

Guide to the Guernsey Retail Prices Indices

2010



POLICY COUNCIL
THE STATES OF GUERNSEY



Introduction

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.

If you would like further information about the indices please contact the Policy and Research Unit (P&RU). Contact details are provided at the end of this booklet.

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The image on this booklet's cover is a photograph of the North Plantation, St Peter Port, Guernsey taken by Liz Walton.

1.1. Retail Price Indices

The P&RU publish two Retail Price Indices; RPIX (the States' preferred measure of inflation since 2009) and RPI (also referred to as the 'all items' RPI). See [Section 2.1](#) below for more information on the differences between the two 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. The indices are published quarterly.

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 RPIX vs RPI

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. This item 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.

3.1 Uses

The principal use of both the RPIX and the RPI 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 RPIX and the RPI 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/pru 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 RPIX and RPI 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 2,700 in total) are collected from over 300 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](#). Items such as capital payments on mortgage or major home improvements, which are considered to be capital investment are not included. Direct taxes (those which are typically deducted directly from your wage) are also excluded. Indirect taxes, such as excise duty and property taxes are included.

Table 4.1.1: RPIX and RPI groups

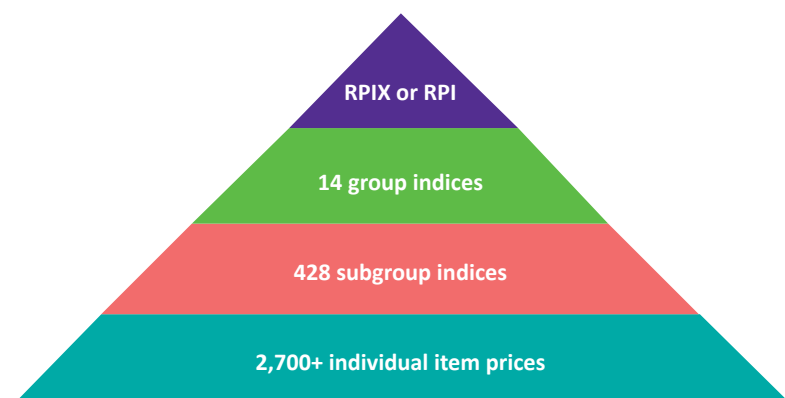
Group	Items included
Food	Food and non-alcoholic drink bought for home consumption.
Alcohol	Wine, beer, spirits and other alcoholic drinks.
Tobacco	Cigarettes, cigars and other tobacco products.
Housing	Rents, parish rates and routine household maintenance and servicing costs. In the RPI this group includes interest paid on mortgages.
Fuel, light and power	Goods and services for the provision of light, heat and power in the home eg gas, oil and electricity.
Household goods	Non-food items purchased for the household including furniture, domestic appliances, stationary and cleaning materials.
Household services	Services enlisted for the household such as contents insurance, postal, telecoms and cleaning services.
Clothing and footwear	Adult's and children's clothing and footwear.
Personal goods	Goods and services purchased for personal use such as jewellery, cosmetics and toiletries plus medical expenses.
Motoring	Vehicle purchase, running and maintenance costs.
Fares and other travel	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.
Food away from home	Food purchased in restaurants, at work, from takeaways etc.

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 by subgroup (eg white bread, brown bread and bread rolls would be aggregated into a subgroup for bread) and the average change in price over the quarter is calculated for each subgroup.

Figure 4.2.1: Aggregation stages in RPIX and RPI calculation



The change in price is calculated for each of the 428 subgroups and used to increase or decrease the value of each subgroup index. The subgroup indices are then weighted according to the proportion of total household expenditure spent on the items in that subgroup.

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

5.1 Weighting

Weighting the item subgroups means that not all items are equally represented. For example, because the average household spends more on white bread than on marmalade, white 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 subgroups are weighted differently for the RPI and RPIX calculations, since the mortgage interest item has a significant weight in the RPI, but a weight of zero in the RPIX. The sum of all the subgroup (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.

Table 5.1.1: RPIX and RPI weighting

	RPIX	RPI
Food	12.4	10.7
Alcoholic drink	4.8	4.2
Tobacco	1.9	1.6
Housing	14.7	26.4
Fuel, light and power	4.5	3.9
Household goods	6.4	5.5
Household services	8.9	7.7
Clothing & footwear	4.7	4.1
Personal goods	6.4	5.5
Motoring	9.9	8.6
Fares/other travel	2.6	2.2
Leisure goods	7.6	6.6
Leisure services	10.1	8.8
Food away from home	5.1	4.4

Both the basket of items and the weighting of the subgroups are reviewed periodically by means of a Household Expenditure Survey (HES). A copy of the latest Guernsey HES Report is available on www.gov.gg/pru.

6.1 Index figures - rebasing

The RPIX and the RPI 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. More information on calculating percentage changes is given in [Section 6.2](#).

The index figures start at a “base” of 100 and typically increase over time. For example, the RPI based in 1965 (ie in the year 1965, the index was set at 100) increased to 1828.9 in September 2010.

In order to keep the index figures to a manageable size they are periodically “rebased” to a value of 100. Both the RPIX and RPI were rebased in 2008. However, index figures from previous base years are maintained for ease of comparison with prices prior to 2008.

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.

RPIX and RPI index figures for all base years are published each quarter in the inflation bulletin, available via www.gov.gg/rpi.

6.2 Index figures - percentage changes

The percentage change in the RPIX or the RPI 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.

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

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

It is important to ensure that both the index figures used in the calculation are from the same base year and the same inflation measure (either RPIX or RPI) in order to get the correct answer.

An inflation calculator is available online at www.gov.gg/rpi. It can perform calculations of percentage changes in the RPIX and the RPI between any two quarters (from 1999 onwards for RPIX and 1965 onwards for RPI). It can also “reflate” monetary values in line with the inflation in either index. See overleaf for more information on reflation factors.

6.3 Index figures - 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:

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

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/pru).

The online inflation calculator (found at www.gov.gg/rpi) can also perform this function and reflate a monetary sum to its equivalent value at a later date.

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/rpi.
2. Click on [Inflation Calculator](#) on the menu on the left hand side of the web page.
3. 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.
4. 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

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

From	To
30th September 2009	30th September 2010

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

Original amount
£100.00

RPIX (excluding mortgage interest)	RPI (all items)
Inflation in % 2.3	Inflation in % 1.6
Available from 1999	
Inflated value £102.35	Inflated value £101.61

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

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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