



INFLATION RISKS OF INTRODUCING THE EURO IN THE SR AND HOW TO ADDRESS THEM

PART I

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Prior to the Slovak Republic's entry to the European Union there were many, largely politically motivated, claims of adverse effects on the price level in the SR and on inflationary rise of prices, which for example, in the case of foods was to have meant a several-dozen-fold increase. After a year of operating in the EU we can state that the outlined scenario has not happened; inflation over the course of 2004 fell continually, where paradoxically agricultural and food prices themselves had a significant dampening effect on its development. It may be expected that a new wave of claims of impending doom regarding significant acceleration in price growth will begin to spread in parallel with the approaching schedule for introducing the euro in Slovakia, which should according to official strategy documents of the SR Government be 1 January 2009.

Expectations can sometimes have negatively self-fulfilling effects. Therefore, despite the fact that the unprofessionally predicted shock in price development upon the SR's entry to the EU has not been confirmed, we feel it necessary to give our opinion in sufficient advance on the price relations of introducing the euro into money circulation in the SR and to outline the procedures and measures that should suppress, or eliminate the potential inflation risks of the currency changeover. In many, though not all cases, the experiences of the 12 euro area countries, which introduced the euro into cash circulation on 1 January 2002, can be of help to us here.

In the first part of this article we will outline the theoretically expected inflation risks of currency changeover in the conditions of the euro area and pay closer attention to price development and the main price relations in the first year following the euro's introduction in the present euro area countries. In the second part we shall focus in particular on the issue of perceived inflation, something which is closely related to the psychology of consumer behaviour, and we shall outline the measures and procedures that it would be appropriate to adopt in the SR for limiting unjustified price growth at the time of the euro's introduction.

Inflation risks of currency changeover

Currency changeover in the conditions of the euro area is a technical operation covering the recalculation of prices and financial values and the exchange of national banknotes and coins for euro banknotes and coins according to a precisely set conversion rate (in a definition valid to 6 digits) in the country's non-cash and cash circulation. The change of currency itself does not therefore in principle contain any stimuli for price increases.

Despite the fact that from the technical aspect there is

no reason why the changeover of the national currency to the euro should lead to a general increase in prices, there do exist several channels by means of which faster price growth, or inflation acceleration, can occur in the currency changeover. These are

- implementation costs,
- recalculation, so called "menu" costs,
- rounding to a new attractive price in euro,
- inflation perceived incorrectly by the public.

Implementation costs In order to enable transactions to be made in euro private companies will incur one-off costs (adjustment and purchase of technical and technological equipment, staff training), which they could (partially) transfer on to the consumer in an effort to maintain their profit margin. These costs however should be only minimal. Besides this, the costs are of an investment nature and their potential effect on prices will be spread over the longer term.

Recalculation costs (menu costs). In retail from time to time prices are revised (e.g. in printing new price tags, menus in restaurants, etc.), which is connected with certain adaptation costs. Firms transfer these costs into consumer prices. It can be expected that traders will carry out this recalculation of costs at the same time of the changeover to the new currency¹. In this way there could occur upon the euro's introduction an extraordinary concentration of individual price changes over a short space of time, where this could influence the usual seasonal course. On the other hand, through performing both operations simultaneously (adaptation of costs and recalculating prices to euro) traders can save a part of these costs. Over the longer term average inflation should not be influenced.

¹ Price changes for shops are expensive, therefore they do not ordinarily change prices upon each change in costs, but only when the difference between the current and optimal price reaches a certain limit. The retail sector will also incur certain costs relating to the recalculation of prices from the domestic currency to euro.



Rounding to new prices attractive to consumers. It is likely that companies will round prices to new ones that are consumer-attractive in euro. The use of psychologically attractive “99” prices is very widespread in retail. Companies will have to reassess the structure of prices following the changeover to the euro in order to achieve new psychologically attractive prices. These changes however should include adjustments in both directions (upwards as well as downwards) and the overall effect on prices should be neutral². The process of rounding prices should be of a longer-term nature.

Perceived inflation. As a potential factor in accelerating inflation it is necessary to consider also the phenomenon of perceived inflation, i.e. inflation which the public perceives on the basis of individual consumer and purchasing habits and experience. With regard to the fact that the basis of perceived inflation are individual subjective evaluations, its rate can differ (sometimes significantly) from official statistics of price development. High perceived inflation can subsequently lead to pressures for increasing wages and so become a source of cost inflation in the macroeconomic scale.

Factors operating against a growth in prices

- competition in local markets,
- dual pricing and monitoring of price development,
- agreements on maintaining price stability at the time of changeover,
- thorough recalculation of regulated prices according to the conversion rate.

Competition. It may be presumed that competition in local markets is now sufficiently strong in order to prevent an unjustified increase in prices in consequence of the currency changeover. Indeed, companies may even reduce prices and use the euro to attract customers (with the aim of increasing market share). Opportunities for increasing prices may at the same time be determined to a significant extent by the current situation in demand.

Dual pricing and monitoring of price development. In order to facilitate orientation in new prices and to lay the foundations for consumer habits to calculate in the new currency, prices will be displayed for a certain time, both before and after the currency changeover, in a dual manner: in the domestic currency (in the case of the SR in koruna) and in euro. Dual pricing shall at the same time serve customers as a control instrument over the development of prices; thus least complicating price increases in retail. Consumers and consumer organisations will however have to carefully observe price development and utilise both purposes of the dual pricing.

² Naturally, in the case that upward rounding were to prevail significantly in the process of forming attractive prices, a certain inflationary stimulus could arise. Nevertheless, such an asymmetric rounding of prices should be prevented by sufficiently strong competition in the retail sector.

Agreements to not increase prices. Upon establishing the euro, the governments of the euro area member states undertook, or publicly declared, that the introduction of the euro shall have a neutral effect on consumers in terms of prices and incomes. The optimal solution is to achieve, for the currency changeover period – i.e. at least for the period during dual display – agreements on price stability with business subjects, or trade associations in all sectors of the economy. An agreement on guaranteeing price stability in the retail sector during the currency changeover was signed at the European level by 13 retail and trade associations.

It is however necessary to draw attention to the fact that dual pricing and price stability agreements are a double-edged sword. Both these instruments can reliably fulfil only an ancillary orientation function: to help consumers familiarise themselves with the value of the new currency and to operate in the newly-established price environment. In the case of euro introductions with “non-ten” conversion rates, this has mostly been very complicated. By applying these instrument it is possible to a significant degree³ to eliminate disruptive impulses which a movement in prices would bring into the consumer’s learning process. They do however signal to businesses that during this period they should restrain from price adjustments in the interest of social consensus, and so they make these adjustments in advance or after the passage of the agreed periods.

Thorough recalculation of regulated prices according to the conversion rate. The price stability principle should primarily be applied in the field of prices administered by general government institutions. All regulated prices should therefore be thoroughly recalculated according to the conversion rate. The state in this way gives a strong signal to the private sector of the credibility of its declared undertaking to ensure that the currency changeover does not become an opportunity for price increases.

From the above it is clear that the price effects of the currency changeover as a whole can be spread over a relatively long time period prior to and following the introduction of the euro. Thus price development monitoring needs to be subordinated to this. The period during which price development shall be monitored more closely must be sufficiently long so as to encompass the time period of the forecast increased occurrence of attempts to unjustifiedly increase consumer prices.

³ Neither dual pricing nor price stability agreements are instruments for an administrative freezing of prices. Their observance can be checked and any breaches publicly condemned, but they are not however enforceable. Of the 12 euro area countries only in Austria was dual pricing governed by law over the time 1 October 2001 to 28 February 2002. The law contained also control and sanction mechanisms for preventing unjustified price increases in this period. Breaches of this law were punished by a fine of ATS 20 000, and in the case of a repeated violation, of up to ATS 200 000. In Portugal it was prohibited by legislative regulation to increase prices in the public transport sector before March 2002.



Estimates of the price effects of introducing the euro in the current countries of the euro area

The following estimates, while not directly comparable, given the differences in analytical methods used, assumptions and periods monitored, nonetheless give a rough idea of the expected effects of the euro's introduction on consumer prices in the euro area.

A study by the Dutch De Nederlandsche Bank estimated that the effect of rounding all prices may represent a contribution to inflation of up to 0.7%; the study did not however take account of the influence of competition. The inflationary effect of including implementation costs in prices in 2001 and 2002 was estimated at 0.2-0.3%.

A study by the Federal Statistics Office of Germany and the Deutsche Bundesbank estimated the influence of introducing the euro on prices in Germany in the period from January to October 2001 at 0.0-0.5%. In June 2001 consumer organisations began to regularly monitor the development of prices in Germany. A study by IFAV (Institut für angewandte Verbraucherforschung) of January 2002, based on a survey in 100 shops, banks and service operations with 841 various products, reported a roughly balanced number of price increases and price decreases. In the period from June 2001 to January 2002 they found price changes in shops in 51% of cases, of which 49% of cases were increases and 51% decreases; changes at banks in 36.2 % of cases, of which 52.9 % increases, 47.1 % decreases; in services 75 % of cases showed changes after the introduction of the euro, of which more than 80 % were increases in the range from 0.24 % do 48.5 %.

A joint study by the central bank and ministry of finance of Luxembourg estimated that in the most pessimistic scenario the introduction of the euro could lead to an increase of 0.52 – 0.60% in the national CPI.

In Portugal according to a study by the Institute for Small- and Medium-Sized Enterprises 87 – 93% of shop owners did not increase prices, 6 – 9% increased prices, though for reasons other than the introduction of the euro. A study by the central bank focusing on estimating the effects of rounding to the nearest cent, using price data from January 2001, reached the conclusion that in the worst case the national CPI would increase by 0.23%, whereas in the most optimistic case a decline would occur of 0.26%.

Research in Finland on the possible consequences of the currency changeover, published in May 2001 and conducted at the Finnish Research Institute for Consumer Issues and at the ministry of finance in cooperation with the statistics office, identified 107 products the prices of which had been rounded to an attractive price in euro. The year-on-year growth in prices of this set was estimated at 7.8%. Its weighting in the CPI represented only 1.2%, but the estimated effect on the overall CPI was less than the 0.1% of the annual rate of 3.4%.

Ex ante estimated effects of the euro's introduction on prices in the euro area

With regard to the forecast relative balance in factors operating both for and against a growth in prices due to the euro's introduction, it has been estimated that the price effects of introducing the currency changeover as a whole are only very slight. Studies conducted in several member states on the inflationary effects of introducing the euro on domestic price levels have reached similar conclusions.

The influence of implementation costs on inflation in the euro area was estimated at 0.3% in 2001 and 0.1% in 2002. Generally it was expected that competition will force firms to bear at least a part of the implementation costs without transferring these into prices⁴. For the years 2003 – 2004 the net contribution of the euro's introduction has already been estimated as a reduction in inflation by 0.2 – 0.3%⁵. This net reduction effect will then be permanent.

In 2001 national statistics offices, the ECB and national central banks, as well as consumer organisations initiated the monitoring of psychologically attractive prices in several euro area countries. By monitoring the price dynamics of selected consumer goods that are usually offered at attractive prices they attempted to estimate the actual influence of the conversion of prices to euro. The results of the monitoring tests confirmed that the influence of the currency changeover on price growth should be only very limited. Even where in some countries in the case of cer-

tain goods price growth attributable to the introduction of the euro could be seen, its effects on the overall national consumer price indices were only very slight.

Price effects of the euro's introduction in assessing official statistics

Identifying the net effects of currency changeover is very complicated, since each price change may be the result of either the euro's introduction (rounding and implementation costs), or a reflection of other cost factors (e.g. wages or import prices, excise duty increases, etc) or various extraordinary factors (weather, veterinary epidemics).

The year-on-year rate of inflation, measured by the HICP, in 2002 in the euro area stood at 2.3%, the same level as a year earlier. According to an analysis by Eurostat, the largest part of the growth in prices in 2002 was the result of ordinary and some specific factors unrelated to the introduction of the euro. These were in particular adverse weather, volatile energy prices and substantial tax increases on tobacco products. Ordinary and extraordinary factors in total explained 2.01 – 2.18% of the total inflation of 2.3%.

Eurostat estimated the contribution of the introduction of euro banknotes and coins into circulation at 0.12 – 0.29% of the total inflation of 2.3% in 2002. The largest part of this overall effect, estimated in the range of 0.09 – 0.28%, occurred in the period between December 2001 and January 2002.

The identified influence of the currency changeover on prices in the euro area was the result of a detailed analysis, the main methodological procedures are briefly summarised in the box. Partial analyses led to the following findings:

- the prevailing majority of items (of expenditure

⁴ According to research by the Austrian Federal Chamber of Commerce in March 2001 a third of businesses estimated the costs for conversion at less than EUR 1,500, 35% of businesses estimated EUR 1,500 - 14,500, while 32% estimated higher costs.

⁵ According to estimates of De Nederlandsche Bank.

**Approach by Eurostat to estimating the effect of the euro's introduction on prices**

In practice it is not possible to identify in a price index the precise value of the effect of the currency changeover. There is no way of ascertaining what inflation would have been if the changeover to the euro had not been made. Even at the lowest level of specification there are many factors – regular, irregular, random and systemic, which overlap with the potential effects of the changeover and on the other hand there are a number of potential effects of the changeover which may mutually multiply or cancel one another out.

The starting point for analyses of the currency changeover effects, carried out by Eurostat, was to identify regular and specific factors not related to the euro which in 2002 influenced the euro area HICP. The second step was to evaluate the sources of the remaining increase in all HICP items, with the aim of identifying the remaining “grey area” as the basis for estimating the most probable interval of the influence had by the euro's introduction on prices.

Within the grey area items (expenditure groups) were identified, whose development contained a probable effect of the euro's introduction and groups with a most probable effect of the euro's introduction. For both these groups their influence on the aggregate euro area HICP was estimated.

A comparison of the most significant items from the euro area HICP analysis with their development in the three EU countries not belonging to the euro area provided a certain control function and confirmed the main finding on the price effects of the euro's introduction.

Determining the interval of influence of the euro's introduction on the euro area HICP:

- the upper limit is given by the sum of the estimated influences in the “likely” and “most likely” group,
- the lower interval is given by the influence of the “most likely” group.

groups), representing approx. 54% of the total weightings of the HICP, did not show any unusual price development in 2002 that would influence aggregate HICP;

- irregular price development was reported by expenditure groups representing 20% of total weightings in the HICP, these irregularities however were not related to the euro's introduction, but to extraordinary external factors (volatile energy prices, increase in security measures and subsequently in prices for transport and vacation following 11 September 2001, substantial tax increases on tobacco products at the start of 2002);

- the remaining expenditure groups, broken down into sub-groups with “likely” and “most likely” effects of the currency changeover, the “grey zone”, in which the potential effects of the euro's introduction could be seen, represented 26% of the weighting share in the HICP aggregate of the euro area.

The results of the detailed analysis of the sub-groups in which the “likely” and “most likely” effect of the introduction of the euro on price development in 2002 was estimated are summarised in Table 1.

Expenditure group items in the case of which the most likely explanation of price changes between December 2001 and

January 2002 was the introduction of the euro included primarily services sector, in particular restaurants and

Table 1: Estimates of the impact of the changeover by expenditure group (Inflation rate points)

		Jan02/Dec01	1Q02/4Q01	2002/2001
	Most likely effects			
	Services			
941	Recreational and sporting services	0.01	0.01	0.02
10X0	Pre-primary and primary, secondary, post-secondary education	0.01	0.01	0.01
1111	Restaurants, cafés and the like	0.06	0.07	0.08
1211	Hairdressing salons and personal grooming establishments	0.01	0.01	0.01
	Total: Most likely effects	0.09	0.10	0.12
	Likely effects			
	Services			
444	Other services relating to the dwelling n.e.c.	0.00	0.00	-0.01
723	Maintenance and repair of personal transport equipment	0.01	0.01	0.02
1120	Accommodation services	0.02	0.03	0.02
	Other services	0.01	0.00	0.00
	Subtotal for services	0.04	0.04	0.03
	Food			
444	Bread and cereals	0.02	0.03	0.05
113	Fish	0.00	0.02	0.02
114	Milk, cheese and eggs	0.03	0.03	0.02
116	Fruit	0.04	0.05	0.04
117	Vegetables	0.04	0.00	0.00
118	Sugar, jam, honey, chocolate and confectionery	0.00	-0.01	-0.01
119	Food products n.e.c.	0.00	0.00	0.01
213	Beer	0.00	0.00	0.01
	Subtotal for food	0.13	0.12	0.13
	Non-energy industrial goods			
933	Gardens, plants and flowers	0.01	0.01	0.01
	Other non-energy industrial goods	0.01	0.01	0.00
	Subtotal for non-energy industrial goods	0.02	0.02	0.01
	Total: Likely effects	0.19	0.18	0.17
	Low bound (most likely effects)	0.09	0.10	0.12
	Upper bound (likely + most likely effects)	0.28	0.28	0.29

Source: Euro changeover effects. Eurostat, Euro-Indicators, news release, Annex, 18 June 2003.



cafes, and “small shop services” such as hairdressers, various repair services and cleaning and services, and recreational, cultural and sporting services. The month-on-month (January 2002/December 2001) effect of these items on the aggregate HICP represented 0.09 rate points, reaching by the end of the year 0.12 rate points in the average annual HICP (2002/2001).

Items included in the group with a likely influence from the introduction of the euro were characterised in 2002 by unusual price development with no explanation found in any non-euro factors. Therefore they were termed “likely” influenced by the introduction of the euro. This group contains certain food stuff such as bread and bakery goods, fruit, vegetables, beer, as well as certain services such as car servicing and accommodation services.

The effects of the euro’s introduction on consumer prices varied between individual countries. The annual report of the European Central Bank (ECB) for 2002 states that the inflationary effect from the introduction of the euro, according to calculations by national statistics offices, represented 0.2% (France) through to 0.6% (Holland) on national HICPs. Differences between countries are explained in particular by different levels of competition in local markets (depending also on the relative significance of large retail chains and small retail vendors) and the differing situation in demand in the individual countries. However, the results of the individual studies are not directly comparable given the differences in the statistical methods used, focus of the analyses, etc.

Summary. Evaluations of the first year following the introduction of the euro into cash circulation showed, based on official statistical data, only a slight effect of the currency changeover on the aggregate HICP of the euro area, as well as on the HICP of individual member states. The prediction that potential influences of implementation costs and rounding on price growth were to a significant extent suppressed by competition in the transparent markets of the euro area was confirmed. Price increases attributable to the introduction of the euro were concentrated in a narrow range of goods and services, which was closely tied to domestic markets and consumer habits. With regard to their low weighting in the aggregate price index, the effect of price increases was reflected in the index only slightly.

View from the side of consumers and consumer organisations

In contrast to the official evaluations, inflation as perceived by the public in the first year of the euro’s operation was high and in some countries there were even consumer strikes and boycotts on the consumption of certain segments of the consumer basket⁶. The feeling of “expensiveness”⁷ was however of a general nature. Combined with consumers’ distrust regarding the future development of prices abstinence and limited purchasing began to gain increasing ground in consumer behaviour.

The sharp growth in perceived inflation following the introduction of the euro into cash circulation is illustrated in Chart 1. The perception of a fast growth in prices intensified throughout the course of 2002, though paradoxically, given the sudden fall-off in inflation expectations.

Consumer dissatisfaction with price growth was reflected in an assessment of the course of the currency changeover from the side of consumer organisations that was substantially more critical than the official assessment. Besides the increased emphasis on the issue of price growth itself in (also officially) identified items of goods and services, and the consequences of price rounding⁸, they devoted attention also to assessing the effects of commitments declared by national governments, or price stability agreements. In contrast to the official, essentially satisfactory assessments, consumer organisations criticised shortcomings (for example their non-across-the-board acceptance⁹ and insufficient compliance, or breaching¹⁰), which weakened their effectiveness.

A particular problem that contributed, following the introduction of the euro, to the feeling of general high prices was the relatively widespread resistance to using coins with the lowest nominal values (1 cent and 2 cents¹¹). Consumers gave insufficient attention to seemingly small price differences at various vendors and in paying often rounded in their own disfavour (they did not request that these coins be given in change), whereby they themselves made their purchases more expensive. Moreover, by doing so, they paradoxically were giving generous tips to such services as those at restaurants, cafés, hairdressers, or car servicing garages, whose prices and sharp increases at them were generally criticised. In order to strengthen the cognisance of values in euro and in order to bring about a change in consumer behaviour, several countries in 2002 undertook additional information campaigns entitled “Every cent counts” and “The euro pays”¹².

⁶ Consumers in Greece particularly expressed open resentment at price growth, where in September 2002 two pressure actions were seen – a general strike by consumers and a three-day boycott of fruit and vegetable purchases. In Italy in July the public protested against a 25 – 50% increase in prices at supermarkets and a 10% increase in the prices of all goods. In summer 2002 excessive price increases were criticised also by the Federation of German Consumer Organisations.

⁷ For example the well-known play on words in Austria and Germany “Euro gleich Teuro”.

⁸ For example, according to research by Flash Eurobarometer at the end of January 2002, 67% of those questioned were convinced that prices had been rounded upwards, only 2% said they thought they had been rounded downwards.

⁹ In Belgium these were made by small- and medium-sized enterprises, in Ireland by cafes, pubs and fast-food outlets.

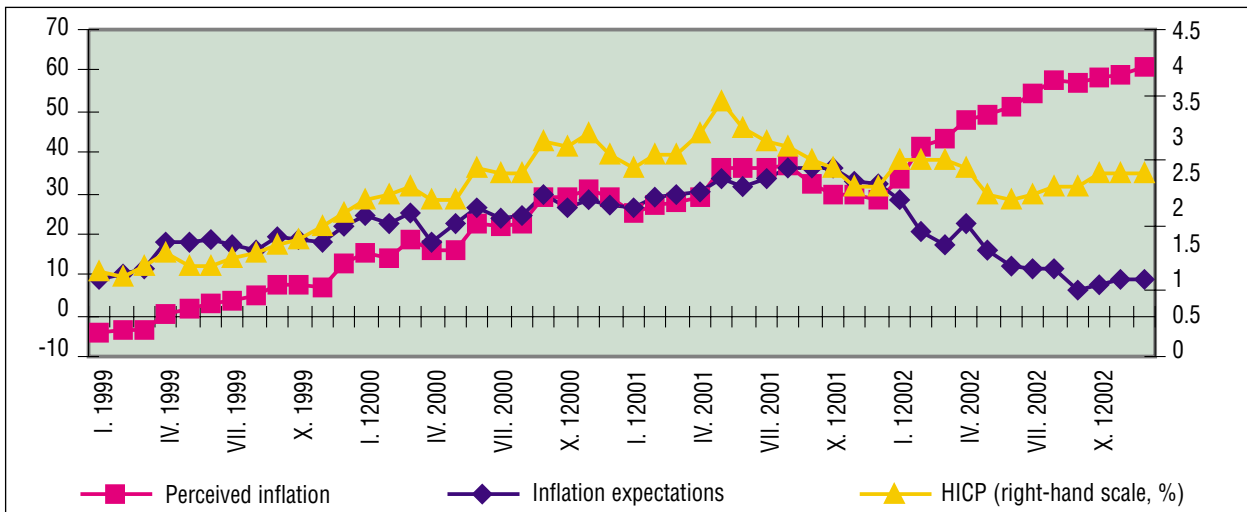
¹⁰ In particular in small shops, in France for example in supermarkets and department stores. In Greece despite the fact that the government in summer 2001 signed two memoranda on price stability, the state water company EYDAP in January 2002 increased prices by 4.9% and the electricity company DEH by 3.8%.

¹¹ In Finland these coins were not introduced into circulation at all.

¹² The European Commission contributed 50% to financing this campaign.



Chart 1 HICP, perceived inflation and inflation expectations in the euro area 1999 – 2002



Source: European Commission Business and Consumer Surveys, February 2005.

Note: The perceived inflation indicator is the result of an evaluation of consumers' answers to the question "What do you think about the development of prices over the past 12 months?". Inflation expectations show their opinion on the growth in prices in the coming 12 months in comparison with the preceding 12 months.

Main lessons learnt from the overall course of the currency changeover in 2002

Analytical studies by Eurostat, as well as studies done by euro area member states, reached the same conclusion: the introduction of the euro into cash circulation did not cause any widespread increase in consumer prices in 2002. They did however confirm the longer-term nature of the adaptation of prices to the new currency.

The price effects from the currency changeover were concentrated primarily in specific fields of the service sector. The most sharp, or sudden growth in prices at the start of 2002 was recorded generally in restaurants, cafes, fast food outlets, hairdressers, dry-cleaners, car servicing garages, and in some countries also in public transport, taxi services and various types of fees (car park fees, motorway tolls).

Prices of goods, which form more than half of private consumption expenditures, were for the euro area generally not greatly influenced by the introduction of the euro. Nevertheless, the prices of some ordinary consumption goods which households buy frequently (e.g. bakery goods, newspapers) grew in some countries quite significantly. Where these goods had a low price, rounding caused a relatively high price increase (measured as a % change). Conversely, in the case of higher-value goods, this meaning also the price of long-term consumption goods, the tendency to adjust prices downwards was more prevalent – with regard to the technical progress and high competition in these markets.

From the course of rounding to new consumer-attractive prices in euro it results that this is a longer-term process. Even if the last months of 2002 showed a substantial stabilisation in price development in the euro area, the

incomplete adaptation to new prices was seen as a certain risk for future development in the euro area. The persistence of accelerated price inflation could, in particular in countries applying wage indexation, lead to undesirable wage pressures and create the risk of cost-side inflation emerging. Over the long term however the sources of price growth pressures induced by the euro should be eliminated and the euro should have a dampening effect on price growth, since it will bring greater price transparency and competition in the euro area. These benefits will be of a permanent nature. Compliance with price stability agreements and the effectiveness of strict price monitoring in the period of dual pricing were generally assessed favourably by official institutions. In several countries, however, fears were confirmed that firms and businesses, while restraining from price increases in the period monitored, nonetheless made price adjustments before the start or after the end of dual display¹³.

From the reactions of price development to the introduction of the euro into cash circulation an important conclusion for future price stability in the euro area was reached: one of the crucial tasks in the process of the efficient promotion of all the systemic benefits of a common currency shall be the speed at which it is managed to adapt consumer behaviour to the new price structure and to suppress the phenomenon of perceived inflation.

To be continued in issue 7/2005

¹³ An example is Austria, where dual pricing was ordered (from 1 September 2001 to 28 February 2002). This regulation was frequently criticised: it was perceived as a source of substantial anticipated price increases from spring 2001 to August 2001. Prices from September were stable. In fields with low competition (swimming pools, sports centres, etc.) prices did however increase significantly from January 2002.