

The new national consumer price index

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Introduction

The new national consumer price index (NCPI) on which the health index is based came into effect in January 2014. As is usual every eight years, it underwent a major overhaul. This article presents the various methodological changes made, which mostly correspond to the adjustments announced at the end of 2013 and mentioned in the article “Measuring inflation: the stakes and the state of play”⁽²⁾, published in the Bank’s Economic Review in December 2013. The article also deals with the changes to the NCPI weighting scheme and the continuing differences in relation to the weighting scheme of the harmonised index of consumer prices (HICP).

1. What is new in 2014

1.1 A new basket of products

The new NCPI comprises 611 goods and services (“shopping basket” items), compared to 535 in the NCPI with base year 2004. Altogether, 31 products from the old index were removed, while 105 new products were introduced. The changes mainly concern the components “processed food”, “non-energy industrial goods” and “services”, whereas few changes were made to the categories “unprocessed food” and “energy”.

As required by the HICP methodology, these changes are justified mainly by the aim of covering all products on which the average household’s expenditure amounts to at least 0.1 % of total expenditure. Thus, some products have been eliminated, such as music CDs and DVD players: their share in consumption has fallen owing to the latest developments in technology. Instead, other products are now

representative and have therefore been included, such as Blu-ray players and telecommunications packages (comprising telephony services, digital TV and the internet).

The new basket of goods and services is based on household expenditure according to the latest available household budget survey (HBS), which dates from 2012. That survey was conducted by the Directorate General of Statistics and Economic Information (DGSEI) covering 6 581 households compared to around 3 600 in previous editions. Moreover, the HBS methodology was modified in 2012 to improve its quality, to accord better with the needs of users and to speed up the transmission of the data. However, the results of the HBS were adjusted by the DGSEI so that they could be used for the purposes of the consumer price index⁽³⁾.

1.2 A more flexible index

Up to December 2013, the NCPI was a fixed-base Laspeyres index, i.e. its weighting scheme remained the same so long as the base was unchanged. The base was changed every eight years, at the time of the major reform of the NCPI, although mini-reforms have been possible every two years since 2006, but without any change being

(1) The author would like to thank D. Cornille and C. Swartenbroeckx for their contribution to this article.

(2) Langohr J. (2013), “Measuring inflation: the stakes and the state of play”, Economic Review, NBB, December, 47-66.

(3) The main adjustments made by the DGSEI were:

- exclusion of life insurance as a savings-based investment;
- for other types of insurance (home, vehicle, travel, health), switch from a gross expenditure concept to a net expenditure concept (premiums paid less claims paid out), on the basis of the Assuralia 2011 figures;
- for expenditure relating to medical services, switch from a gross expenditure concept to a net expenditure concept (i.e. minus reimbursements) on the basis of the NIHDI figures for 2011;
- exclusion of items not forming part of monetary expenditure on household consumption, such as contributions to political associations, unions or professional associations, and fines.

TABLE 1 EXAMPLES OF NEW PRODUCTS AND PRODUCTS REMOVED FROM THE NEW NCPI⁽¹⁾

| | Examples of new products | Examples of products removed |
|-----------------------------|---|---|
| Unprocessed food | Chicken fillets | Oysters Lobster |
| Processed food | Energy drinks Couscous Infant milk powder Pizza (frozen) Frozen salmon Australian wine | Pâté de campagne Pizza (fresh) Frozen cod fillets |
| Energy | Briquettes Wood pellets | Anthracite |
| Non-energy industrial goods | Hearing aids Cycle helmet Blu-ray player Food processor Tablet | Visiting cards Music CD External hard disk DVD player Corduroy trousers |
| Services | Car wash Flower delivery Menu of the day Telecommunications package Parking Sauna | DVD rental Launderette |

Source: DGSEI.

(1) The table showing all the new products and those deleted may be found in the annex.

permitted in the weightings of the twelve main consumption basket categories.

The major reform in 2014 was not only the occasion to switch from an index with base 2004 = 100 to an index with base 2013 = 100, but was also the opportunity to make the transition to a Laspeyres chained index. The methodology of that index permits updating of the weighting scheme in January each year, both by an updating of the weightings of all items included in the basket and by the addition and deletion of products. Moreover, the chaining technique offers the opportunity to introduce any methodological improvements once a year.

In practice, the reference period of a chained index is regularly updated, permitting comparison of prices and quantities with an intermediate reference period rather than a fixed reference period. More specifically, the prices

for twelve months in year t are compared with those for December in year $t-1$. A chain is then formed by multiplying these short-term indices by one another to obtain a long-term series which will itself be expressed in terms of a chosen reference year.

This important change of method addresses the problem of “weighting ageing” from which the NCPI formerly suffered. In fact, since its weighting scheme is fixed for a number of years and is based on household expenditure during an arbitrarily selected base year, an index with a fixed base becomes less representative the further the distance from the base year and the more consumption patterns change. For instance, in recent years the old NCPI gave excessive weight to energy and fixed telephony, because – as a result of changes in consumption patterns – these two expenditure items had become relatively less important in volume since 2004, and that was not reflected

in the NCPI consumption basket. In contrast, the HICP was already based on a chained methodology. A chained index therefore ensures that the index remains representative over time, by systematic use of recent weighting schemes. The adjustments to the NCPI weighting scheme which can be made each year if necessary will be based on the HBS (published every two years) or on the national accounts (published annually), the latter being the source used for the HICP weighting scheme.

The chained index also offers the advantage of flexibility when the methodology requires gradual adjustments, whereas in the past methodological changes could only be made every eight years at the time of the major reform. Other developments can also be taken into account, such as the entry of new names in the distribution sector, since it is now easier to update regularly the sample of sales outlets where the prices of the items are recorded.

1.3 A new average for a more accurate picture

For each product included in the consumption basket, a number of prices are recorded (for various brands and at various outlets). In the case of mass consumption goods, clothing, domestic electrical appliances and multi-media, the elementary aggregation of these price collections for each item is now performed with the aid of a geometric average (Jevons index) instead of an arithmetical average (Dutot index)⁽¹⁾.

This new method, which has already applied to the HICP since January 2013, can take account of the substitution effect. This refers to variations in the quantities consumed in response to price changes. Use of a geometrical average implies the assumption that the elasticity of substitution is equal to 1, i.e. that the quantities consumed vary in proportion to the price, whereas an arithmetical average implies the rather unrealistic assumption that the elasticity of substitution is zero, so that the quantities consumed are totally unconnected with prices. This change is all the more important in that it concerns goods with a price level which may vary greatly between brands and between shops.

Another advantage of the Jevons index is that the impact that price changes have on the index does not depend on the level of those prices, whereas the Dutot index accords greater importance to relatively expensive products (such as branded products) rather than cheaper products (such as white-label or private-label products). By taking greater account of the effects of substitution in favour of cheaper products, it can be assumed that inflation calculated

on the basis of a geometrical average at an elementary level might be slightly lower than if it were based on the arithmetical average, particularly in a context of changes in the distribution sector, with growing market shares for discounters and private-label products which are generally more attractively priced. That effect is likely to be fairly small since the impact of the adoption of the geometric average on total inflation can be estimated at -0.03 percentage point according to the HICP in 2013.

1.4 Taking greater account of rent changes

The methodology used to measure the movement in private rents in the two consumer price indices was based on a survey of a sample of tenants. The survey procedure implied that the rent index primarily reflected indexations during the lease – based on the health index – rather than higher rent introduced when a new lease is signed, whereas this is a substantial source of rent increases.

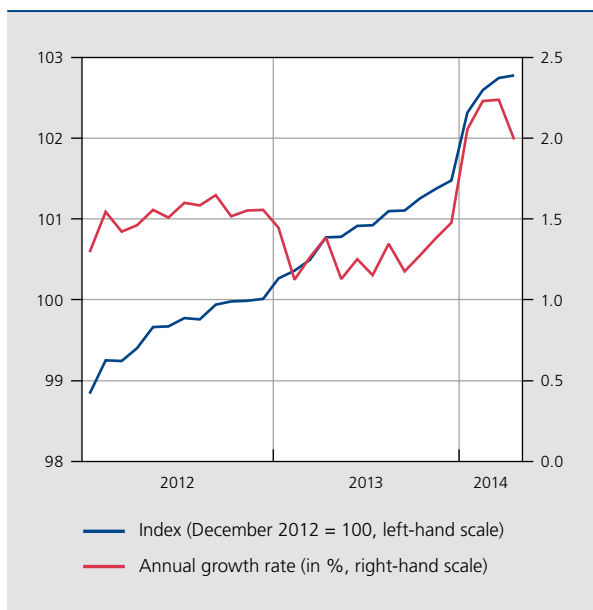
The changes made when the index was revised in January 2014, for both the NCPI and the HICP, in order to reflect the movement in rents more accurately consist in particular in compensating for and limiting non-responses to the survey used by targeting the survey more carefully, by means of addresses obtained on the basis of both the HBS and the statistical survey of incomes and living conditions (SILC) and the labour force survey (LFS). In future, the sample should become even more representative thanks to the aggregate data derived from leases recorded with the General Administration of the Patrimonial Documentation (GAPD) of FPS Finance; a request for data access was made to the Privacy Protection Commission, and duly granted.

In regard to the remaining non-responses, the bridged overlap method now makes it possible to reduce the distortion created, since the movement in unreported rents is now estimated on the basis of rents for other housing in the same category and province. The bridged overlap is also applied where one unit of accommodation is replaced by another in the sample.

Since, by further limiting the distortions associated with survey non-responses, the new method is better at reflecting rent increases made when a new lease is signed, it is logical to find that the private rent index surged in January 2014, when this new methodology was introduced. Private rent inflation increased from 1.5% in December 2013 to 2.1% in January 2014, exceeding the 2% threshold for

(1) For more details on the statistical properties of the Jevons and Dutot indices, see ILO/IMF/OECD/UNECE/Eurostat/World Bank (2004), *Consumer Price Index Manual: Theory and Practice*.

CHART 1 ACTUAL RENTS OF TENANTS IN THE NCPI



Sources: DGSEI, NBB.

the first time since October 2009. Although the impact of the new methodology will be more particularly noticeable over the twelve monthly year-on-year changes in 2014, that does not necessarily mean it will be non-existent thereafter since the improved recording of rent increases imposed when a new lease is signed should have a structural effect on future movements in the private rent index.

1.5 Modernisation of the recording of telecommunication service prices

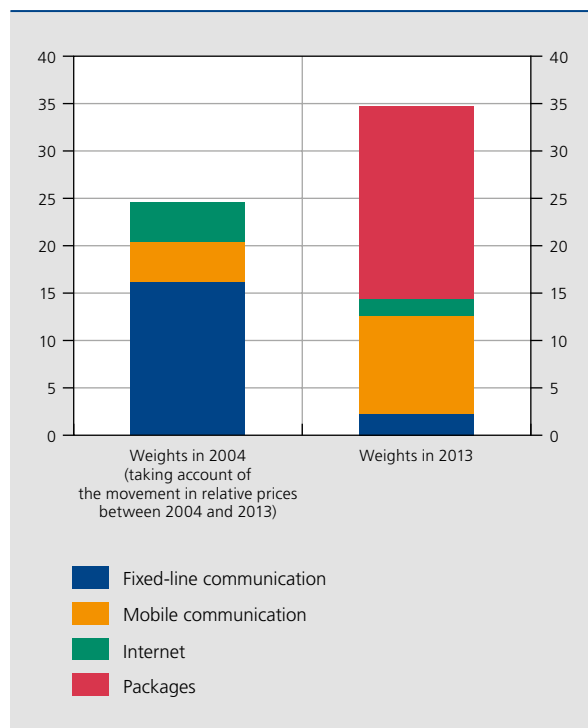
The old methodology used to measure the movement in telecommunication prices had two main weaknesses: it took no account of changes in market share among the different suppliers and contracts, and also disregarded service package deals (comprising telephony, digital TV and the internet).

The adjustments made at the time of the major reform address the significant changes which have taken place on this market in recent years, in particular the sharp fall in expenditure on fixed telephony and the internet as individual products, with households increasingly opting for package deals. Moreover, while expenditure on mobile telephony has remained stable, the strong growth of consumption has been counterbalanced by the decline in prices. The overall weight of telecommunication services had implicitly diminished between 2004 and 2013 following the

reduction in these tariffs. The updating of the weightings at the time of the switch to base 2013 = 100 made it possible to reflect the rise in consumption of mobile communications and package deals, which has more than offset the decline in terms of individual products of the internet and – above all – fixed telephony. This last item still accounted for two-thirds of telecommunication services in the NCPI in 2013.

While it was vital to update the weightings in order to reflect these movements and to reduce the weight of fixed telephony, for example, the updating also needed to be accompanied by a methodological reform to give a more accurate picture of these new realities. With that in view, the DGSEI established cooperation with the Belgian Institute of Postal Services and Telecommunications (IBPT) and the telecommunications sector. Thus, as in the case of gas and electricity, account is now taken of the consumption profile of each telecommunication service and of the number of customers for each operator and each representative tariff formula. The new methodology also makes it possible to take account of old contracts which are no longer actively offered on the market by suppliers, but which still apply to many consumers, often at less advantageous tariffs. The fact that these contracts were previously

CHART 2 TELECOMMUNICATION SERVICE WEIGHTINGS (per thousand)



Sources: DGSEI, NBB.

CHART 3 PRICES OF TELECOMMUNICATION SERVICES
(index December 2012 = 100)



Sources: DGSEI, NBB.

disregarded could therefore lead to underestimation of the movement in prices, particularly for mobile telephony, for which tariffs have fallen considerably.

The excessive weight of fixed telephony in the NCPI weighting scheme up to 2013 is reflected in the movement in the index of telecommunication services, where the 4.3% jump from April to May 2013 is attributable to large increases in fixed telephony tariffs of around 7.5%. At that time, they alone had had an impact of 0.1 percentage point on inflation according to the NCPI, given the continuing substantial weight of that expenditure. In contrast, in the HICP the telecommunication services category increased by only 1.3% between April and May 2013, in view of the much lower weight of fixed telephony expenditure.

1.6 The other methodological changes

1.6.1 A new seasonal adjustment for travel

Since some holidays (Easter and Carnival) do not always fall in the same month each year, the method of seasonal adjustment applied up to 2013 was not always appropriate. From now on, econometric models, already used for the purpose of seasonal adjustment in the conjunctural statistics, and permitting estimation of the various

components of an economic series, will therefore be used to make these adjustments. Although this improvement has only a limited impact on the year-on-year changes, as the influence of the seasons varies little from one year to the next, the level of the index does reflect these seasonal variations so that, in some specific cases, the latter could exert an influence on indexation mechanisms based on indices derived from the NCPI, such as the health index. The HICP does not include any seasonal adjustment for travel, so that is one of the remaining methodological differences between these two indices.

1.6.2 Treatment of fresh product prices

Previously, the methodology applied to the prices of seasonal fresh products, namely fruit, vegetables and seafood, involved attributing variable weights to the various items on a monthly basis according to the fluctuations in monthly expenditure that consumers devoted to these products. That technique implied that the index could vary from one month to the next following changes in the weights, whereas the prices of the items remained unchanged.

Moreover, these weights varying from month to month were determined in relation to a fixed reference year, whereas consumption of these products may differ from one year to the next, for instance according to weather conditions. Finally, these products are not the only ones for which the consumption pattern changes during the year. In fact, that applies to almost all products in varying proportions. Yet the weighting of all the other items is based on annual expenditure, as the changes in expenditure during the year are not relevant for measuring inflation. In the case of seasonal products, it is only availability that matters, and not changes in monthly expenditure. The new methodology therefore aims to limit the variation at the level of the monthly weighting coefficients and attribute a zero coefficient during months in which a product is not available on the market⁽¹⁾.

1.6.3 The method of introducing new products

When two products are no longer comparable from one month to the next, the bridged overlap technique is now used, whereby the movement in the price of the new product is estimated on the basis of the movement in prices of similar products. Since two products are rarely identical, and that prevents direct comparison between the prices of the old and new products, a price is therefore

(1) However, the new methodology does pose a problem if a product is only available for a month or two each year, but in large quantities. In that case, it is necessary either to extend the price observation period, if that is possible, or to remove the item. The first solution was chosen for fresh fish products (cod, salmon, sole and trout), which are no longer included in the seasonal basket, while the second option was selected for lobster and oysters, which have been removed from the NCPI consumption basket.

imputed for the month preceding the introduction of the new product, based on the movements in prices of similar products. In the case of all products except cars and PCs, the price of the new product used to be linked to that of the old one, eliminating the difference in price between the two, i.e. assuming that the price had not changed.

1.6.4 Abandonment of the concept of localities

Up to the end of 2013, the calculation of the NCPI was based on price collections in 65 localities. For most of the items, an index was calculated for each locality, and those partial indices were then aggregated into a single index for each item on the basis of the population figures.

That method was actually not very useful, since the DGSEI has recently demonstrated that prices fluctuate in practically the same way from one locality to another, as pricing policy has become more national following the strong expansion of retail chains. Moreover, this procedure is based on the rather unrealistic assumption that all goods are bought in the same proportions everywhere. However, certain goods and services only appear sporadically in certain localities, and that is reflected in a small number of collections per locality. For example, consumers purchase certain products, such as clothing, primarily in shopping centres which are often located outside the 65 localities. These factors cause the DGSEI to focus on the product rather than on the locality so that the latter concept has been abandoned. Moreover, this change will make it easier to introduce the methodology based on supermarket scanner data, planned for January 2015.

2. What lessons can be drawn from the new weighting scheme?

2.1 Changes in the weightings compared to the basket with base year 2004 = 100

The new NCPI weighting scheme is based on the latest available HBS, namely that for 2012. In order to interpret correctly the real changes in relation to the old NCPI with base year 2004, it is necessary to exercise some caution. The official weightings for 2004 give a false picture of the actual contribution to total inflation made by changes in the price of a given product in recent years. Depending on the movement in relative prices, that contribution was bigger or smaller than during the base period. In the case of products for which prices increased by more than total inflation between 2004 and 2013, the implicit weighting coefficient for 2013 will be higher than the initial coefficient⁽¹⁾. That applies to food items and more particularly to

TABLE 2 NCPI WEIGHTING SCHEME
(per thousand)

| | 2004 weightings taking account of the movement in relative prices | 2013 weightings | Difference due to updating of the weightings |
|------------------------------------|---|-----------------|--|
| Unprocessed food | 85 | 78 | -7 |
| Meat | 47 | 42 | -5 |
| Processed food | 129 | 113 | -15 |
| Bread and cereals | 35 | 29 | -6 |
| Tobacco | 12 | 8 | -4 |
| Non-energy industrial goods | 301 | 327 | 26 |
| Clothing | 39 | 49 | 10 |
| Vehicle purchases | 62 | 78 | 16 |
| Newspapers, books, stationery | 22 | 15 | -7 |
| Services | 359 | 364 | 4 |
| Actual housing rents | 62 | 76 | 14 |
| Telecommunication services | 25 | 35 | 10 |
| Recreational and cultural services | 28 | 18 | -10 |
| Energy | 126 | 118 | -8 |
| Fuel and lubricants | 49 | 41 | -7 |
| Total | 1 000 | 1 000 | 0 |

Sources: DGSEI, NBB.

those relating to energy, which have thus implicitly gained in importance in the old index (i.e. without any explicit updating of the weightings). The opposite is seen in the case of services, and especially non-energy industrial goods, where price increases have fallen short of total inflation.

To assess the actual impact of the introduction of the new weightings on inflation, it is therefore necessary to compare those weightings with the implicit weightings in the old index at 2013 prices. Such a comparison shows the increasing inflation contributions of non-energy industrial goods and, to a lesser extent, services. These changes are in line with those at the time of the previous reform, which had already seen an increase in the importance of these two categories, which now account for 33% and 36% respectively of the basket of products, or more than two-thirds of the total on their own.

(1) Formally, the implicit weighting coefficients are calculated as the product of the initial weighting coefficient and the index of relative prices of the category, the latter corresponding to the ratio of the index for the category in question and the index for the total.

Clothing, vehicle purchases, rents and telecommunication services are the categories whose contributions have risen the most, while the categories “newspapers, books and stationery” and “recreational and cultural services” have declined considerably.

The inflation contribution of food (processed and unprocessed) is down by around 2 percentage points, which is logical since the importance of this type of product is known to decline as the standard of living rises. That finding, derived from the 2012 HBS, is also in line with a long-term trend, likewise evident at the time of the earlier reforms. More particularly, “meat” and “bread and cereals”, together with “tobacco”, are the categories whose weight has declined most significantly in household expenditure, according to the HBS.

The energy component will also have a smaller influence than at the end of the period of application of the old index, following the explicit weighting adjustment resulting from changes in consumption patterns according to the 2012 HBS. Energy products thus account for around 12 % of the new index, compared to 13 % at 2013 prices in

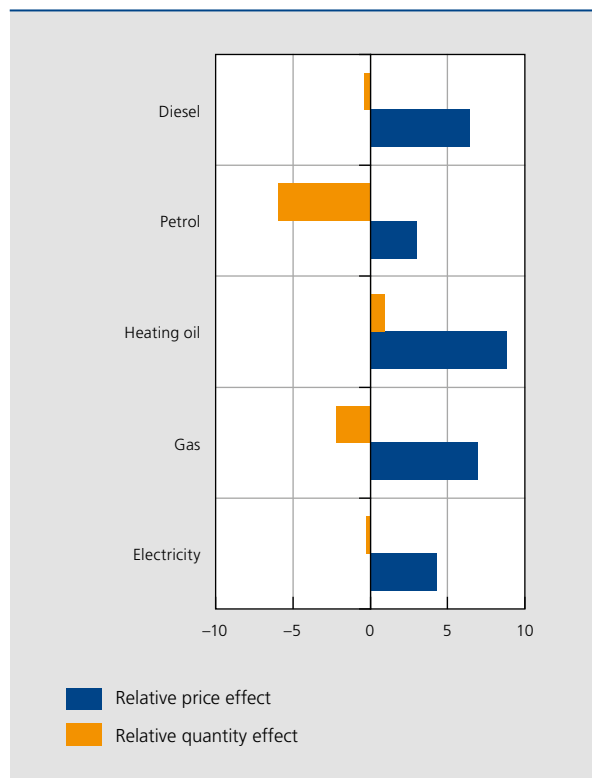
the old index. Nevertheless, that is higher than the official weight for base year 2004, which was around 10 %, but that increase is therefore due solely to the movement in relative prices in the context of a sharp increase in energy costs during the period 2004-2013.

Between 2004 and 2013, the relative price effect had a positive influence on all energy categories, reflecting the fact that, during an episode of rising crude oil prices, the increase in the prices of these products outpaced total inflation. That effect was more marked for the “heating oil” category owing to its greater sensitivity to fluctuations in crude oil prices, the reason being that the excise duty is lower than on other petroleum products. The “gas” category, where prices were until recently closely linked to the fluctuations in oil prices, also exhibited a considerable positive relative price effect. The “electricity” category, though its price is less directly dependent on the crude oil price, likewise recorded a positive relative price effect, notably following increases in the distribution and transport tariffs.

Comparison of the 2004 weightings at 2013 prices and the new weightings shows that the updating of the basket has reduced the importance of the energy component by 0.8 percentage point. That reduction is due mainly to the intrinsic decline in consumption of fuel and lubricants according to the 2012 HBS. In fact, despite the sharp rise in oil prices, the weight of this category has only gone up by 3 per thousand in the new weighting scheme, compared to the 2004 figure, rising from 38 to 41 per thousand, whereas the relative price effect came to 10 per thousand. It is mainly petrol that weakened in importance compared to the old weightings expressed at 2013 prices, while the weighting of diesel remained constant, reflecting consumers’ preference for the latter compared to petrol since 2004.

Since the “petrol” category accounts for almost the whole of the decline in the energy component’s contribution to total inflation, there is hardly any change, so far as the health index is concerned, in the level of the contribution of energy products compared to the old weightings at 2013 prices. In regard to the transition from the old health index to the new one, the social partners meeting in the National Labour Council opted for the mathematical conversion coefficient, whereas in 2006 they had agreed on a ratio slightly different from the mathematical coefficient⁽¹⁾.

CHART 4 IMPACT OF THE REFORM ON THE WEIGHTING COEFFICIENTS OF ENERGY PRODUCTS (per thousand)



Sources: DGSEI, NBB.

(1) For the transition from the health index with base 2004 to the index with base 2013, the conversion coefficient was set at 0.828, or the ratio between 100 and the average of the health indices of the year 2013 with base 2004 = 100.

2.2 Weighting differences between the NCPI and the HICP

Despite the January 2014 updating, the NCPI basket still differs considerably from that of the HICP which, as every year, was updated in January 2014. The differences are due to continuing methodological divergences between the two inflation measurements, particularly at the level of demographic coverage – inclusion in the HICP of expenditure by non-residents on Belgian territory, unlike the NCPI – and the statistical source, since the HICP weighting scheme is based primarily on the 2012 HBS, whereas that of the HICP is based on the 2012 national accounts. Moreover, an adjustment for the movement in relative prices in 2013 is made for the HICP but not for the NCPI.

The HICP thus attributes a significantly higher weight to processed food, and notably alcohol and tobacco, owing partly to the inclusion of expenditure by non-residents in Belgian territory, and partly to the usual underestimation of this type of expenditure in the HBS. In recent years, the “over-weighting” of these products in the NCPI due to “ageing” of the weightings had attenuated that difference.

The weighting differential for the energy product category persists, but became much smaller with the introduction of the new NCPI with base 2013, as the weight of fuel in the basket had fallen sharply. Nonetheless, a bigger weighting is still accorded to energy in the NCPI, the main reason being that, in the HICP, the weights were adjusted for the

movement in relative prices in 2013 – which was negative for that component – in contrast to the NCPI.

In the case of non-energy industrial goods, the difference is due mainly to the “purchase of vehicles” category, which has a considerably higher weight in the NCPI since the latter adopts a “gross” approach, taking account of transactions between households, on the basis of the HBS, whereas the HICP takes a “net” approach based on registration data, excluding transactions between households.

In the case of services, while rents have a higher weight in the NCPI – owing to the estimated number of tenants and the average rental price, which vary according to the two indices – that is more than offset by the medical care and social protection categories, which have a much larger weighting in the HICP, owing to the statistical source. In fact, in the HBS (used for the NCPI), consumers such as the elderly and people living in communities (retirement homes) are under-represented owing to the procedures for this survey. However, the relative weight of expenditure relating to health in the basket of these consumers is fairly significant. The weight of the category “maintenance and repair of personal vehicles” is also greater in the HICP, as the latter includes the part paid by insurance, whereas the NCPI excludes it altogether.

TABLE 3 DIFFERENCES BETWEEN THE WEIGHTINGS OF THE HICP AND THE NCPI
(per thousand)

| | HICP 2014 | NCPI base 2013 | Difference HICP-NCPI 2013 | NCPI base 2004 (price update 2013) | Difference HICP-NCPI 2004 |
|-----------------------------------|----------------|----------------|------------------------------|---------------------------------------|------------------------------|
| Unprocessed food | 82.0 | 77.5 | 4.4 | 84.8 | -2.8 |
| Processed food | 134.5 | 113.2 | 21.3 | 128.5 | 6.0 |
| Energy | 109.1 | 118.4 | -9.3 | 126.0 | -16.9 |
| Electricity | 28.1 | 31.8 | -3.7 | 32.1 | -4.0 |
| Gas | 22.8 | 23.5 | -0.6 | 25.6 | -2.8 |
| Heating oil | 15.3 | 19.6 | -4.2 | 18.6 | -3.3 |
| Solid fuel | 0.6 | 2.1 | -1.5 | 1.1 | -0.5 |
| Transport fuel | 42.2 | 41.4 | 0.8 | 48.6 | -6.4 |
| Non-energy industrial goods | 278.9 | 327.2 | -48.3 | 301.4 | -22.5 |
| Services | 395.4 | 363.6 | 31.8 | 359.4 | 36.0 |
| Total | 1 000.0 | 1 000.0 | | 1 000.0 | |

Sources: DGSEI, NBB.

2.3 Inflation according to the two indices: the divergences will persist

In 2011 and 2012, inflation had been higher according to the NCPI than according to the HICP, mainly because of the divergences in the weight of energy, which was then rising rapidly in price. In 2013, the reverse occurred owing to a fall in energy prices and the inclusion in the NCPI, from January 2013, of the effect of prices discounted in the sales. However, the impact of that was lessened somewhat by another methodological reform introduced at the same time, namely the “payment” approach for heating oil. Taking the moving average over the past twelve months rather than the price in the month for which the index is calculated had an upward effect, owing to the fall in the price of Brent denominated in euros.

Overall, the comparison of the two new weighting schemes indicates that inflation according to the HICP could continue to differ from the NCPI figure in 2014, leaving aside the effect of prices discounted in the sales. However, the gap should be smaller than previously, in view of the reduction in the weighting differential for the energy category, which was the main cause of divergence in recent years.

This diminishing gap was borne out by the inflation figures for the first three months of 2014, since the movement in

prices on an annual basis came to 1.1 % in January, 1.0 % in February and 0.9 % in March, according to both the HICP and the NCPI. However, these figures conceal the compensatory effect of certain divergences between the fluctuations in the various categories, due to weighting differentials in those categories and to certain remaining methodological variations and the impact on the year-on-year change of the introduction of the various changes of method made to the NCPI when it underwent total reform. 2014 is in fact a transitional year in which inflation measured by the NCPI will still be influenced temporarily by the old base, since inflation is calculated by comparing the 2014 indices (after the reform) with those for the corresponding month in 2013 (before the reform, but converted in order to permit comparison). The effect of the winter sales may also have been a factor since it is reflected in full in the January HICP, whereas in the NCPI it is spread across the indices for the first six months of the year. In April, inflation according to the two indices diverged again, at 0.9 % according to the HICP and 0.6 % according to the NCPI, notably as a result of the effects of the reduction in VAT on electricity prices and the rise in tobacco prices.

3. Future developments

Since the switch to the index-chaining technique makes it easier to incorporate updates of the weighting scheme and methodological adjustments, the Index Committee working with the government will draw up a programme of work each year concerning the modifications proposed for the future, in order to ensure that the index is representative. The topics to be assessed and the programme of work will thus be determined by the Committee at the start of each calendar year.

The next important step, already planned for January 2015, is the incorporation of the supermarket scanner data. That reform, which will require the retail chains to submit statistics each week on product characteristics, turnover and prices of individual products, is intended to take better account of real consumer purchasing patterns. These data will make it possible to monitor practically all the goods actually bought, and to do so on the basis of the actual transaction prices and not just the advertised prices. The movement in prices will be measured on the basis of the products that consumers actually buy, instead of a sample of products deemed representative. Nevertheless, the use of supermarket scanner data will concern only part of the basket, namely around 22 %. Moreover, even for products to which this change will apply, additional price collections will be needed, notably in specialist stores such as bakers and butchers.

CHART 5 INFLATION ACCORDING TO THE HICP AND THE NCPI
(percentage changes compared to the corresponding month of the previous year)



Sources: DGSEI, NBB.

Conclusions

The January 2014 introduction of the new NCPI with base 2013 puts an end to the significant ageing of the index, whose weighting scheme no longer reflected real consumer purchasing patterns, and that had implications for the inflation figures. In addition, a number of methodological changes made at the time of that reform should provide a structural solution to some of the main weaknesses of the NCPI. Although the methodology of the NCPI was brought more into line with that of the HICP on that occasion, the two indices are likely to continue to diverge in view of the remaining differences, notably in the weighting scheme, though to a lesser extent than in recent years.

The most significant change is probably the switch to use of a chained index instead of a fixed base. That decision, which also implies that the major reform in 2014 was the last of its kind, will not only make it easier to carry out gradual methodological adjustments in the future, but also and above all to adjust the weighting scheme each year in order to constantly reflect new consumption patterns.

The improvements in measuring the movement in rents and prices for telecommunication services were also a priority in view of the weight of the former and the upheaval affecting the latter. Other adjustments are particularly welcome, such as those concerning the methodology of the household budget survey or the switch to the geometrical average for the aggregation of most prices of basket items at elementary level. This last change is particularly significant as it coincides with fundamental changes in the

distribution sector, where market shares fluctuate widely between different types of distributor and brand. The use of the geometrical average specifically makes it possible to reflect the substitution effect, favouring cheaper outlets or cheaper brands. From that point of view, the use of retail chain scanner data, to be introduced in January 2015, should permit an even more accurate picture of these developments, and is therefore to be encouraged.

The switch to the geometrical average and the new methodology for telecommunication services is likely to have a downward effect on inflation according to the NCPI. In fact, that new methodology takes better account of changes in market shares, and accords greater weight to mobile communication, for which prices are falling, especially in relation to fixed telephony. Those effects are likely to be partly offset by the upward influence exerted by other changes, principally the new methodology for rents. While the other changes of method can be considered neutral or insignificant in terms of their influence on inflation, that is not true of the weighting scheme update, which also affects the movement in the NCPI.

The chaining of the index and the accompanying establishment of a work programme drawn up each year by the Index Committee now offers the opportunity to make gradual, continuous improvements in response to challenges which arise, such as the growth of internet trading. Moreover, some harmonisation with the HICP is still possible and desirable, notably to take account of movements in relative prices between the year of the source used for the weighting scheme and the updating of the scheme.

Annex

NEW BASKET ITEMS AND DELETED ITEMS

| ECOICOP ⁽¹⁾ | New items | Deleted items |
|------------------------|---|-------------------------------------|
| 01 | Food and non-alcoholic beverages | |
| 01.1.1.1 | Rice | |
| 01.1.1.1.02 | Rice (in bulk) | |
| 01.1.1.5 | Pizza and quiche | |
| 01.1.1.5.01 | Pizza (frozen) | Pizza (fresh) |
| 01.1.1.6 | Pasta and couscous | |
| 01.1.1.6.03 | Couscous | |
| 01.1.1.7 | Breakfast cereals | |
| 01.1.1.7.02 | Muesli | |
| 01.1.2.2 | Pig meat | |
| 01.1.2.2.04 | Pork stir-fry | |
| 01.1.2.4 | Poultry | |
| 01.1.2.4.03 | Chicken breast | |
| 01.1.2.7 | Charcuterie (cured, dried or smoked meat) | |
| 01.1.2.7.xx | | Pâté de campagne |
| 01.1.2.8 | Other meat-based preparations | |
| 01.1.2.8.09 | Curried chicken salad | |
| 01.1.3.2 | Frozen fish | |
| 01.1.3.2.02 | Frozen salmon | Cod fillets |
| 01.1.3.3 | Fresh seafood | |
| 01.1.3.3.xx | | Lobster |
| 01.1.3.1.xx | | Oysters |
| 01.1.3.4 | Frozen seafood | |
| 01.1.3.4.01 | Frozen tiger prawns | |
| 01.1.4.5 | Cheese | |
| 01.1.4.5.09 | Cheese: soft cheese for spreading | |
| 01.1.6.3 | Dried fruit and nuts | |
| 01.1.6.3.02 | Mixed fruit and nuts | |
| 01.1.7.3 | Dried and tinned vegetables and vegetable-based products | |
| 01.1.7.3.03 | Tinned sweetcorn | White haricot beans in tomato sauce |
| 01.1.7.3.xx | | Split peas |
| 01.1.8.2 | Jam, marmalade and honey | |
| 01.1.8.2.02 | Honey | |
| 01.1.8.2.03 | Strawberry jam | |
| 01.1.8.3 | Chocolate | |
| 01.1.8.3.06 | Milk chocolate with praline filling | |
| 01.1.8.4 | Confectionery | |
| 01.1.8.4.02 | Chewing-gum | |
| 01.1.9.1 | Sauces and condiments | |
| 01.1.9.1.03 | Tomato ketchup | |

Source: DGSEI.

(1) ECOICOP: European Classification of Individual Consumption by Purpose. This European classification of household consumption by purpose is the harmonisation at European level of the nomenclature of consumption expenditure produced by the United Nations.

NEW BASKET ITEMS AND DELETED ITEMS (continued 1)

| ECOICOP ⁽¹⁾ | New items | Deleted items |
|------------------------|--|-------------------------|
| 01.1.9.2 | Salt, spices and herbs | |
| 01.1.9.2.01 | Salt | |
| 01.1.9.2.02 | Pepper (black) | |
| 01.1.9.3 | Baby foods | |
| 01.1.9.3.02 | Infant milk powder | |
| 01.1.9.4 | Prepared dishes | |
| 01.1.9.4.01 | Frozen meat dish | |
| 01.2.2.2 | Soft drinks | |
| 01.2.2.2.05 | Energy drink | |
| 01.2.2.2.06 | Sports drink | |
| 01.2.2.3 | Fruit and vegetable juice | |
| 01.2.2.3.02 | Mixed fruit juice | |
| 02 | Alcoholic beverages and tobacco | |
| 02.1.1.1 | Liqueurs and spirits | |
| 02.1.1.1.04 | Vodka | |
| 02.1.1.2 | Alcohol-based refreshing drinks | |
| 02.1.1.2.01 | Ready prepared cocktail | |
| 02.1.2.1 | Wine (made from grapes) | |
| 02.1.2.1.05 | Italian wine | |
| 02.1.2.1.06 | Chilean wine | |
| 02.1.2.1.07 | Australian wine | |
| 02.1.2.1.09 | Cava | |
| 02.1.2.2 | Alcoholic drinks made from other fruits | |
| 02.1.2.2.01 | Cider | |
| 03 | Clothing and footwear | |
| 03.1.2.1 | Men's clothing | |
| 03.1.2.1.12 | Bathing trunks | Sports jacket |
| 03.1.2.1.xx | | Corduroy trousers |
| 03.1.2.2 | Women's clothing | |
| 03.1.2.2.08A | Blazer | Suit (winter) |
| 03.1.2.2.08B | Synthetic trousers (summer) | Suit (summer) |
| 03.1.2.2.16 | Bra (push-up) | Bermuda shorts (summer) |
| 03.1.2.2.xx | | Nightdress |
| 03.1.2.3 | Clothing for children and infants | |
| 03.1.2.3.08 | Skirt (F – 8 to 12 years) | |
| 03.1.2.3.09 | Socks (G – 28-33) | |
| 03.1.3.1 | Other items of clothing | |
| 03.1.3.1.01 | Cycle helmet | |
| 03.1.4.1 | Cleaning of clothing | |
| 03.1.4.1.xx | | Launderette |
| 03.1.4.2 | Repair and hire of clothing | |
| 03.1.4.2.01 | Clothing repairs | |

Source: DGSEI.

(1) ECOICOP: European Classification of Individual Consumption by Purpose. This European classification of household consumption by purpose is the harmonisation at European level of the nomenclature of consumption expenditure produced by the United Nations.

NEW BASKET ITEMS AND DELETED ITEMS (continued 2)

| ECOICOP ⁽¹⁾ | New items | Deleted items |
|------------------------|---|--|
| 03.2.1.1 | Men's footwear | |
| 03.2.1.1.02 | Casual shoes | |
| 04 | Housing, water, electricity, gas and other fuel | |
| 04.3.1.0 | Supplies for maintenance and repair of the dwelling | |
| 04.3.1.0.03 | Acrylic paint | |
| 04.3.1.0.05 | Woven wallpaper | |
| 04.3.1.0.08 | Silicon | |
| 04.4.1.0 | Water supply | |
| 04.4.1.0.01 | Water (consumption) | Water consumption (incl. sewage treatment) |
| 04.4.3.0 | Waste water collection | |
| 04.4.3.0.01 | Water (sewage treatment) | |
| 04.5.4.9 | Wood and other solid fuel | |
| 04.5.4.9.01 | Briquettes | Anthracite |
| 04.5.4.9.02 | Wood pellets | |
| 05 | Furnishings, household equipment and routine household maintenance | |
| 05.1.1.1 | Indoor furniture | |
| 05.1.1.1.07 | Bedframe | |
| 05.1.1.1.08 | Indoor furniture | |
| 05.2.0.1 | Furnishing fabrics and curtains | |
| 05.2.0.1.03 | Blinds | |
| 05.2.0.3 | Table linen and towels | |
| 05.2.0.3.03 | Bath towel | |
| 05.3.1.1 | Refrigerators and freezers | |
| 05.3.1.1.03 | Refrigerator: low model | |
| 05.3.2.1 | Food preparation equipment | |
| 05.3.2.1.01 | Food processor | |
| 05.3.2.3 | Irons | |
| 05.3.2.3.01 | Iron with steam generator | Steam iron |
| 05.4.0.1 | Glassware and crockery | |
| 05.4.0.1.02 | Water glass | |
| 05.4.0.1.03 | Porcelain plate | |
| 05.5.1.2 | Repair and hire of machinery and equipment | |
| 05.5.1.2.01 | Hire of garden tools and equipment | |
| 05.5.2.1 | Small, non-powered tools | |
| 05.5.2.1.03 | Step ladder | |
| 05.5.2.2 | Miscellaneous accessories for the house and garden | |
| 05.5.2.2.04 | Exterior lighting | |
| 05.6.1.1 | Cleaning and maintenance products | |
| 05.6.1.1.03 | Concentrated washing powder | |
| 05.6.1.1.07 | Liquid detergent for WC | |
| 05.6.1.1.08 | Window-cleaning liquid | |
| 05.6.1.1.09 | Softener | |
| 05.6.1.1.10 | Anti-limescale product | |

Source: DGSEI.

(1) ECOICOP: European Classification of Individual Consumption by Purpose. This European classification of household consumption by purpose is the harmonisation at European level of the nomenclature of consumption expenditure produced by the United Nations.

NEW BASKET ITEMS AND DELETED ITEMS (continued 3)

| ECOICOP ⁽¹⁾ | New items | Deleted items |
|------------------------|--|----------------------------|
| 05.6.1.2 | Other small non-durable household goods | |
| 05.6.1.2.05 | Scourer | |
| 05.6.1.2.06 | Squeegee sponge | |
| 05.6.1.2.07 | Paper towels | |
| 06 | Health | |
| 06.1.3.1 | Eyeglasses and contact lenses | |
| 06.1.3.1.01 | Eyeglasses (plastic) | Eyeglasses (glass) |
| 06.1.3.2 | Hearing aids | |
| 06.1.3.2.01 | Hearing aid | |
| 06.1.3.9 | Other paramedical services | |
| 06.1.3.9.02 | Nursing care | |
| 06.2.3.9 | Andere paramedische diensten | |
| 06.2.3.9.xx | | Verpleegkundige verzorging |
| 06.3.0.0 | Hospital services | |
| 06.3.0.0.03 | Two-bed room (BIM) | Common ward (VIPO) |
| 06.3.0.0.xx | | Common ward |
| 07 | Transport | |
| 07.2.1.3 | Accessories for personal vehicles | |
| 07.2.1.3.02 | Bicycle lights | |
| 07.2.2.4 | Lubricants | |
| 07.2.2.4.01 | Coolant | |
| 07.2.3.0 | Maintenance and repair of personal vehicles | |
| 07.2.3.0.05 | Bicycle repair | |
| 07.2.3.0.06 | Car wash | |
| 07.2.4.2 | Parking facilities and parking meters | |
| 07.2.4.2.01 | Parking | |
| 08 | Communications | |
| 08.3.0.4 | Combined telecommunication services | |
| 08.3.0.4.01 | Telecommunication packages | |
| 09 | Recreation and culture | |
| 09.1.1.2 | Video equipment | |
| 09.1.1.2.02 | Blu-ray player | DVD player |
| 09.1.1.2.xx | | DVD recorder |
| 09.1.3.1 | Personal computers | |
| 09.1.3.1.02 | Tablet | |
| 09.1.3.1 | Accessories for personal computers | |
| 09.1.3.1.xx | | External hard disk |
| 09.1.3.3 | Computer software | |
| 09.1.3.3.01 | Software | |
| 09.1.4.1 | Pre-recorded recording media | |
| 09.1.4.1.02 | Blu-ray disc | Music CD |
| 09.1.4.1.xx | | Educational CD-ROM |

Source: DGSEI.

(1) ECOICOP: European Classification of Individual Consumption by Purpose. This European classification of household consumption by purpose is the harmonisation at European level of the nomenclature of consumption expenditure produced by the United Nations.

NEW BASKET ITEMS AND DELETED ITEMS (continued 4)

| ECOICOP ⁽¹⁾ | New items | Deleted items |
|------------------------|--|---------------------------------|
| 09.2.2.1 | Musical instruments | |
| 09.2.2.1.01 | Guitar | |
| 09.3.1.1 | Games and hobbies | |
| 09.3.1.1.04 | Game | Word game |
| 09.3.1.2 | Toys and party goods | |
| 09.3.1.2.04 | Toy dining set | |
| 09.3.2.2 | Equipment for camping and open-air recreation | |
| 09.3.2.2.01 | Rucksack | |
| 09.3.3.2 | Plants and flowers | |
| 09.3.3.2.xx | | Hypericum |
| 09.3.3.2.xx | | Solidago |
| 09.3.3.2.xx | | Cyclamen |
| 09.3.4.2 | Pet-related products | |
| 09.3.4.2.05 | Cat litter | |
| 09.3.4.2.06 | Dog shampoo | |
| 09.4.1.1 | Recreational and sporting services (for spectators) | |
| 09.4.1.1.03 | Day trips (amusement park) | Day trips (amusement park etc.) |
| 09.4.1.2 | Recreational and sporting services (for participants) | |
| 09.4.1.2.04 | Hire of inflatable castle | DVD hire |
| 09.4.2.2 | Museums, libraries and zoological gardens | |
| 09.4.2.2.01 | Day trips (other) | Day trips (amusement park etc.) |
| 09.5.1 | Books | |
| 09.5.1.0.xx | | Tourist guide |
| 09.5.1.0.xx | | Defining dictionary |
| 09.5.3.0 | Miscellaneous printed matter | |
| 09.5.3.0.01 | Greetings cards | Visiting cards |
| 09.5.4.1 | Stationery | |
| 09.5.4.1.02 | Paper (A4 size) | |
| 09.5.4.9 | Writing and drawing materials | |
| 09.5.4.9.03 | Pencil | |
| 11 | Hotels, restaurants and cafés | |
| 11.1.1.1 | Restaurants and cafés | |
| 11.1.1.1.07 | Menu of the day | |
| 11.1.1.1.08 | Spaghetti | |
| 11.1.1.1.09 | Steak tartare | |
| 11.1.1.1.10 | Vol-au-vent | |
| 11.1.1.1.16 | White wine | Aperitif |

Source: DGSEI.

(1) ECOICOP: European Classification of Individual Consumption by Purpose. This European classification of household consumption by purpose is the harmonisation at European level of the nomenclature of consumption expenditure produced by the United Nations.

NEW BASKET ITEMS AND DELETED ITEMS (continued 5)

| ECOICOP ⁽¹⁾ | New items | Deleted items |
|------------------------|--|---------------|
| 12 | Miscellaneous goods and services | |
| 12.1.1.2 | Ladies' hairdressing | |
| 12.1.1.2.01 | Haircut | |
| 12.1.1.3 | Personal care services | |
| 12.1.1.3.02 | Sauna | |
| 12.1.2.1 | Electrical personal care appliances | |
| 12.1.2.1.02 | Toothbrush (electric) | |
| 12.1.3.1 | Non-electrical appliances for personal care | |
| 12.1.3.1.01 | Replacement blades for a safety razor (H) | |
| 12.1.3.1.02 | Toothbrush (manual) | |
| 12.1.3.2 | Personal hygiene and beauty products | |
| 12.1.3.2.08 | Liquid toilet soap | |
| 12.1.3.2.09 | Cotton buds | |
| 12.1.3.2.10 | Incontinence pads | |
| 12.1.3.2.11 | Bath oil | |
| 12.1.3.2.12 | Foam bath | |
| 12.1.3.2.20 | Roll-on deodorant | |
| 12.3.1.1 | Jewellery | |
| 12.3.1.1.02 | Necklace | |
| 12.4.0.3 | Home care services | |
| 12.4.0.3.01 | Mass catering for the elderly | |
| 12.7.0.4 | Other costs and services | |
| 12.7.0.4.02 | Advertisement | |
| 12.7.0.4.03 | Flower delivery | |

Source: DGSEI.

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