

23 January 2023 | 1100 hrs | 010/2023

Retail Price Index (RPI): December 2022

1. Main points

- In December 2022, the annual rate of inflation as measured by the RPI was 7.35 per cent, up from the 7.12 per cent in November 2022 (Table 2).
- The 12-month moving average rate for December stood at 6.15 per cent (Table 2).
- The largest upward impact on annual inflation was measured in the Food Index (+2.73 percentage points) (Chart 3).

Chart 1. Inflation rates



2. Overview

The RPI measures monthly price changes in the cost of purchasing a representative basket of consumer goods and services. A closely related measure of price movements is the Harmonised Index of Consumer Prices (HICP). A description of differences between the HICP and the RPI can be found in Section 5.2 of this news release.

Each monthly RPI news release includes three different measures of inflation:

- The annual inflation rate measures average price changes between the reference month and the same month of the previous year. Although responsive to recent changes in price levels, this measure can be influenced by one-off effects in either month.
- The monthly inflation rate compares price changes between the reference month and the previous month. This measure can be highly influenced by seasonal effects.
- The 12-month moving average rate overcomes the volatility of the above two rates by comparing the average of the latest 12 indices to the average of the previous 12 indices. This measure is less sensitive to temporary changes in prices.

3. Price changes and effects on inflation

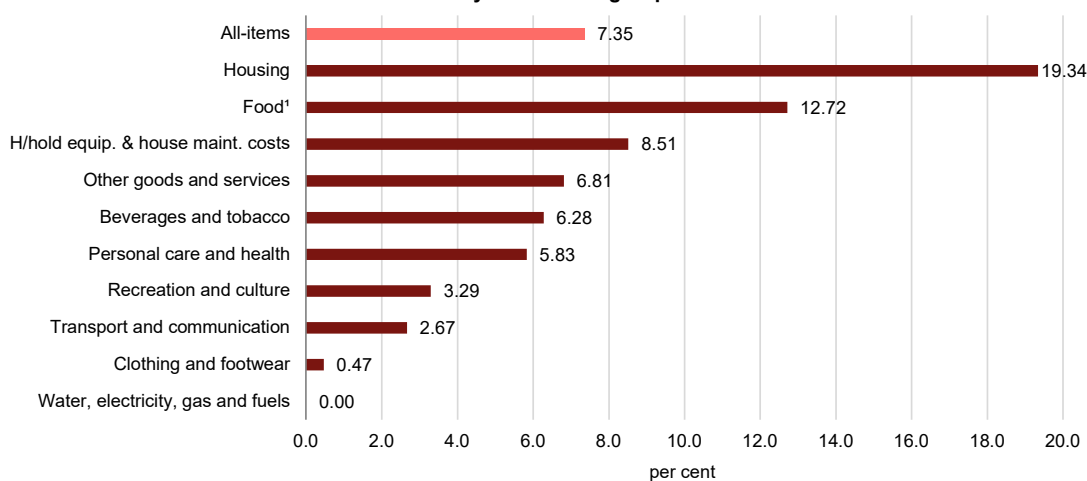
The highest annual inflation rates in December 2022 were registered in Housing (19.34 per cent) and Food (12.72 per cent). On the other hand, the lowest annual inflation rates were registered in Water, electricity, gas and fuels (0.00 per cent) and Clothing and footwear (0.47 per cent) (Table 1).

Table 1. RPI indices by period and group
December 2016=100

Group	Weight (%)	Indices			Annual rate (%)	Monthly rate (%)
		Dec 2021	Nov 2022	Dec 2022	Dec 2022	Dec 2022
Food ¹	21.49	114.38	128.12	128.93	12.72	0.63
Beverages and tobacco	5.56	107.64	114.23	114.40	6.28	0.15
Clothing and footwear	6.62	94.91	95.21	95.35	0.47	0.16
Housing	7.90	108.88	128.96	129.94	19.34	0.76
Water, electricity, gas and fuels	3.31	100.29	100.29	100.29	0.00	0.00
Household equipment and house maintenance costs	6.97	103.60	111.54	112.42	8.51	0.79
Transport and communication	22.10	103.20	105.22	105.95	2.67	0.70
Personal care and health	8.81	107.63	113.33	113.91	5.83	0.50
Recreation and culture	9.90	107.83	110.11	111.39	3.29	1.16
Other goods and services	7.34	107.20	113.54	114.50	6.81	0.85
All-items	100.00	106.82	113.94	114.68	7.35	0.65

¹ Including restaurant services and take-aways.

Chart 2. Annual inflation rates by the 10 main groups: December 2022



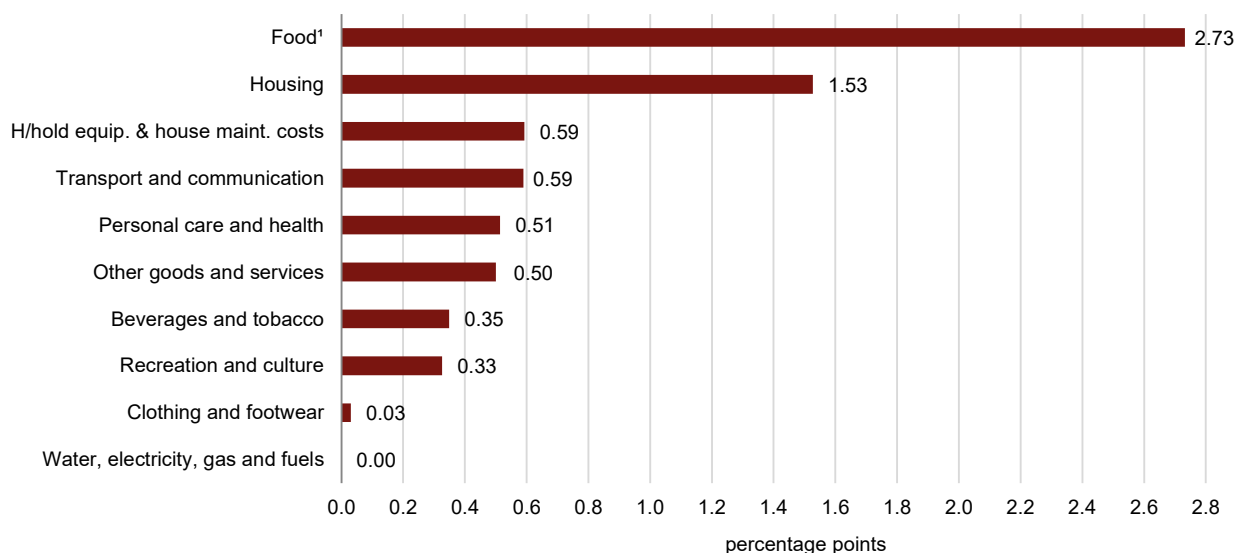
¹ Including restaurant services and take-aways

Chart 3 depicts the impact on the annual inflation rate by the 10 main groups. An impact is a measure showing the change in inflation as a result of the inclusion of an index. Such an impact takes into account both the weight and the annual rate of inflation by group.

In December 2022, the largest upward impact on annual inflation was registered in the Food Index (+2.73 percentage points), largely due to higher prices of take-aways. The second and third largest impacts were measured in the Housing Index (+1.53 percentage points) and the Household equipment and house maintenance costs Index (+0.59 percentage points), mainly on account of higher prices of house maintenance services and furniture, respectively (Chart 3).

On the other hand, no downward impacts on annual inflation were registered for the month of December (Chart 3).

Chart 3. Contribution to the annual inflation rate by the 10 main groups: December 2022



¹ Including restaurant services and take-aways.

Note: A percentage point is the arithmetic difference between two percentages.

Table 2. Inflation rates by year and month

Month	2020		2021		2022	
	Annual rate (%)	12-month moving average rate (%)	Annual rate (%)	12-month moving average rate (%)	Annual rate (%)	12-month moving average rate (%)
January	1.34	1.63	0.33	0.56	3.88	1.79
February	1.03	1.55	0.19	0.49	4.22	2.13
March	1.11	1.49	0.40	0.43	4.43	2.46
April	0.83	1.40	0.87	0.43	5.67	2.86
May	0.66	1.30	1.27	0.48	6.02	3.26
June	0.72	1.20	1.47	0.55	6.21	3.66
July	0.62	1.11	1.81	0.64	6.82	4.08
August	0.42	1.00	2.08	0.78	6.98	4.49
September	0.18	0.90	2.25	0.96	7.52	4.93
October	0.35	0.81	2.31	1.12	7.47	5.36
November	0.27	0.72	2.38	1.30	7.12	5.76
December	0.18	0.64	2.59	1.50	7.35	6.15

4. Aggregates

Table 3. Inflation rates for RPI aggregates by group: December 2022

Group	Aggregates (respective % weight)	Annual rate (%)	Monthly rate (%)
Food (21.49 %)	Food excluding restaurant services and take-aways (15.60 %)	13.82	0.63
	Restaurant services and take-aways (5.89 %)	9.81	0.63
Beverages and tobacco (5.56 %)	Beverages (2.81 %)	7.90	0.16
	Served beverages in restaurants and take-aways (1.16 %)	10.01	0.28
	Tobacco (1.59 %)	0.00	0.00
Clothing and footwear (6.62 %)	Clothing (5.45 %)	0.58	0.03
	Footwear (1.17 %)	-0.03	0.70
Housing (7.90 %)	Rent (1.08 %)	7.62	0.91
	Materials for house maintenance (3.70 %)	20.39	1.43
	Services for house maintenance (3.12 %)	22.15	0.00
Water, electricity, gas and fuels (3.31 %)	Water and electricity (3.06 %)	0.00	0.00
	Gas and fuels (kerosene) (0.25 %)	0.00	0.00
Household equipment and house maintenance costs (6.97 %)	Furniture and furnishings (3.59 %)	8.47	0.60
	Carpets and household textiles (0.76 %)	-0.07	-0.01
	Household appliances and utensils (2.62 %)	10.70	1.26
Transport and communication (22.10 %)	Transport (16.57 %)	2.96	0.95
	Communication (5.53 %)	1.71	-0.09
Personal care and health (8.81 %)	Medical services and medicinals (4.14 %)	3.63	0.29
	Personal care products and services (4.67 %)	7.77	0.68
Recreation and culture (9.90 %)	Sports related equipment (0.54 %)	7.60	0.49
	Educational fees and related expenses (2.04 %)	4.61	0.69
	Other recreational articles and services (7.32 %)	2.59	1.35
Other goods and services (7.34 %)	Jewellery, watches and other articles (1.13 %)	2.55	-1.49
	Non-durable household goods (1.72 %)	11.95	1.09
	Veterinary services (including pet food) and domestic services (1.40 %)	10.42	0.46
	Insurances, financial services and other services (3.09 %)	4.05	1.72

In December, the Housing Index registered the highest annual inflation rate of 19.34 per cent (Table 1), of which Rent registered an annual rate of 7.62 per cent, Materials for house maintenance registered an annual rate of 20.39 per cent and Services for house maintenance registered an annual rate of 22.15 per cent (Table 3).

The Water, electricity, gas and fuels Index registered the lowest annual inflation rate of 0.00 per cent (Table 1), since the prices of all subcomponents remained unchanged (Table 3).

5. Background notes

5.1 Accessing data

HICP and RPI NSO news releases may be accessed from:

https://nso.gov.mt/en/News_Releases/View_by_Unit/Unit_A5/Price_Statistics/Pages/Harmonised-Index-of-Consumer-Prices.aspx and

https://nso.gov.mt/en/News_Releases/View_by_Unit/Unit_A5/Price_Statistics/Pages/Retail-Price-Index.aspx respectively.

Eurostat news releases on HICP may be accessed from:

<https://ec.europa.eu/eurostat/web/hicp/publications>

5.2 Differences between RPI and HICP

Both indices are compiled using a large and representative selection of more than 470 different goods and services, for which price movements are regularly monitored. More than 14,000 separate price quotations are used each month to compile the index.

The methodology underlying RPI and HICP is similar, yet they differ by the following:

- i. The RPI captures private households only, whereas the HICP covers private households, institutional households (such as retirement homes) and foreign visitors to Malta.
- ii. The population base year of each index is different. The RPI is a fixed base index with weights periodically updated in line with the Household Budgetary Survey (HBS). On the other hand, the HICP is a chain-linked index with the weights reviewed on an annual basis. Unlike the RPI, where the sample of goods and services changes every time the weights are updated, newly significant goods and services can be introduced in the HICP framework on an annual basis.
- iii. The coverage of the HICP is based on an international classification system, ECOICOP (European Classification of Individual Consumption by Purpose), whereas the RPI has a different set of codes for each group of items, as explained in the table below.

	ECOICOP division	Weight (out of 1000)	RPI group	Weight (out of 100)
1	Food and non-alcoholic beverages	178.71	Food (including restaurant services and take-aways)	21.49
2	Alcoholic beverages and tobacco	38.85	Beverages and tobacco	5.56
3	Clothing and footwear	42.46	Clothing and footwear	6.62
4	Housing, water, electricity, gas and other fuels	100.09	Housing	7.90
5	Furniture, household equipment and routine household maintenance	87.40	Water, electricity, gas and fuels	3.31
6	Health	48.79	Household equipment and house maintenance costs	6.97
7	Transport	124.02	Transport and communication	22.10
8	Communication	39.81	Personal care and health	8.81
9	Recreation and culture	79.29	Recreation and culture (including education)	9.90
10	Education	26.45	Other goods and services	7.34
11	Restaurants and hotels	149.75		
12	Miscellaneous goods and services	84.38		
	Total	1,000.00	Total	100.00

Apart from the disparities identified above, both the RPI and the HICP:

- have the same geographic coverage, implying that both indices refer to the whole country;
- utilise the same price collection methodologies; and,
- utilise the same retail outlet sample (with some exceptions).

5.3 Explaining divergences between RPI and HICP inflation

The HICP and RPI price indices bear several similarities and often produce similar inflation estimates. However, in some cases, inherent methodological differences between the two indices, particularly differences in the consumption basket and in the weights given to these products, cause the inflation rates reported by these two measures to diverge.

5.4 Further information

Price quotations for the new items introduced in the latest RPI index series started being collected in December 2016.

From January 2017, the RPI started being published with December 2016 as its base. All RPI indices pertaining to the years prior to 2017 were re-based to December 2016=100. This latest index series may be linked to the previous one by using a linking coefficient of 1.1199.

The basket of consumption items considered for the RPI is reviewed periodically, in line with the HBS, during which, information about household consumption is collected over a 12-month period, in order to obtain an estimate of the average household expenditure. New products are included in the basket of items when achieving a sales volume of over one part per thousand of total consumer expenditure covered by the RPI. The information collected through the HBS exercise is then further supplemented by additional data sources to obtain the final RPI weights.

The HICP is published with 2015 as its base year. The previous series with reference 2005=100 has been discontinued. Commission Regulation (EU) No 2015/2010 provides the legal basis for updating the HICP reference year from 2005=100 to 2015=100. It should be noted that the re-basing operation was conducted after rounding all past indices to one decimal place. Therefore, there might be slight differences when comparing this series with past data due to rounding.

The HICP largely follows National Accounts (NA) concepts of what constitutes household consumption in determining the index scope, and mainly uses NA data to weight the items in the basket.

The HICP weighting scheme is annually updated in accordance with Commission Regulation (EU) No 1114/2010. The treatment of seasonal items is in accordance with Commission Regulation (EC) No 330/2009.

Figures in Table 3 may not add up mainly due to additivity and the change in weights and basket of items in January 2017.

Users are advised to consult the NSO before comparing the results of the RPI and the HICP.

More information on the metadata behind HICP and RPI news releases may be accessed from:

Sources and methods:

https://nso.gov.mt/en/nso/Sources_and_Methods/Unit_A5/Price_Statistics/Pages/Retail-Price-Index.aspx

Statistical concepts: <https://metadata.nso.gov.mt/concepts.aspx>

Metadata (RPI): <https://metadata.nso.gov.mt/ConceptDetails.aspx?id=1779>

ECOICOP division classification:

https://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL&StrNom=HICP_2019&StrLanguageCode=EN&IntPcKey=&StrLayoutCode=HIERARCHIC

RPI and HICP manual:

https://nso.gov.mt/en/nso/Sources_and_Methods/Unit_A5/Price_Statistics/Documents/RPI_and_HICP_Manual.pdf

NSO statistical database: <https://statdb.nso.gov.mt/start>

ECB digital publication on inflation:

<https://www.euro-area-statistics.org/digital-publication/statistics-insights-inflation/?lang=en>

References to this news release are to be cited appropriately.

5.5 Publication policy

A calendar for future news releases may be accessed through the following link:

https://nso.gov.mt/en/News_Releases/Release_Calendar/Pages/News-Release-Calendar.aspx

6. Methodological notes

6.1 Reassessments / revisions

Note that the RPI series is published with reference base December 2016, whereas the HICP series is published with base year 2015, in line with Eurostat base year revisions:

<https://ec.europa.eu/eurostat/documents/272892/10977288/HICP+reference+year+2015%3D100/>

6.2 Time series

Data from 1946 onwards is accessible through the following link:

https://nso.gov.mt/en/nso/Selected_Indicators/Retail_Price_Index/Pages/Index-of-Inflation.aspx