

Guide to the Guernsey Retail Prices Indices

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POLICY COUNCIL
THE STATES OF GUERNSEY



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The image on this booklet's cover is courtesy of VisitGuernsey.

1.1. Introduction to the Retail Price Indices

This guide provides a basic introduction to the Retail Price Indices published in Guernsey. The publication contains an overview of what price indices represent, how they are calculated and how they are used.

The Policy Council, Policy and Research Unit (P&RU) publishes two Retail Price Indices in its quarterly Inflation Bulletins (available from www.gov.gg/rpi); RPIX (the States' preferred measure of inflation since 2009) and RPI (also referred to as the 'all items' RPI). It also publishes an RPIY figure in the annual States Strategic Monitoring Report (see www.gov.gg/kpi). See [Section 2.1](#) for more information on the differences between the indices.

The indices are used to monitor changes (or inflation) in the prices of goods and services purchased by 'typical' Guernsey households. Each index represents the cost of a set list of goods and services (or 'items'), known collectively as a 'shopping basket'. By comparing either index value on any two dates, it is possible to measure the change in the general price level.

1.1. Introduction to the Retail Price Indices (cont.)

The calculation method has been audited by the UK Office of National Statistics (ONS) and the P&RU maintain regular contact with the ONS to ensure the methodology is kept up to date. The compilation, calculation and publication of the indices is overseen by the RPI Steering Group, which is comprised of six independent members, to ensure impartiality.

2.1 RPI, RPIX and RPIY

The shopping baskets used to measure the RPI, RPIX and RPIY are very similar. However, there are some items included in the RPI (also known as the "all items" index) basket that are not included in the RPIX and RPIY baskets. A summary of the items included in the RPI basket of goods and services is included on [Page 4](#).

In 2009, the States of Guernsey adopted the RPIX (sometimes referred to as 'core inflation') as their preferred measure of inflation. The RPIX measures the same basket of goods and services as the RPI, except for the mortgage interest item, which is excluded from RPIX.

The mortgage interest item is directly affected by changes made by The Bank of England (BoE) to the base rate. The BoE use the base rate as a tool for controlling retail price inflation in the UK. The mortgage interest item has a comparatively high weight in the Guernsey RPI. As a result, any changes in the price of this item can disguise movements in prices of other core groups. The RPIX excludes the mortgage interest item entirely, so is generally considered a more suitable measure for monitoring underlying economic conditions.

The RPIY excludes indirect taxes (i.e. property taxes and the excise duties levied on fuel, cigarettes and alcohol in Guernsey and, in other jurisdictions, also the VAT or GST charged on goods or services) as well as the mortgage interest item. This measure removes the elements of inflation that can be directly influenced by government and is used in the annual States Strategic Monitoring Report to monitor private sector competitiveness (since greater competition tends to lead to lower price increases).

3.1 Uses

The principal use of the RPI, the RPIX and the RPIY is to measure price inflation over time. They are macroeconomic indicators (measuring the whole economy) and provide an important indication of the health of the economy.

The inflation indices do not measure the 'cost of living', which would vary between households depending on their spending patterns. However, they do indicate how average household costs change over time.

As a result, the indices are often used as guides for calculating annual increases in salaries, benefits, pensions and rents.

Some payment agreements are 'index linked'. This means the contract or agreement (e.g. for rent or maintenance) states that the amount payable should change in line with the specified measure of inflation.

The 'inflation calculator' on www.gov.gg/RPIcalculator can be used to easily calculate changes in prices between any two dates. See [page 10](#) for more information on using the inflation calculator and performing other calculations using inflation figures.

4.1 Calculation - price collection

The calculation of the indices is based on changes in the costs of items within the shopping basket from one quarter to the next. The shopping basket includes a wide range of items, which are representative of goods and services purchased by a typical household.

At the end of each quarter (ie 31st March, 30th June, 30th September and 31st December), the prices of the items in the basket (over 1,700 in total) are collected from over 400 local suppliers and service providers. Guernsey has no legislation requiring compulsory provision of price data, and as such the consistency and accuracy of the data is reliant on the co-operation of local suppliers.

4.1 Calculation - price collection (continued)

The items can be grouped into 14 categories, shown in [Table 4.1.1](#). Direct taxes (those which are typically deducted directly from your wage) are excluded. Items such as capital payments on mortgage or major home improvements, which are considered to be capital investment, are also not included. Mortgage interest payments are included in the RPI, but not the RPIX or the RPIY. Indirect taxes, such as excise duty and property taxes, are included in the RPI but not the RPIY.

Table 4.1.1: RPI groups

Group	Items included
Food	Food and non-alcoholic drink bought for home consumption.
Catering	Food purchased in restaurants, at work, from takeaways, etc.
Alcohol	Wine, beer, spirits and other alcoholic drinks.
Tobacco	Cigarettes, cigars and other tobacco products.
Housing	Interest paid on mortgages (for RPI only), rents, parish rates and routine household maintenance and servicing costs.
Fuel and light	Goods and services for the provision of light, heat and power in the home e.g. gas, oil and electricity.
Household goods	Non-food items for the household including furniture, domestic appliances and cleaning materials.
Household services	Services enlisted for the household such as contents insurance, postal, telecoms and cleaning services.
Clothing and footwear	Adults' and children's clothing and footwear.
Personal goods and services	Goods and services for personal use such as jewellery, cosmetics and toiletries plus medical expenses.
Motoring expenditure	Vehicle purchase, running and maintenance costs, including motor fuel.
Fares and other travel costs	Air and sea passenger fares and other travel related costs.
Leisure goods	Goods for sports, hobbies and entertainment including electronic goods, sporting and gardening equipment.
Leisure services	Services purchased for leisure activities including foreign holidays, cinema tickets and sporting activities.

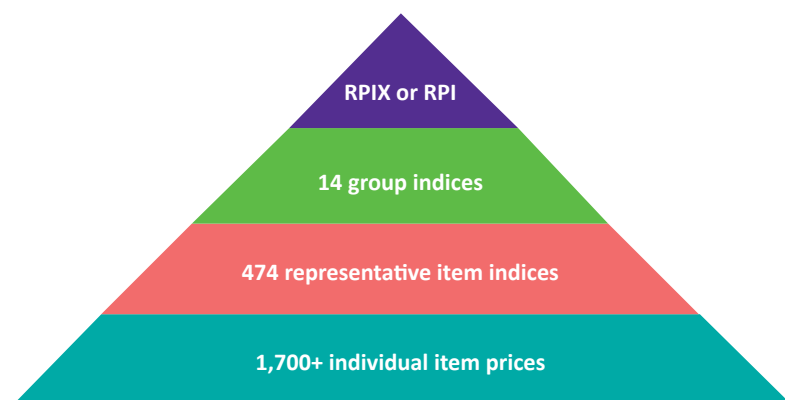
Please note that the fourteen groups were aligned with the international standard framework in December of 2014. More detail on the differences between the pre and post December 2014 groups is included in [section 9.1](#).

4.2 Calculation - aggregation

Each item price collected is compared with that collected the previous quarter on a 'like for like' basis. To be valid, the comparison must be made between the same item from the same supplier. Special offers and sale prices are included as these represent genuine price decreases, albeit temporary.

Individual item prices are then aggregated (e.g. white bread, brown bread and bread rolls would be aggregated under the representative item heading of "bread") and the average change in price over the quarter is calculated for each representative item.

Figure 4.2.1: Aggregation stages in RPIX and RPI calculation



The change in price is calculated for each of the 474 representative items and used to increase or decrease the value of each representative item index. The representative item indices are then weighted according to the proportion of total household expenditure spent on the goods and services that are represented by that item (hence the name).

The weighted indices are then aggregated up to calculate the average change in price for each group and the overall change in RPI, RPIX and RPIY. The stages of aggregation are shown in [Figure 4.2.1](#) above.

5.1 Weighting

Weighting at the representative item level means that not all items are equally represented. For example, because the average household spends more on bread than on marmalade, bread has a higher weighting than marmalade. As a result a 10% increase in the price of white bread will have a larger impact on the index than a 10% increase in the price of marmalade.

The representative item are weighted differently for the RPI, RPIX and RPIY calculations. The sum of all the representative item (and therefore also the sum of all the group) weights totals 100% in both of the calculations. See [Table 5.1.1](#) for a comparison of the weights of the groups between the RPI and the RPIX.

Table 5.1.1: RPIX and RPI weighting

	RPIX	RPI
Food	12%	11%
Catering	4%	4%
Alcohol	4%	4%
Tobacco	1%	1%
Housing	18%	22%
Fuel and light	5%	5%
Household goods	7%	6%
Household services	11%	10%
Clothing and footwear	3%	3%
Personal goods and services	8%	7%
Motoring expenditure	8%	8%
Fares and other travel costs	5%	5%
Leisure goods	4%	4%
Leisure services	11%	10%

Both the basket of items and the weightings are reviewed periodically by means of a Household Expenditure Survey (HES). The weights were last updated in December 2014. A copy of the latest Guernsey HES Report is available on www.gov.gg/hes.

6.1 Using the index figures

The inflation indices are directly proportional to weighted prices. This means that a 1% increase in weighted prices will result in a 1% increase in the index. As such the index figures can be used to calculate the percentage change in the weighted prices over time. The percentage change in the inflation index between two dates gives the price inflation over that time period.

The headline percentage change figures published by the P&RU in the quarterly inflation bulletin represent the annual change in the RPIX and the RPI, ie the percentage change between the most recent index figure and the index figure a year earlier. RPIY figures tend to be used for different purposes and, as such, are published annually in a different format and are not referred to below.

The percentage change between index figures from any two dates can be calculated as follows:

$$\text{Percentage change} = \frac{(\text{Later date index} - \text{Earlier date index})}{\text{Earlier date index}} \times 100$$

In order to keep the index figures to a manageable size they are “rebased” to a value of 100 after each Household Expenditure Survey (once every five to seven years). Both the RPIX and RPI were rebased in September 2014. However, index figures from previous base years are maintained (see www.gov.gg/rpiindex) for ease of comparison with dates prior to this.

The percentage change in the value of the index over any given time period is the same regardless of the index base year chosen. It is important to ensure that indices with the same base year are being compared when calculating the change in prices.

An inflation calculator is available online at www.gov.gg/RPIcalculator. It can perform calculations of percentage changes in the RPIX and the RPI between any two quarters (from 1999 onwards for RPIX and 1949 onwards for RPI). It can also “reflate” monetary values in line with the inflation in either index. See [section 7.1](#) for more information.

7.1 Inflation calculator

The calculations using index figures in [section 6](#) can be easily performed using the online inflation calculator, which is updated each quarter when the latest inflation figures are published.

The instructions below indicate how to calculate percentage changes and reflated monetary values:

1. Go to www.gov.gg/RPIcalculator.
2. Double click the [Inflation Calculator \[Date\]](#) spreadsheet (an Excel document) on the download list on the right hand side of the web page. Either open, or save and then open the spreadsheet.
3. Once the spreadsheet is open, select the dates required from the drop down menus by clicking in the white **From** and **To** boxes.

The percentage change in RPIX and RPI will be displayed in the boxes on the right hand side.

If required, a monetary amount can be entered into the white box labelled **Original Amount**. The values inflated in line with the changes in RPIX and RPI will be displayed in the lower boxes on the right hand side.

Inflation Calculator POLICY COUNCIL THE STATES OF GUERNSEY

This spreadsheet will calculate cumulative inflation between any two quarters up to and including 30th September 2014

Click on the white boxes below to choose your selected dates from the dropdowns:

From	To
30th September 2013	30th September 2014

And then enter the amount of money you wish to inflate (if known) in the white box below here:

Original amount
£1.00

RPIX (excluding mortgage interest)	RPI (all items)
Inflation in %	Inflation in %
1.8	2.5
Available from 1999	
Inflated value	Inflated value
£1.02	£1.02

NB - these values may vary slightly from figures calculated using unrounded index figures.

8.1 Reflation factors

The effect of inflation is to erode the purchasing power of currency over time. For example in 1965 you could purchase more goods and services with £100 than you can today.

Reflation factors can be used to calculate how much an earlier value is worth at current prices to enable a like for like (or “real”) price comparison.

Reflation factors can be calculated as follows:

$$\text{Reflation factor} = \frac{(\text{Later date index} - \text{Earlier date index}) + 1}{\text{Earlier date index}}$$

The earlier monetary value can then be multiplied by the reflation factor to obtain its equivalent value at current prices.

Reflation factors are published by the P&RU in the annual Facts and Figures Booklet (available via www.gov.gg/ff).

The online inflation calculator (found at www.gov.gg/RPIcalculator) can also perform this function and reflate a monetary sum to its equivalent value at a later date. See [section 7.1](#) for further information.

9.1 New Groups introduced in December 2014

2008 Group	2014 Group	Comparison
Food	Food	No change.
Alcoholic drink	Alcohol	No change in contents, but renamed.
Tobacco	Tobacco	No change.
Housing	Housing	This category now includes repairs to appliances (previously in Household goods) and mortgage endowment payments (previously in Household services). Now removed from the Housing category are DIY materials (now in Household goods) and garden tools (now in Leisure goods).
Fuel, light and power	Fuel and light	No change in contents, but renamed.
Household goods	Household goods	This category now includes garden furniture and mobile and landline purchases (both previously in Leisure goods), DIY materials (previously in Housing) and furniture hire (previously in Household services).
Household services	Household services	This category now includes function catering, domiciliary care, driving lessons and licenses, education/school fees (all previously in Leisure services). Now removed from the Household services category are mortgage endowment payments (now in Housing), residential home fees and personal injury insurance (both now in Personal goods).
Clothing and footwear	Clothing and footwear	No change.
Personal goods	Personal goods and services	This category now includes residential home fees and personal injury insurance (both previously in Household services).
Motoring expenditure	Motoring expenditure	No change.
Fares and other travel	Fares and other travel costs	No change in contents, but renamed.
Leisure goods	Leisure goods	This category now includes garden tools (previously in Housing). Now removed from Leisure goods are garden furniture and mobile and landline purchases (both now in Household goods).
Leisure services	Leisure services	Now removed from this category are function catering, domiciliary care, driving lessons and licenses, education/school fees (now in Household services).
Food away from home	Catering	No change in contents, but renamed.

8.1 Contact details and further information

RPI figures are published approximately three weeks after the end of each quarter. Handouts are circulated via email and are published on the web site www.gov.gg/rpi. Figures are also available the inflation information line.

A full list of provisional publication date for all of the statistical bulletins produced by the P&RU is available at www.gov.gg/pru. For further information or to be added to our email circulation list please contact the P&RU.

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