

The Consumer Price Index : changes for 2022

The Consumer Price Index (CPI) follows each month the prices of a fixed basket of products. This basket is updated each year in order to remain representative of the consumption and in order to take into account the evolution in the consumer habits (Laspeyres-type index). Each year, a chain-linking of the index is performed in January and enables to update the basket of products and their weights and possibly permits to introduce some methodological improvements.

The update of the products in the CPI basket

Each year, the product sample is updated in order to take into account changes in the household consumption. The products that are no more representative in 2021 are dropped from the CPI basket meanwhile new products, which represent a huge or an increasing market share (electric scooters, for example), are introduced. It's also an opportunity to take into account new habits of consumption (internet consumption in particular) and sometimes to adapt the collection protocol to track prices at best. The number of data collections by product varieties is also optimized according to the weight of the variety and the variability of the prices evolution (for example, the number of data collections for the fresh produces has been slightly revised in 2022). The prices of these new products are collected from December 2021 in order to measure their price evolution between December 2021 and January 2022 and so that they contribute to the CPI from January 2022.

The 2022 weights update

As every year in January, the weights of the CPI and the Harmonized Consumer Price Index (HICP) have been updated for the current year. They are used to aggregate the 21,000 indices calculated by family of elementary products and geographic area of collection. These weights represent the share of expenditure associated with the index concerned with regard to household consumption covered by the CPI.

In accordance with European regulations, these weights are usually updated based on semi-final estimates of consumption by the national accounts for year Y-2, valued at the prices of December of year Y-1 and possibly supplemented by volume corrections between year Y-2 and Y-1.

This method is usually acceptable to obtain representative weights of consumption for year Y-1 because changes in this consumption are slow. With the health crisis, however, the structure of consumption has changed markedly between 2019 and 2020 and between 2020 and 2021. This is why additional work has been carried out in accordance with the new European directives¹ on updating weights in the event of a major shock on consumption.

For the calculation of the 2022 weights, the first estimates of the quarterly accounts for the whole of 2021, used at a finer level of detail than that at which they are published (95 positions), were used to apply changes to volume 2020 consumption amounts provided by the annual accounts. If necessary, adjustments have been made to an even finer level of nomenclature by mobilizing turnover indices.

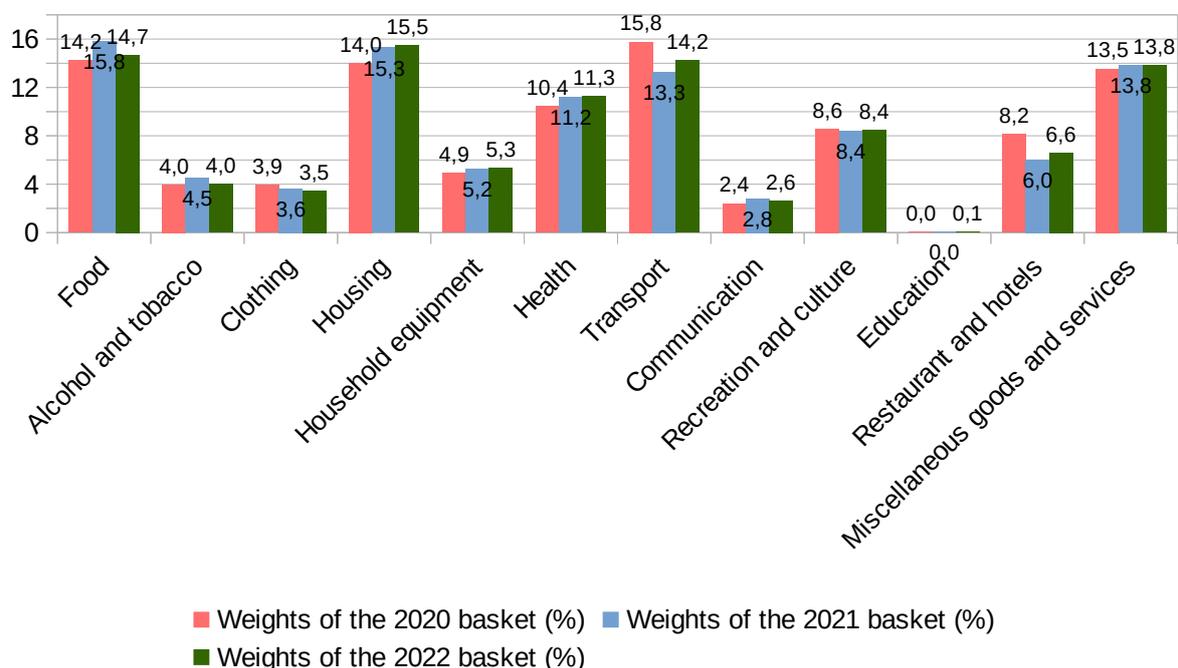
The weight in the 2022 CPI basket of food, alcohol and tobacco returns to a level close to that of the 2020 basket, after having increased in the 2021 basket. The weight of clothing continues to fall in the 2022 basket. The weight of housing and health are stable between the 2021 and 2022 baskets, at higher levels than those

¹ 2021: <https://ec.europa.eu/eurostat/documents/10186/10693286/Guidance-on-the-compilation-of-HICP-weights-in-case-of-large-changes-in-consumer-expenditures.pdf>

2022: <https://ec.europa.eu/eurostat/documents/10186/10693286/Derivation-of-HICP-weights-for-2022.pdf/>

of the 2020 basket. The weights of transport, accommodation and catering are on the rise but have not returned to their 2020 basket level.

Figure 1: weighting of consumption functions in the CPI basket for 2020, 2021 and 2022, in %



Scope: Metropolitan France

Source: Insee, quarterly accounts detailed results Q1, Q2, Q3 2021 and first estimate Q4 2021; semi-final national accounts 2020.

Reading note: The weight of food in the CPI basket goes from 14.2% in 2020 to 15.8% in 2021, to 14.7% in 2022.

These differences between the 2020, 2021 and 2022 baskets have consequences on the measurement of the overall consumer price index, in particular because products with very seasonal or very volatile prices are not weighted in the same way in the two baskets. Thus, the weight of international air transport in the basket drops by 68% between 2020 and 2021, then rises by 35% between 2021 and 2022 while its price varies according to very significant amplitudes (11% on average, in absolute value, from 2015 to 2020). The weight of tourism in the CPI (rental of rooms, camping, lodgings, etc.) also experiences significant fluctuations, while its price variations are very seasonal. As a result, the year-on-year changes in the CPI risk being affected since seasonal phenomena have a different weight between 2020, 2021 and 2022. Thus in January, the air transport price cuts after the seasonal increases in December will have a higher weight in the 2022 basket, which reduces the year-on-year rise in the CPI.

The weights of the basket are calculated from national accounts consumption estimates valued at December prices of year Y-1. Thus the very marked increase in the price of heating oil between December 2020 and 2021 (+37.3%) explains the 23% increase in the weight of heating oil between the 2021 and 2022 basket (which goes from 0.54% in 2021 to 0.66% in 2022). Similarly, the increases in the weight of gasoline and diesel between the 2021 and 2022 basket are mainly explained by the price increase between December 2020 and December 2021: the weight of gasoline is up by 26%, from 1.57% in 2021 to 1.98% in 2022, while the price of gasoline increased by 21% between December 2020 and December 2021; and the weight of diesel is up by 33%, from 1.15% in 2021 to 1.53% in 2022, while the price of diesel increased by 20% between December 2020 and December 2021.

The update of seasonal adjustments and seasonal adjusted indices

As each year, seasonal adjustments for the all-item index (France, all household) and for four indexes of core inflation have been revised over the period January 2000- December 2021. The coefficient estimate in 2020, 2021 and 2022 is complicated by the fact that the sanitary crisis could change the prices seasonality without having the necessary distance to estimate that. The weight update in 2021 and 2022 also changed the seasonality, by allocating a different weight for products with marked seasonal prices (transport, tourism). For this reason, the seasonal adjustments in 2021 and 2022 have been estimated with the revised series taking into account the 2021 and 2022 weights for the whole period of estimation.

Collection schedule

The CPI is based on scanner data, price collected by collectors on the field or recorded centrally. The centralized collection is made throughout the calendar month.

The field collection is carried out according to a specific calendar fixed a year in advance. This collection calendar differs from the civil calendar. Every month, prices for CPI are collected during 20 days, throughout the working days of four consecutive weeks.

Each product in the sample is tracked on a specific day among the 20 days of field collection (numbered from 1 to 20) and the price collector responsible for this collection returns every month to observe in the same outlet, the same product, the same day among the collection month: this organization ensures that we measure changes on average over a month, guarantees the opening of the outlet and neutralizes possible “day of the week” effects on the prices.

A calendar month consists of 28 to 31 days and doesn't correspond to a whole number of weeks. So, every year, Insee adapts the field collection calendar so that the 48 weeks of collection coincide at best with the civil calendar. This adaptation consists of fixing weeks without collection, four on average in a year. In 2022, the field collection calendar has four weeks without collection as in 2021.

Regardless of this exercise, the month-on-month changes in the CPI integrate calendar effects which may affect the year-on-year comparability of monthly changes. In general, the calendar effects in the index level disappear after one or two months and are limited to specific consumption segments. For example, every year, the school holidays or some days off are not located on the same month. These generate variations in the index evolution for the accommodation and passenger transports. If such effects are seen, they are commented in the publication *Informations Rapides* published at the same time as the CPI. It is the same for the sale calendar when it changes.

The Insee's field collection calendar aims as much as possible to reproduce the calendar effects: a shift in the sales observed in the civil calendar will have to be found, as far as possible, in Insee's collection calendar.

Table 2 : Number of sale days in the CPI calendar and the civil calendar

	<u>Calendar</u>	2018	2019	2020	2021	2022
Winter sales						
January	<u>CPI</u>	13	13	13	8	13
	<u>Civil</u>	22	23	24	12	20
February	<u>CPI</u>	17	17	7	20	7
	<u>Civil</u>	20	19	4	28	8
March	<u>CPI</u>	0	0	0	2	0
	<u>Civil</u>	0	0	0	2	0
Summer sales						
June	<u>CPI</u>	0	0	0	0	3
	<u>Civil</u>	4	5	0	0	9
July	<u>CPI</u>	18	18	3	17	16
	<u>Civil</u>	31	31	17	27	19
August	<u>CPI</u>	7	7	12	0	0
	<u>Civil</u>	7	6	11	0	0