1. Introduction

As confinement measures are gradually being lifted throughout Europe, prices can again be collected for the compilation of the Harmonised Index of Consumer Prices (HICP). However, the exceptional nature of the post confinement period poses price measurement issues, which need to be addressed in a coherent way by index compilers. This note identifies the most common compilation issues and provides some guidance as to the way they should be tackled.

2. Re-introduction of observed prices

During the lockdown, prices were imputed because products were unavailable or because prices could not be collected in the field. As actual prices are observed again, it is important that the change between the last pre-lockdown and the first post-lockdown price is correctly captured, independently of the prices imputed during the lockdown.

3. Covid-19 related fees

Some goods and services that were not available during the lockdown are again provided with an additional Covid-19 related fee. Examples include the extra costs that may be charged by hairdressers and dentists, which are often associated with additional measures linked to the provision of the service (e.g. purchase of face masks, disinfectant liquid), or reservation fees in restaurants.

As a rule, these extra charges should be taken into account and recorded as a price increase in the HICP whenever it is not possible to obtain the product without the payment of the additional charge (i.e. the consumer has no other option than paying the fee if he/she wants to purchase the product). This principle applies as long as the underlying product (e.g. a specific haircut) is deemed to be sufficiently comparable to the one supplied before the lockdown. Conceptually, increases in production costs that are passed onto the consumer should lead to increases in the HICP.
This line of reasoning also applies in other cases, such as in the provision of transport services, where prices may have increased due to a reduced supply of seats to help ensuring social distancing among passengers.

4. **Changes in the quality of products**

A product, which was absent from the market during the lockdown period, may be sold again but with quality differences.

Decisions on whether a price should be quality adjusted have to be made on a case-by-case basis. In principle, a price change should not be used as a basis for deciding if two individual products are comparable or not. Instead, one must look at differences for example in product characteristics or conditions of supply in order to make a judgment on any quality differences.

Since the direction of quality changes can have contradictory signs (e.g. the once crowded restaurant is now available without many people around due to the imposition of maximum capacity restrictions, but reservation and health check are compulsory), the exact value of the quality change may not be easy to estimate. In these situations, prices should generally not be quality adjusted.

For some products, it may be possible to estimate quality differences. In these cases, quality adjustments should be conducted consistently across product groups and across time, always respecting the idea of symmetry in the treatment of prices (e.g. a quality decrease today should be associated with a quality increase in future when the product becomes available in its usual form, or vice versa).

5. **Updates of the target sample**

The Covid-19 crisis has had a significant impact on the products that consumers purchase. Products typically not covered by the HICP (e.g. face masks and disinfectant) have suddenly gained importance. In dealing with these situations, the key point is to evaluate, to the extent possible, whether changes in the consumption of a particular product are likely to persist in time. The sample of products for which prices are observed every month can be kept representative over time either through replacements (see section 4), or by resampling. The expenditure weights of the published ECOICOP categories are kept constant throughout the year and will be reviewed and updated in next year’s HICP.

If feasible, resampling can be conducted during the year in order to make the sample representative of the new circumstances. For example, the product specifications or the sampled outlets within an elementary aggregate can be updated (sample rotation). Where relevant, the list of elementary aggregates below the ECOICOP subclass level can also be adjusted. (*) Prices for the new sample must be available for two consecutive months to allow for the chaining of the new sample into the previous basket of products.

(*) Article 3(3) of the forthcoming Commission Implementing Regulation states: 'The weight of an elementary aggregate shall be kept constant throughout the calendar year, unless the list of elementary aggregates within a sub-class is adjusted to reflect significant changes in the target universe.'
6. Changes in air travel, package holidays and accommodation services

Prices are becoming available again for these services, but the market situation is different from the one present before the start of the Covid-19 crisis. An example is the changes in consumption patterns of air travel, where households may now be acquiring tickets at closer dates from actual travel dates, when previously these were purchased several months in advance. Another example is the situation in which the offer of services may not be available with the same options and characteristics as before (e.g. air travel to a particular destination, even if now on offer, is not available on the same schedule as before).

As a rule, observed prices should be included again in the HICP in the month in which the service resumes. Prices collected in advance (for instance before the start of the Covid-19 crisis) can be included as long as the service is actually supplied. If the price collection scheme is considered not to be representative of current consumer behaviour, and if consumption changes are considered to persist in time, then price collection should be reviewed and updated.

Changes in the price collection scheme (e.g. collecting one month instead of three months in advance) or changes in travel dates are associated with differences in quality and they should — in principle — be subject to quality adjustments. It may however be not feasible to quality-adjust for changes in the booking specifications of the service. Therefore, in practice, such changes often have to be ignored. Similarly, changes in the conditions of the service (for example a higher degree of flexibility) can be difficult to quantify to the extent that previously standard booking conditions may not be available in the current context.

Data permitting, the ideal solution would be to explicitly value the quality differences between the old and the new product-offers. Direct comparison can be used when differences between the old and the new products are considered not to be substantially relevant, or when these differences are difficult to quantify. Another option would be to collect prices for two consecutive periods and link in the new sample as soon as possible to the old one (2).

If the services are introduced gradually after the lockdown, it may happen that only part of the sample is based on observed prices and the remaining part still needs to be imputed. In this situation, if a sufficient number of prices can be observed, preference should be given to the imputation of the missing prices with the observed price changes of available services. If the number of observed prices remains insufficient, other imputation methods may be more suitable. (3) As mentioned in section 5, if it is likely that the unavailability of some services is of a more permanent nature, resampling is recommended. It should be noted that the resampling for these type of services should be done in a cautious way, as it may lead to a break in the series and to a change in the seasonal pattern.

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(2) Note that sample rotation implicitly values the quality difference as the difference in the average price in the overlap month.

(3) See imputation methods described in Sections 3 and 4 of the Methodological note on the compilation of HICP in the context of Covid-19.