Inflation and indexation in Belgium : causes and possible effects of the current acceleration in inflation

Introduction

Measured by the harmonised index of consumer prices (HICP), inflation accelerated sharply in Belgium from 1.2 p.c. in August 2007 to 4.1 p.c. in April 2008 (1). During the summer of 2007 it had been below the rate for the euro area, but that has no longer been so since the beginning of 2008. In April, inflation came to 3.3 p.c. in the euro area, so that Belgium has a positive inflation gap of 0.8 percentage point in relation to that area. The particularly sharp acceleration in inflation in Belgium and the positive inflation gap in relation to the euro area has, in some circles, raised questions as to the role of the indexation mechanism. A first question concerns the extent to which that mechanism is the source of the current acceleration in inflation. A second concerns whether that mechanism will perpetuate the current inflationary process by triggering a price-wage spiral.

This article examines these two questions and is planned as follows. Section 1 looks at the factors at the root of the current acceleration in inflation and the positive gap between Belgium and the euro area. In that context, the article refers extensively to the study entitled "Inflation in Belgium : an analysis by the National Bank of Belgium at the request of the federal government", published in a special edition of the Economic Review, while also commenting on the latest developments. The previous study in fact only examined the data available up to January 2008, whereas this article is based on the data up to April 2008. Section 2 discusses the possible effects of the current inflationary process on wage-setting. Finally, the main conclusions are summarised.

1. Factors behind the acceleration in inflation

The acceleration in inflation recorded since mid 2007 is entirely attributable to the movement in energy prices and prices of processed food. The pace of the increase in energy prices continued to quicken in February, March and April 2008, and in that last month reached 20.7 p.c. against the previous year. Recently, the rate of processed food price increases has ceased accelerating, but has still remained at historically high levels, namely 8.3 p.c. in April 2008. As this article will show, the movement in the prices of these two product categories largely reflects the impact on consumer prices of the increase in the price of energy and food commodities. Moreover, energy products in particular were also affected by price factors of domestic origin, which are attributable only partly – if at all – to the rise in labour costs, and still less so to the indexation mechanism applied in Belgium.

(1) When this article went to press, i.e. on 30 May, the national consumer price index for May was known. On that basis, inflation according to the HICP is likely to continue rising by 5.2 p.c., though this does not invalidate the distinction which this article makes between the movement in inflation for energy and processed food on the one hand, and for non-energy industrial goods and services on the other.

TABLE 1 HARMONISED INDEX OF CONSUMER PRICES FOR BELGIUM

(percentage changes compared to the previous year)

	Total	Energy	Unprocessed food (1)	Underlying trend in inflation (2)	Processed food	Non-energy industrial goods	Services	*p.m. Health index* (3)
2001	2.4	1.4	6.9	2.1	2.2	2.0	2.0	*2.7*
2002	1.6	–3.6	3.2	2.1	1.5	1.7	2.6	*1.8*
2003	1.5	0.2	1.7	1.7	2.8	1.0	1.9	*1.5*
2004	1.9	6.6	0.9	1.4	2.2	0.3	2.1	*1.6*
2005	2.5	12.7	1.7	1.4	2.0	0.3	2.1	*2.2*
2006	2.3	7.3	3.3	1.6	2.1	0.9	2.1	*1.8*
2007	1.8	0.2	3.0	1.9	4.7	0.9	1.9	*1.8*
2007 December	3.1	8.7	2.7	2.4	7.6	1.1	2.0	*2.6*
2008 January	3.5	13.3	1.4	2.5	8.5	1.4	1.5	*2.8*
February	3.6	15.0	1.2	2.5	8.7	1.2	1.5	*3.1*
March	4.4	20.7	2.3	2.6	8.3	1.2	1.9	*3.9*
April	4.1	20.7	1.6	2.2	8.3	1.3	1.1	*3.7*

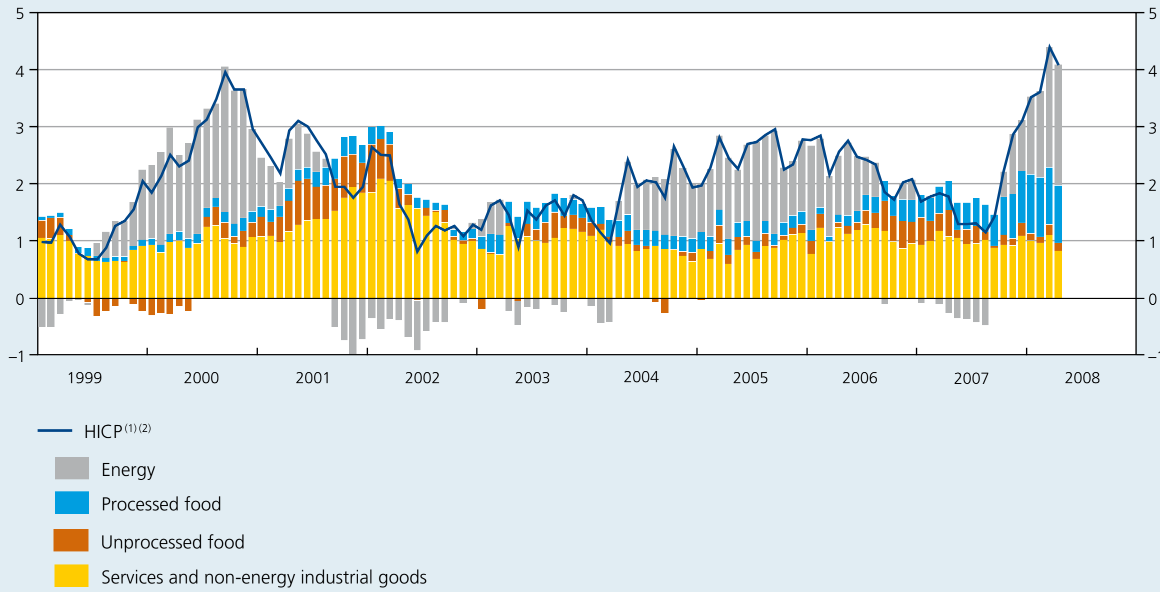
Sources: EC, DGSEI, NBB.
(1) Fruit, vegetables, meat and fish.
(2) Measured by the HICP, excluding unprocessed food and energy.
(3) National consumer price index, excluding products considered harmful to health, namely tobacco, alcohol drinks, petrol and diesel.

Conversely, the other three main components of inflation – unprocessed food, non-energy industrial goods and services – showed few signs of accelerating in the second half of 2007 and the first four months of 2008. In March 2008, the rate of price increases in the case of unprocessed food edged upwards to 2.3 p.c., a rise attributable to the movement in the prices of fish and vegetables which essentially reflects the intrinsic volatility of that component. In April, the rate of these price increases subsided to 1.6 p.c. The rising inflation in services, up from 1.5 p.c. in February to 1.9 p.c. in March, is due to the early date of the Easter holiday, which traditionally exerts a seasonal, upward effect on travel: the holiday fell partly in March this year, whereas it generally falls entirely in April. The same factor also explains why inflation in services slowed sharply in April to 1.1 p.c. In principle, this slowing is a temporary factor. The rate of increase in prices of non-energy industrial goods came to 1.3 p.c. in April.

Not only was there no increase in the contribution of these three components to overall inflation in the second half of 2007 and the first four months of 2008, but that contribution was also particularly low in relation to historical data: between September 2007 and April 2008, it came to 1.1 percentage points, compared to an average of 1.3 percentage points since January 1999. That is in marked contrast to the contribution of energy and processed food, which increased to 2.1 percentage points between September 2007 and April 2008, compared to an average of 0.8 percentage point since January 1999. In April 2008, the contribution of these product categories actually reached 3.1 percentage points.

CHART 1 INFLATION IN BELGIUM

(contribution to inflation, percentage points, unless otherwise stated)



Sources: EC, NBB.
(1) Percentage changes compared to the corresponding month of the previous year.
(2) Excluding the estimated effect, in January and July 2000, of the inclusion of sales in the HICP.

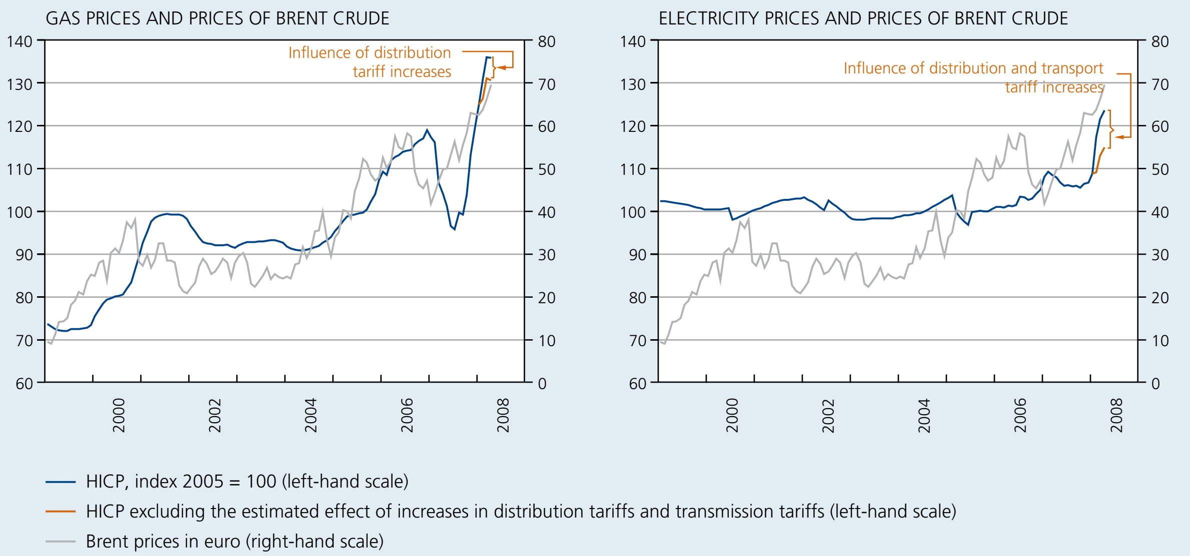
1.1 Movement in energy prices

The strong acceleration in consumer prices of energy products is due mainly to the general increase in the price of energy as a commodity. Expressed in euro, the price of a barrel of Brent crude oil averaged just over 40 euro at the beginning of 2007. Since then it has risen almost continuously, and in October 2007 exceeded the peak levels recorded in 2006 to reach an average of 70 euro in April 2008. Expressed in US dollars, the rise in the price of crude was even more marked – the price of Brent surged from 54 dollars at the beginning of 2007 to an average of 110 dollars in April 2008 – but the appreciation of the euro against the US currency attenuated the inflationary effects in the euro area.

As a result, from October 2007 and up to April 2008, consumer prices of petroleum products – not only petrol but also diesel and heating oil – exceeded the previous year's record levels so that, during the period from October 2007 to April 2008, the rate of inflation was between 10 and 17 p.c. for road fuel and between 14 and 46 p.c. for heating oil. The effects of the higher price of crude oil have been further amplified in the past few months by an increase in the refining margins for diesel and heating oil. The latter is the most sensitive to fluctuations in petroleum product prices quoted on the international markets because, unlike petrol and diesel, it is less subject to significant flat-rate duties. Conversely, the rise in consumer prices of road fuel was marginally curbed by the activation of the reverse ratchet system, whereby the excise duty on petrol was reduced by 0.87 cents between mid February and the end of April 2008. For diesel, the reverse ratchet system had already used up in 2007 the whole of the scope permitted under European law.

The rise in the prices of energy commodities also largely explains the increase in consumer prices of gas and electricity since mid 2007. Moreover, for gas that transmission accelerated considerably from January 2007 since, from that date, consumer prices have been indexed not only on the basis of the smoothed movement in heating oil prices, as used to be the case, but also on the basis of the reference price for natural gas at Zeebrugge, which is a spot price. The transmission was further reinforced from October 2007, when the largest gas supplier adjusted one of the parameters used in the indexation formulas. The resulting tariff increase was then followed – though to a lesser extent – by the other suppliers.

CHART 2 CONSUMER PRICES OF GAS AND ELECTRICITY IN BELGIUM



Sources : EC, NBB.

The costs of the energy input have also increased recently in the case of electricity. However, the impact of that rise on consumer prices has been less than for gas, owing to the higher level of the non-energy costs involved in electricity production. It was also tempered by the relative importance of nuclear power stations in generating electricity in Belgium. However, the moderating effect of this last factor has diminished slightly of late owing to the fall in the share of nuclear power, attributable to major maintenance work on the nuclear power stations. It has therefore been necessary to make more use of power stations fired by gas or coal, whereas the price of those commodities has risen sharply in recent months. Although the resulting price increases are, in principle, temporary, they undoubtedly exerted upward pressure in the first four months of 2008.

However, other factors also play a considerable role. Thus, the rise in the gas and electricity supply tariffs, and in the electricity transmission tariffs, have affected inflation for those products since February 2008, driving overall inflation up by 0.3 percentage point. This situation has arisen because the municipal associations challenged at law the justification for the tariff reductions previously imposed by the regulator, CREG, and in this case the court ruled that the CREG had exceeded its powers. In these circumstances, the municipal associations decided to put up the tariffs, thus largely cancelling out the tariff reductions previously imposed [1].

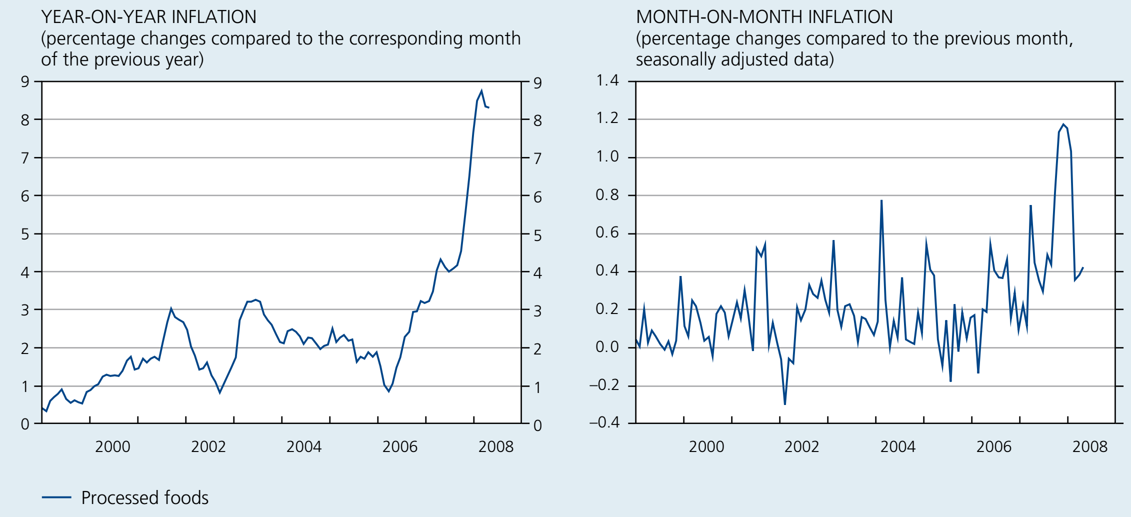
Moreover, since January 2007 the gas and electricity prices recorded by the HICP reflect the monthly tariffs movements, whereas they used to reflect the movement in the annual bills. Consequently, the adjustments described above were immediately reflected in inflation.

1.2 Movement in processed food prices

The inflation analysis conducted in February at the request of the federal government showed that the quickening pace of price increases for processed food was due largely to the rise in food commodity prices [2]. The biggest increases were recorded for milk, cheese and eggs, oils and fats (particularly butter), and bread and cereals (including pasta). The effect on consumer prices was exceptionally large because world market food prices were higher than the intervention prices set by the Common Agricultural Policy (CAP), which was therefore no longer able to

(1) For more details, see Annex C to the article "*Inflation in Belgium : an analysis by the National Bank of Belgium for the federal government*", published in the Economic Review, NBB, special edition, April 2008.
(2) For more details, see Annex D to the article "*Inflation in Belgium : an analysis by the National Bank of Belgium for the federal government*", published in the Economic Review, NBB, special edition, April 2008.

CHART 3 MOVEMENT IN PROCESSED FOOD PRICES IN BELGIUM



Sources : EC, NBB.

smooth the fluctuations in world market prices. This was therefore the first time that those fluctuations influenced European market prices without any attenuating mechanism. That largely explains the exceptional impact of this shock on prices, which in turn speeded up the transmission mechanism. A substantial shock in fact encourages firms setting prices to deviate from their normal habit of periodic price adjustments and react almost instantly. The sudden and exceptional increase in the second half of 2007 in the frequency of price adjustments in the case of the processed foods recording the biggest rises shows that this was in fact what happened (1). The resulting, highly synchronised price adjustments probably made it easier to increase prices, since individual firms did not need to be so worried as usual about their price competitiveness and hence their competitive position.

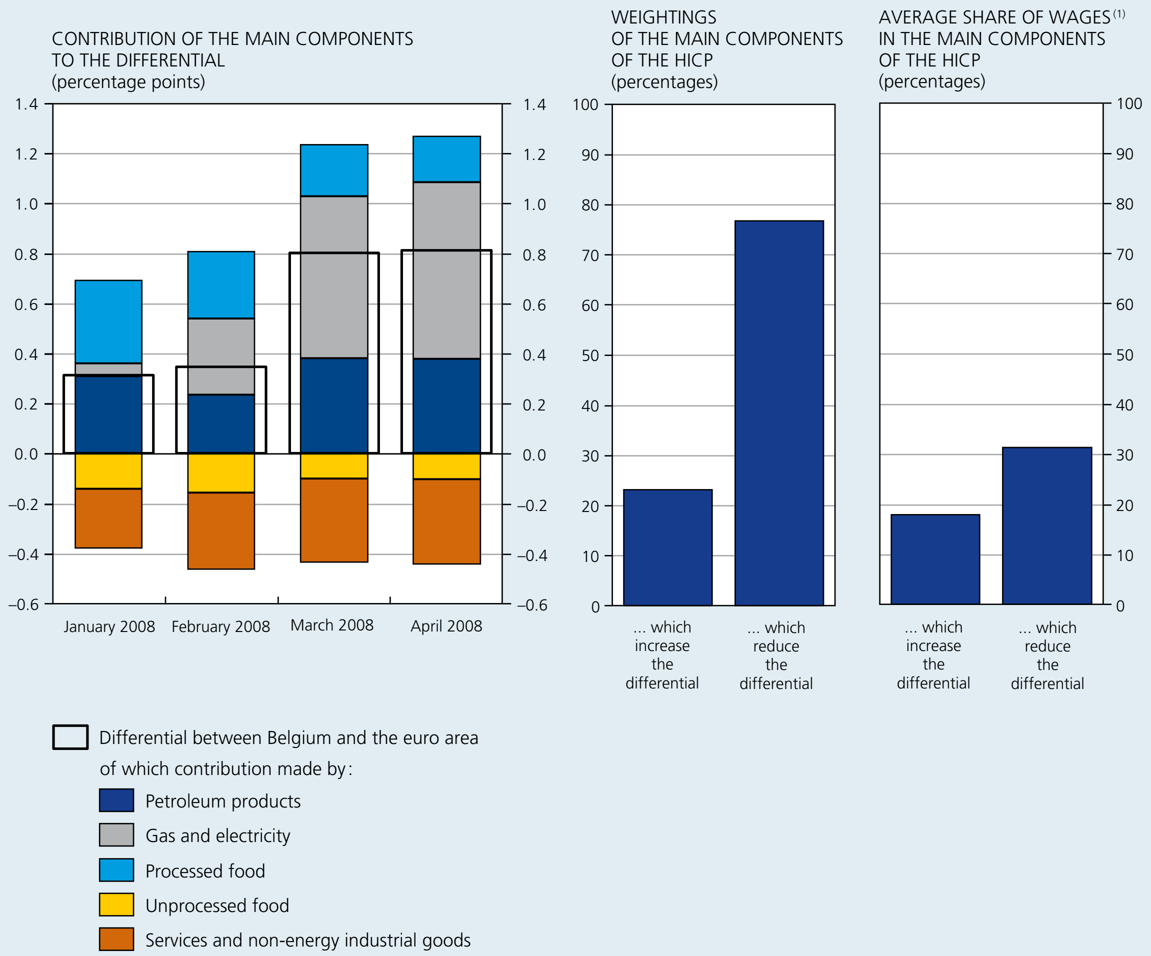
This vigorous and rapid response by consumer prices also suggested that – in the absence of other commodity price shocks – the transmission might be completed promptly and that the rate of processed food price increases might therefore soon subside. The inflation figures for February, March and April 2008 appear to bear out this assumption. The increase in processed food prices did indeed slow down from February, and dropped from 8.7 p.c. in February to 8.3 p.c. in April. However, the size of this decline should be viewed in context, since it is due entirely to a base effect resulting from the marked rise in tobacco prices recorded a year earlier. Conversely, the fact that the month-on-month changes in processed food prices have eased considerably in recent months after an exceptionally large increase in the second half of 2007 is more significant. Thus, the monthly rise in processed food prices dropped from almost 1.2 p.c. at the end of 2007 to around 0.4 p.c. in March and April 2008. This monthly price increase is nevertheless relatively high, since it corresponds to annual inflation of around 5 p.c.

1.3 Inflation differential in relation to the euro area

The inflation differential in relation to the euro area came to 0.8 percentage point in April and was due solely to the fact that the movement in prices of energy and processed foods made a larger contribution to inflation in Belgium than in the euro area. In contrast, the movement in prices of unprocessed food, and especially services and non-energy industrial goods, exerted a moderating influence. In the case of services, that was due largely to the reduction in mobile phone charges during the summer of 2007. Consequently, the positive inflation differential is attributable entirely to products which represent less than one quarter of the consumption basket, whereas for three quarters of the basket the price movement was more

(1) For more details, see Annex E to the article "*Inflation in Belgium : an analysis by the National Bank of Belgium for the federal government*", published in the Economic Review, NBB, special edition, April 2008.

CHART 4 INFLATION DIFFERENTIAL BETWEEN BELGIUM AND THE EURO AREA



Sources: EC, NAI, NBB.
(1) Calculated on the basis of the 2000 input output tables. Share of wages in cumulative costs of final household consumption, assessed at purchase prices excluding VAT. For more details, see Cornille, D. and B. Robert (2005), *Sectoral interdependences and cost structure in the Belgian economy : an application for input-output tables*, Economic Review, NBB, 2005-2.

favourable in Belgium than in the euro area. Moreover, labour costs are a less significant determinant of inflation for products which make a positive contribution to the inflation differential than for products which make a negative contribution. Of those, it is in services that wages represent the largest share of the cost structure, at 44 p.c. of the price excluding VAT.

Moreover, a more detailed analysis of the categories of products which make a positive contribution to the inflation differential shows that the movement in labour costs has played only a minimal, or even non-existent, role. The large contribution made by petroleum products to inflation in Belgium arises from the fact that the fluctuations in the prices of these products on the international market traditionally have a greater short-term effect on the Belgian HICP owing to their higher weighting and the lower excise duty imposed on them [1]. The significant contribution of gas and electricity is due to the acceleration, since the beginning of 2007, in the transmission of fluctuations in energy commodity prices to consumer prices in Belgium, plus the temporary factors described above – which exert additional upward pressure on electricity prices – and the sharp rise in gas and electricity distribution and transport costs. This last factor alone accounts for 0.3 percentage point of the inflation differential in

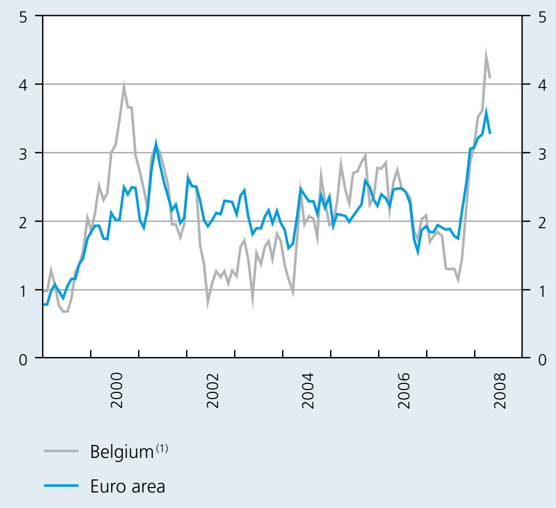
(1) For more details, see Annex B to the article "*Inflation in Belgium: an analysis by the National Bank of Belgium for the federal government*", published in the Economic Review, NBB, special edition, April 2008.

relation to the euro area. Finally, the larger contribution from processed food is due in part to the tobacco price increases in March and April 2007. In view of the disappearance of that factor from the inflation figures for March and April 2008, the contribution of this category of products to the inflation differential in relation to the euro area has diminished recently. The remainder of that contribution reflects the fact that the rise in the price of bread and cereals was significantly greater than in the euro area, plus the fact that consumption habits specific to Belgium tend to have an unfavourable effect in the current circumstances (higher weighting for bread and cereals, and for butter).

Since the creation of the monetary union, there have been brief periods in which inflation in Belgium was considerably higher than in the euro area, notably in 2000. However, there have also been periods when Belgium recorded lower inflation than the euro area, as in 2002 or more recently in 2007. Overall, inflation in Belgium has therefore not shown any systematic tendency to exceed the rate in the euro area. Thus, inflation in Belgium averaged 2 p.c. between 1999 and 2007, against 2.1 p.c. in the euro area. Wage settlements have been a major factor in this good inflation performance: the reasons why wage increases have remained moderate during this period, despite the existence of an indexation mechanism, are analysed below.

CHART 5 INFLATION IN BELGIUM AND IN THE EURO AREA

(percentage changes compared to the corresponding month of previous year)



Source: EC.

(1) Excluding the estimated effect, in January and July 2000, of the inclusion of sales in the HICP.

2. Risk of triggering a price-wage spiral

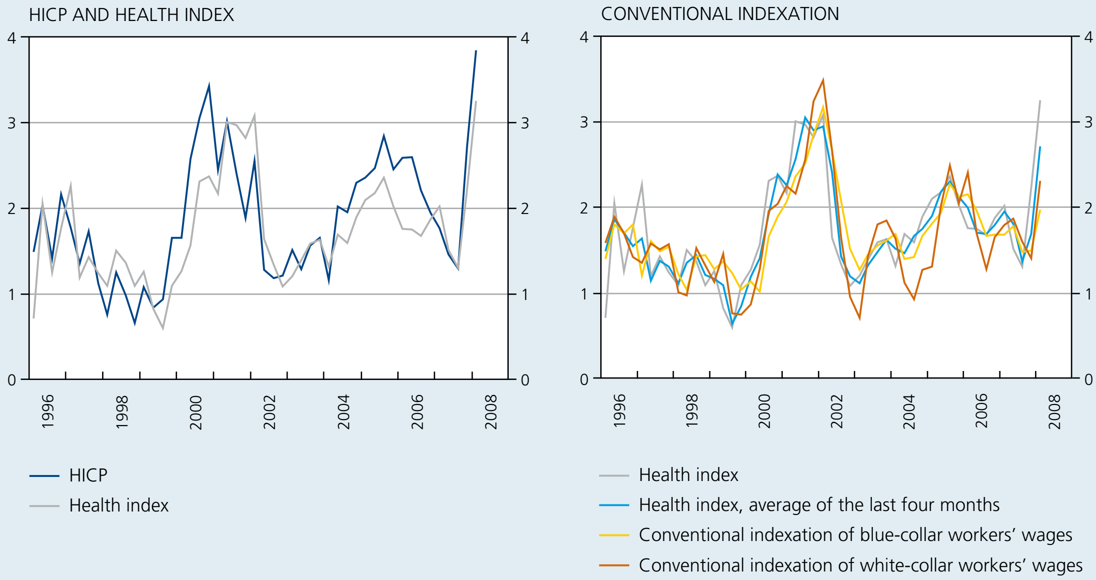
The above analysis has demonstrated that neither the acceleration in inflation up to April 2008 nor the ensuing positive differential in relation to the euro area is due to the indexation mechanism applied in Belgium. What is more, since the creation of monetary union this mechanism has not caused any structural upward deviation in inflation in Belgium compared to the figure for the euro area, where most countries do not have automatic indexation mechanisms. If it has been possible, in recent years, to reconcile wage indexation with moderate wage increases and moderate inflation, that is mainly thanks to the two principal characteristics of the Belgian system described below, which are designed to attenuate the undesirable effects of wage indexation and to make it compatible with the operation of EMU. Nonetheless, this is no cause for complacency, nor should it give the impression that wage indexation is totally harmless in regard to future wage increases and hence inflation.

The first key characteristic of the Belgian system of wage indexation is that, since 1994, it has been based on the health index. This index does not measure the whole of the movement in consumer prices, since it excludes petrol, diesel, alcoholic beverages and tobacco. Consequently, there is less risk of an oil shock triggering a price-wage spiral. Thus, over the period 1999-2007 as a whole, the cumulative rise in the health index was 2 percentage points below overall inflation, at 17.3 compared to 19.3 p.c. The lags in the health index always coincided with steep increases in crude oil prices, as in 2000 and between 2004 and 2006. This is also the main reason why the rise in the health index has again trailed behind overall inflation in recent months, displaying an average deviation of 0.5 percentage point between October 2007 and April 2008.

However, the health index does not entirely eliminate the effect of oil shocks, since it takes account of heating oil, gas and electricity prices, which are also affected by crude oil price fluctuations. Over the period 1999-2007 as a whole, the health index neutralised only around three-fifths of the rise in energy prices. Apart from the normal transmission of changes in crude oil prices to the three products mentioned, which in recent months has accelerated sharply in the case of gas, the health index is driven upwards, in the current circumstances, by the other factors responsible for the rise in gas and electricity prices, such as distribution and transport costs, and the accelerating inflation of processed food prices. Consequently, the rise in the health index recorded from mid 2007 has become much steeper, reaching 3.3 p.c. in the first quarter of 2008. In April, the index actually rose by 3.7 p.c.

CHART 6 INDEXATION MECHANISM

(quarterly data, percentage changes compared to the corresponding quarter of the previous year)



Sources: DGSEI, FPS Employment, NBB.

The indexation of the wages of both blue- and white-collar workers has therefore begun to gather speed, albeit after a slight time lag. That is due to the fact that the law stipulates that the indexation must be based on the average health index for the past four months. Moreover, the exact indexation procedures are laid down in the sectoral negotiated wage agreements, which may cause an additional delay (1). The fact that indexation only began to accelerate slightly in the first quarter of 2008 is an additional argument indicating that the surge in inflation cannot, for the moment, be blamed on indexation. Nonetheless, the corollary to this delayed response by wages is that indexation will certainly continue to accelerate in the second quarter of 2008, at the very least.

That said, it is not possible to conclude that such an acceleration will necessarily get out of control. A second key characteristic of indexation in Belgium is that, under the law of 1996 on the promotion of employment and safeguarding of competitiveness, it is incorporated in a broader framework governing private sector wage settlements. The social partners are therefore requested to take account of the impact of the indexation mechanism when determining the real wage increases and thus to reconcile the indexation with a moderate overall wage increase which should, in principle, be in line with the movement in nominal wage costs in the three main trading partners.

When determining the margin available for real wage increases, the social partners in fact take account of the expected movement in inflation when negotiating the nominal increase for the two-year period covered by an interprofessional agreement. Taking account of the automatic wage indexation mechanism during the term of the agreement, the ex post rise in nominal wages is nonetheless liable to deviate from the increase initially expected if actual inflation differs from expected inflation. Thus, in all probability, the influence of the indexations on wage increases in 2008 will be markedly greater than expected at the time of the negotiations relating to the agreements for the period 2007-2008. At the time of the sectoral negotiations in the spring of 2007, the inflation forecasts – including those produced by the Bank – were in fact much more favourable than the actual inflation figures. In practice, however, in recent years a number of sectors – representing around a quarter of private sector workers – have opted for all-in agreements, one of the aims of which is to determine real negotiated increases which can be reduced if indexation exceeds the pace expected

(1) Broadly speaking, there are two methods: indexation takes place either at fixed intervals (e.g. every six months or annually), or when certain thresholds (trigger indices) are exceeded.

at the time of conclusion of the sectoral collective agreements, as is currently the case. The risk of a price-wage spiral being triggered is thus limited during the period covered by the agreement. Conversely, once a new cycle of negotiations begins, that protection disappears and it is up to the negotiators to take that risk into account. That is also the moment when the negotiators for sectors which have not concluded all-in agreements are asked by the 1996 law to take that risk into consideration and to attenuate the effects of undesirable automatisms in wage setting.

Thus, the wage negotiations scheduled for the autumn and relating to the period 2009-2010 offer the social partners the opportunity to take account of the effect of the indexation expected for that period when determining the margin available for real pay increases. In addition, the 1996 law provides that if the increase in labour costs in Belgium were to exceed that in the three neighbouring countries, e.g. because – contrary to the initial forecasts – indexation accelerated sharply in the period 2007-2008, that slippage must in any case be taken into account when the social partners negotiate the available margin for wage increases under the new agreement.

The fact that it is incorporated in a broader framework is the precise reason why wage indexation – with use of the health index already offering partial protection against the adverse effects of an oil shock – is less automatic than it looks. In the past, these protection mechanisms have helped to moderate wage increases, and hence inflation. In the future, it is of the utmost importance to ensure that the current acceleration in inflation is not perpetuated by the impetus of second-round effects in the setting of both wages and prices. No-one would benefit from such a process triggering a damaging inflationary spiral which, all other things being equal, would in turn erode corporate profit margins and the real income of workers. Such variability in the respective movement in corporate profit margins and the real income of workers is inefficient and hence harmful to economic activity ; that is specifically one of the reasons why monetary policy attaches such importance to safeguarding price stability. In a small open economy forming part of a monetary union, such a spiral can also lead to loss of competitiveness in relation to other countries, thus further depressing economic activity and employment.

Conclusion

This article has examined the recent acceleration in inflation in Belgium and in that context has investigated two questions concerning the role played by the indexation mechanism, namely the extent to which indexation is responsible for the current inflationary process and whether it will perpetuate that by triggering a price-wage spiral.

Regarding the first question, the analysis presented above provides a clear answer : neither the acceleration in inflation nor the positive differential in relation to the euro area can so far be attributed to the Belgian indexation mechanism. The acceleration in inflation is in fact due entirely to the strong pressure from prices of energy and processed food, whereas there has so far been no sign of any rise in inflation for three-quarters of the products making up the consumption basket, particularly non-energy goods and services. What is more, it is precisely for this last category of goods that labour costs are most important as a determinant of inflation. This study demonstrates that the surge in commodity prices on the world market had been the main factor influencing the movement in prices of processed food and energy. It is particularly in the case of energy that the repercussions have been more marked in Belgium than in the euro area. Previous studies had already shown that fluctuations in crude oil prices had a greater short-term impact on the Belgian HICP owing to the higher weighting of petroleum products and the lower levels of excise duty applicable to them. Moreover, since the beginning of 2007 the transmission of energy commodity price movements to consumer prices of gas and electricity recorded in the HICP has greatly speeded up in Belgium. In addition, these products recorded a further sharp price increase at the beginning of 2008 owing to the substantial rise in transport and distribution costs.

On the second question, it appears that, in the current circumstances, and despite an undeniable moderating influence, the use of the health index did not prevent an acceleration in wage increases resulting from indexation in the first quarter of 2008. However, the law of 1996 on the promotion of employment and the safeguarding of competitiveness places Belgium's indexation practices in a broader framework governing the movement in private sector wages. More particularly, the cycle of pay negotiations relating to 2009 and 2010, scheduled for the autumn, offers the social partners the opportunity to take account of the indexation when determining the pay increases, and thus to continue the tendency which has begun in recent years, which consists in reconciling indexation with responsible pay settlements. In these conditions, it will be possible to prevent the triggering of a price-wage spiral, to contribute to the preservation of competitiveness and employment and to ensure that Belgian inflation does not remain permanently above the level in the euro area.