.

**Q 7 Is the CPI a cost of living index?**

No. The CPI is a pure price index and measures the change in the level of prices of consumer goods and services. A cost of living index includes items such as income levels, taxation, social welfare payments and substitution between dearer and cheaper goods. This concept would be rather difficult to construct. The change in the level of prices is one of the major determinants of the change in the cost of living and it is only this element that the CPI covers.

**Q 8 Is the index representative of the average consumer?**

Yes. The index is based on the expenditure of private and institutional households in Ireland and foreign tourists on holiday in Ireland based on annual National Accounts data, from the January 2013 index. The representative items in the basket are based on data from the national Household Budget Survey (HBS) which is conducted by the CSO every five years.

**Q 9 Whose buying habits does the index reflect?**

The index covers the average consumer. It doesn't cover the profile of any one individual or household but is based on the average expenditure profile for the country as a whole. As such, it represents young and old, rich and poor, urban and rural.

**Q 10 What happens when my expenditure profile is different?**

Individuals have different tastes and needs; some people have mortgages, some people rent, while others own their houses outright. While an individual may have a different expenditure profile, and therefore his/her actual experience of inflation may be different to the average, an economy is not organised on the basis of millions of individual inflation rates. This is why an average rate representing the average consumer is produced - an average rate to represent the country as a whole.

**Q 11 What is the Household Budget Survey?**

The Household Budget Survey (HBS) is carried out every 5 years by the CSO to measure the income and expenditure of households. A detailed record of household expenditure is recorded by members of the household over a period of time. The data from the HBS is used as the basis for the weighting of items in the CPI basket.

**Q 12 What is included in the basket of Goods and Services?**

The basket currently covers a range of consumer goods and services. A total of 634 items are included in the basket and these items are representative of goods and services typically purchased by the average consumer. The basket is split on the basis of 58% covering Services with the remaining 42% covering Goods.

**Q 13 What items of household expenditure are excluded from the index?**

Investments such as life assurance, pensions, and capital payments on house purchase (mortgage), charity contributions, lottery and betting payments and items which do not command a price are excluded from the scope of the index.

**Q 14 Are the items in the basket reflective of modern consumer tastes and patterns?**

Yes. Every five years the basket is reviewed and new products and services are introduced while older less popular items are deleted from the basket. In December 2011, new items added to the basket included Building energy rating (BER) assessment fees, bundled telephone and internet services, computer repairs, etc.

**Q 15 What does the term weight mean?**

The weight is the proportion of total expenditure spent on a certain item or category in the overall basket of consumer goods and services. For example, the percentage of total expenditure on Food & Non Alcoholic Beverages is 11.2%. In simple terms, it means the average expenditure on Food & Non Alcoholic Beverages was under 12%. The weight presents the relative importance of an item or category in the overall basket.

**Q 16 Does the index cover the entire country?**

Yes, every county is covered by the index. The survey is based on a sample of 84 cities and towns throughout the country, including the Dublin Metropolitan Area, the four regional cities of Cork, Galway, Limerick and Waterford and a sample of larger towns, medium sized towns and small towns.

**Q 17 Does the index take account of the importance of Dublin in terms of population?**

Yes. The index is based on calculating for each item a weighted National Average Price (NAP). Prices are sorted into five predefined areas (by reference to Nomenclature of Territorial Units for Statistics 3 (NUTS 3) regions) to which area weights are applied to give a weighted price. The eight NUTS 3 regions have been combined into five areas for CPI administrative purposes. As the greater proportion of the urban population live in Dublin, this area is given a larger weight to reflect its importance in terms of size of population, higher average incomes and larger commuter population.

**Q 18 Are there separate indices for different regions of the country or for different household types?**

No. There is only one index covering the average household across the entire country.

**Q 19 How does the CSO select pricing locations and individual retail and service outlets?**

All large towns, and smaller samples of other towns, are selected on the basis of population. Care is taken to ensure that every county is covered and the towns selected are not over-concentrated in one part of a county to the detriment of other parts. Price collectors are appointed in locations and they, using local knowledge, select a range of retail and service outlets to price. Within the cities, where there are multiple locations, areas are pre-selected by reference to population. In addition, certain price collectors concentrate on designated outlets such as the major department stores, or major shopping centres such as Liffey Valley, Blanchardstown, or the Dundrum Shopping Centre.

**Q 20 How does the index cover the profile of the retail and service sector?**

On a monthly basis, approximately 80 price collectors collect prices from approximately 3,500 retail outlets throughout the country. Price collectors try to select retail outlets which are representative of a particular area and cover a mixture of large and smaller retail outlets - a mixture of supermarkets, small specialist shops and other retail outlets. In the case of services, a sample of respondents are selected throughout the country as representative of all service providers and canvassed via Special Inquiries. In a certain number of cases, such as passenger transport by road, combined passenger transport, water supply charges and sewage collection charges, national pricing exists, and prices are collected from central sources.

**Q 21 What are Special Inquiries?**

Special Inquiries is the term given to the CPI postal, e-mail and telephone inquiries, along with internet price collection. Of the 634 items in the basket, 506 items are collected by price collectors in direct pricing operations while 128 are collected under the heading Special Inquiries. These cover a wide range of items such as rents, mortgage interest repayments, prescribed drugs, insurance and most professional services.

**Q 22 Is every item priced on a monthly basis?**

In the direct pricing operations, every item is priced on a monthly basis. In the case of Special Inquiries for certain items, such as school fees and electricity, prices change less frequently. Some items are collected quarterly and others just once a year. However, where an item is not due to be priced for a number of months but a price change occurs in advance of the relevant pricing period, the period of price collection is brought forward to capture the change at the point of introduction.

**Q 23 What is the reference period for the CPI?**

The base reference period for the current CPI series is December 2011 = 100. Former bases relate to December 2006, December 2001, November 1996, November 1989, November 1982, November 1975, November 1968, August 1953, August 1947 and July 1914.

**Q 24 What is the reference day for pricing?**

The reference day for pricing was the second Tuesday of each month up to 2010. Since February 2010, prices are collected over a period of more than one working week, i.e. Monday prior to the second Tuesday of the month up to and including the third Tuesday of the month. This is necessary to meet the requirements of Council Regulation (EC) No. 701/2006 regarding the temporal coverage of price collection in the HICP.

**Q 25 What is a rebase?**

A rebase is the process where the CPI is updated to reflect (a) changes to the basket of Goods and Services, (b) the introduction of updated item weights based on the latest HBS and CPI sub-index weights based on annual National Accounts data (from the January 2013 index), and (c) the introduction of a new base reference period (currently December 2011=100). As and from November 1996, this rebase occurs every 5 years with the next full rebase due in January 2017 (December 2016=100).

**Q 26 How are different series linked together?**

Series with different base periods are linked or chained together at the base reference month. For example, Series 1 (base: December 2006=100) links at December 2011 to Series 2 (base: December 2011=100). This produces a continuous series over two periods to December 2006=100 base. This process can be repeated a number of times and the resultant index can be rescaled or referenced to any date within that period.

**Q 27 What is a Laspeyres Index?**

A modified version of the Laspeyres Index is used to calculate the CPI. It does this by comparing the current price of a fixed quantity of goods and services with the price of the same fixed quantity in the base period. Each month the expenditure of the previous month is price updated to give the updated value or cost of the fixed basket. This is then compared to the base reference period to generate index numbers.

**Q 28 How is the Index calculated?**

The process is based on a matched basket approach. Prices this month are matched against the previous month to generate a matched current price against a matched previous price. If a price is missing this month but was present in the previous month it must be deleted from the previous month's calculation to ensure the correct match. A matched weighted National Average Price (NAP) for the current month is compared to an adjusted weighted NAP for the previous month to generate a price relative. This relative is applied to the previous month's expenditure to give the current month's updated expenditure value. This forms the basis for the index.

**Q 29 What are the main outputs?**

Up to and including July 2013, two statistical releases were produced on a monthly basis. The main release included the overall CPI, HICP and the 12 main COICOP (Classification of Individual Consumption by Purpose) divisions. A more detailed breakdown of the 12 main COICOP divisions was provided in the Detailed Sub-Indices release. From August 2013 onwards, the two separate releases were incorporated into one electronic release. The electronic release allows users to directly access the CPI and HICP data on the CSO statistical database (Statbank) and HICP data on Eurostat's statistical database.

**Q 30 How does the index deal with changes in indirect taxes?**

Changes in indirect taxes (e.g. VAT, excise duty) are reflected in retail prices and are therefore captured in the CPI.

**Q 31 What does it mean to say "falling out of the index"?**

A price increase, once introduced, stays in the annual rate of inflation for a 12-month period. If that price increase is not followed by a corresponding price increase or replicated a year later, the increase introduced a year ago no longer has an effect on the annual rate of inflation (e.g. an increase in VAT or a price increase for medical insurance). This is a formula effect where the increase 'falls out' of the index calculation - the increase no longer has an effect on the rate of inflation.

**Q 32 Are House Prices included in the Index?**

Yes, and no. House prices are not taken into account directly in the index, but are used to estimate the changing size of the average mortgage. Each month the average mortgage changes in size reflecting the monthly change in house prices. For example, increasing house prices are reflected in the index in the form of higher average mortgage interest repayments. The capital cost of purchasing a house is excluded.

**Q 33 How is Mortgage Interest calculated?**

The CSO uses a basket of 240 mortgages, reflecting mortgages of different durations and sizes, from the latest mortgage taken out in the past month to one 20 years old. Each month the oldest mortgage is dropped off and the newest mortgage is added to the basket - reflecting the change in house prices. A weighted average interest rate (tracker/variable/fixed), weighted by reference to the market share of each lending institution, is applied to the average mortgage size to estimate the value of mortgage interest repayments for the country.

**Q 34 How does the index deal with quality changes?**

Sometimes improvements to the quality of an item are matched by a price increase. Some element of this increase can be assigned to the improvement in quality and the remainder as a real price increase. This is really an issue for areas of major technological advancement such as motor cars. For most items, we use an implicit method of quality adjustment using the matched basket approach. If an item has changed radically, it is deemed to be non-comparable to the replaced item and excluded from the calculations in the month in question. In this way, the item excluded is assumed to have moved by the same level as other items that remain in that stratum. The difference between this implied price and the price of the new item is deemed to be a measure of the improved quality.

**Q 35 What is the difference between a percentage and a contribution?**

The percentage change measures the change in the price level over a period. The contribution measures the effect or the contribution of individual items or headings to the overall change in the month, quarter or year.

**Q 36 How does the CPI deal with discounts?**

Discounts are included in the CPI if the offer is non-restrictive i.e. open to the general public with no special conditions and if it does not involve extra expenditure. For example, a special offer of '1/3 extra volume free' would be treated as a price reduction of a third with the return in a subsequent period to its normal size treated as a price increase. But, an offer such as 'buy two and get the third free' is excluded because it involves additional expenditure.

**Q 37 Are Sales included in the CPI?**

Yes. The CPI covers all sales with the traditional sale periods being January and July. Following sales, the CPI shows recoveries from sale prices. Items that are marked down a second time are treated as clearance items and are excluded from the CPI.

**Q 38 What is meant by a zero to positive price?**

A zero to positive price is where an item that was previously free of charge commands a price. An example of this was the introduction of the plastic bag levy. It also covers items such as the drug refund scheme where thresholds rise and these higher thresholds result in increased contributions by households and are treated as price increases. As the item did not command a price, no price comparison is possible. The CSO estimates the additional expenditure by the household, and generates the corresponding price change as the increase in expenditure.

**Q 39 How many prices are collected on a monthly basis?**

Each month, over 50,000 prices are collected in the direct pricing operations and another 3,000 price quotations are collected via Special Inquiries. This represents a higher proportion than most other countries in terms of population.

**Q 40 How does the CSO ensure the quality of the data collected?**

Price collectors are trained on appointment and are called to Price Collector Discussion Group meetings to discuss issues relating to pricing and selection of items and brands as necessary. When pricing, price collectors record descriptions as well as prices, and price the same item month after month on hand-held devices. They use a series of codes to show sales, recoveries from sales, verification of prices, comparable items and non-comparable items. When prices are returned to the CSO, CPI HQ staff scrutinise the prices on an administration system, and query prices where necessary. Edits showing large price changes are generated and these are examined in detail. Area Average Prices and trends are compared. Final results are checked for accuracy.

**Q 41 How does Ireland fit into European Price Indices?**

Ireland is one of the 19 countries making up the Euro Area HICP, and one of the 28 making up the EU average. The indices of the 19/28 countries are weighted by reference to country weights. Ireland represents just over 1% of the EU total weight. Despite our small size, we are an active participant in HICP Working Groups and Task Forces where discussions on further harmonisation of the HICP are ongoing.

**Q 42 What is the Classification system used?**

The CPI and the HICP use the Classification of Individual Consumption by Purpose (COICOP) which classifies household expenditure into 12 main headings at 2-digit level with further disaggregations at 3 and 4 digit levels. For national purposes, the CSO has disaggregated, in certain cases, the lowest COICOP breakdown into a 5th digit.

**Q 43 How important is the monthly change?**

The monthly change measures the change in prices since the previous month. Each month, we tend to focus on the annual rate of inflation. When looking at the latest month, you should also look at what happened in the same month of the previous year. If the monthly increase this month is higher than for the same period last year, then the annual rate of inflation will rise. In effect, the annual rate of inflation for each month is a more meaningful statistic.

**Q 44 How can I get CPI information?**

In addition to the statistical release which is available in electronic format on the CSO website, requests can be made by phone, in writing, through our main Information Service or through our dedicated e-mail account ([cpi@cso.ie](mailto:cpi@cso.ie)). Detailed subindices are also available on the CSO website.

**Q 45 What are the CPI excluding Indices?**

The CSO produces a number of CPI subindices: (a) CPI excluding Tobacco, (b) CPI excluding Housing, (c) CPI excluding Mortgage Interest, (d) CPI excluding Mortgage Interest and Local Property Tax, (e) CPI excluding Energy Products and (f) CPI excluding Energy and Unprocessed Food. These are calculated by excluding the expenditure of the excluded item from the calculations and the relative weights of all other items in the basket adjust upwards.

**Q 46 Is every possible service or item covered under each heading?**

No. As one can appreciate, there are thousands of items or product lines available for purchase by the consumer. Representative items under each heading are selected. For example, under professional and legal services the following sample of items are included for pricing: (a) engineers'/surveyors' fees; (b) estate agents' fees; and (c) solicitors' fees. While the list is by no means exhaustive, the items chosen are representative of all the items or services which can be classified under each category, and the assumption is made that the price movements of the items priced will move in the same direction or level as other items in that stratum.

**Q 47 How can I get information about Inflation in other countries?**

Each national statistical institute (NSI) publishes data on their website. Useful links to European and international statistical agencies can be found on the CSO website.



**Q 48 How does the CPI measure prices in areas where the State is the main social provider?**

In the case of health and education, the vast majority of services are provided by the State. The CPI only covers those items where there is a public charge, or where the service is provided on a private basis such as private schools and private beds in public hospitals.

**Q 49 Does the CSO produce National Average Prices for every item?**

No. For certain items such as the price of a pint of stout or 20 cigarettes, a National Average Price (NAP) is calculated and published. This can only be published where the unit of measure is common or standard. In most other cases, the CSO identifies the item to be priced, for example coffee, and the price collector is free to select both the brand and the size so long as they price the same brand and size each month. In this way, we ensure we get many different brands and sizes rather than restricting the price collector to select a fixed item.

**Q 50 What happens until the next rebase?**

The CPI and HICP sub-index weights will be updated each January using annual National Accounts data. The item weights will be recalculated on a pro rata basis using proportions from the December 2011=100 rebase. The CSO will continue to improve further the quality and accuracy of the index. We will continue to review the Special Inquiries and keep the samples and weighting structures up to date. Any developments occurring in the HICP will be incorporated into the CPI.

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