

The euro and prices two years on

In the realm of economic policy, hardly any event has caused such a public stir in Germany and the entire European Union as the introduction of euro banknotes and coins on 1 January 2002. Consumers in virtually every country of the euro area felt that they were experiencing a sharp surge in inflation, and there were growing numbers of press reports on excessive price rises.

The official statistics did, in fact, show that prices had gone up in connection with the introduction of euro cash but not nearly to the extent perceived by the general public. Many of the price increases were not connected with the introduction of the euro banknotes and coins but were due instead to other factors, such as very cold winter weather as well as higher taxes on energy, tobacco products and insurance. Nevertheless, there were very noticeable price movements, mainly in the case of some services. Moreover, the pattern of prices had changed, and the diversity of prices had become wider.

In the two years following the change-over to the euro, it is noticeable that price structures have, by and large, returned to normal in many sectors. Moreover, some of the excessive prices that arose at the start of 2002 have since gone down again.

A look back

Special studies ...

The Federal Statistical Office and the Deutsche Bundesbank conducted a series of special studies to accompany the conversion of consumer prices from D-Mark to euro.¹ These analyses were based not only on the comprehensive official price statistics which are published regularly but also on individual data which the Federal Statistical Office compiled specifically for this purpose.²

... reveal effect on price patterns ...

Major findings of the studies by the Federal Statistical Office and the Bundesbank were that the introduction of euro banknotes and coins and the associated conversion of prices had a considerable impact on the patterns and dynamics of (individual) prices. First, re-pricing in euro led directly to a reduction in the percentage of "attractive" prices. Whereas many prices during the D-Mark era had ended in the figure 9, ie just below what was perhaps felt to be a price threshold, this was initially much less the case from January 2002 onwards. "Rounded" prices with the final digit 0 or 5, which make it easier to give out change, were also observed less frequently. In part, this had to do with the fact that, even after the cash changeover, quite a large number of traders were also showing the prices of their goods in D-Mark and initially retaining the former pricing patterns. It was only gradually that the practice of showing prices solely in euro prevailed.

... and price dynamics

Second, the introduction of euro cash was accompanied by an exceptional number of price changes. It is likely that many vendors saw the displaying of prices in euro for the

first time as a favourable opportunity for re-pricing. Deferring or bringing forward a change in price to January 2002 was especially opportune in cases where setting new prices incurred relatively high costs. It may be that a period of considerable confusion and uncertainty also appeared to be a suitable occasion for putting up prices even though customers were inevitably going to be particularly alert to the situation. In actual fact, most prices were converted exactly in January 2002.³ In the retail food sector, some suppliers advertised the fact that they were actually rounding down the exactly converted prices and, by doing so, they were able to expand their market shares significantly.⁴ By contrast, there were more frequent, and sometimes sharp, price increases in the services sector.

¹ For the Deutsche Bundesbank, see *inter alia* Appendix: Price analysis in the period of changeover from the D-Mark to the euro, *Monthly Report*, November 2001, pp 39-42; Appendix: Introduction of euro banknotes and coins – price developments in January 2002, *Monthly Report*, March 2002, pp 8-11; Consumer prices and the changeover from Deutsche Mark to euro, *Monthly Report*, July 2002, pp 15-24. Major publications of the Federal Statistical Office: W Buchwald, J Chlumsky and N Engelhardt, Zum Einfluss des Euro auf die Preisentwicklung in Deutschland, *Wirtschaft und Statistik 2002*, Heft 3, pp 182-188; W Buchwald, J Chlumsky and N Engelhardt, *Sechs Monate Euro – Eine Zwischenbilanz der amtlichen Preisstatistik*, July 2002; J Chlumsky and N Engelhardt, *Ein Jahr Euro – ein Jahr Teuro?*, December 2002.

² For the extension of the special analysis beyond 2002, the sample was reduced from 35 products to 25. The selected goods and services are batteries (monocell), ground coffee, writing pads, dry-cleaning (a man's suit), egg noodles, ladies' tights, filter papers for coffee machines, men's hairdressing, men's socks, UHT milk, dog food, cinema tickets, butter, mineral water, car wash, frozen spinach, salami, daily newspaper (subscription), toilet paper, overnight stay in a hotel, beer consumed away from home, milk chocolate, white wine, toothpaste and sugar.

³ A special study of the consumer price statistics showed that around two-thirds of the 18,000 individual prices were converted exactly in January 2002. See Deutsche Bundesbank, Consumer prices and the changeover from Deutsche Mark to euro, *op cit*, p 19-20.

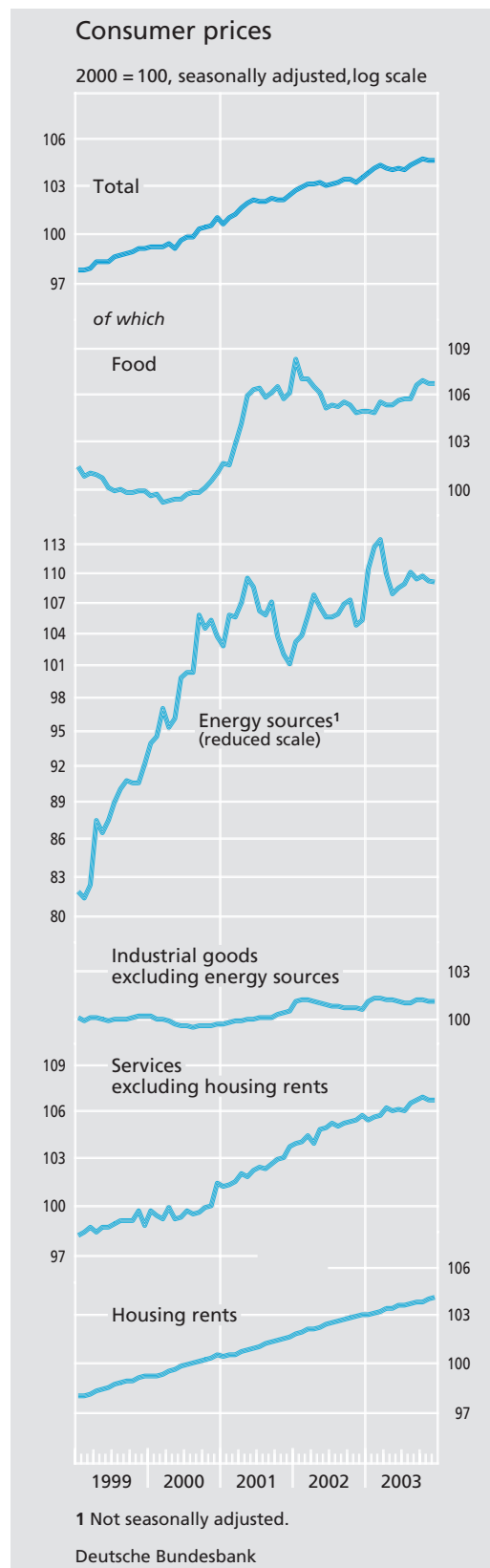
⁴ See *Gesellschaft für Konsumforschung*, Discounting wird zum Prinzip im Handel, GfK Analysen und Profile, March 2003.

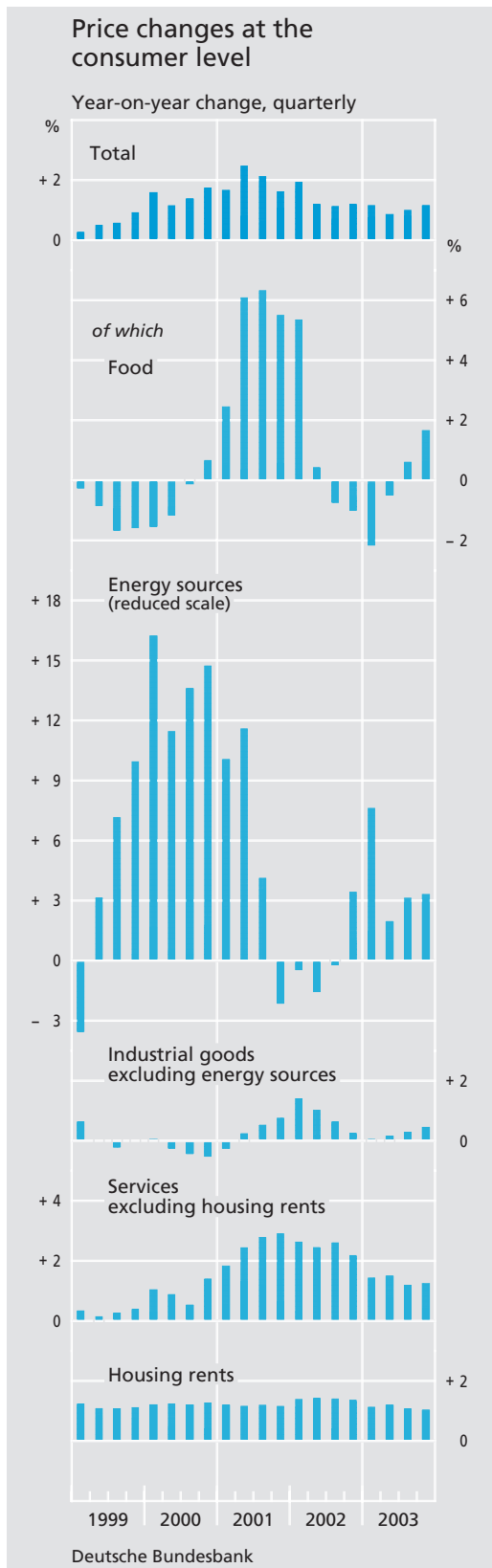
Little change
in overall price
level

The introduction of the euro had very little effect on the overall price level of the basket of goods representing household spending in Germany. According to the consumer price index supplied by the Federal Statistical Office (base year 2000), the overall price level in January 2002 went up by 0.3% in seasonally adjusted terms. This was only slightly more than in the months immediately before and after January 2002. However, the year-on-year rate went up from 1.4% in December 2001 to 2.1% in January 2002.⁵ The acceleration in the rate of inflation is by no means ascribable to the euro changeover alone, however. In actual fact, taxes on energy, tobacco products and insurance were increased as of 1 January 2002. Moreover, a reduced supply of fresh fruit and vegetables owing to very unfavourable weather pushed up prices. Even after eliminating the usual price increases at this time of year, seasonal food products still went up by around 10% on the month. At most, a 0.3 percentage point contribution to the annual inflation rate for January 2002 can be ascribed to the introduction of euro cash itself.⁶

⁵ The 2001 and 2002 analyses referred to the consumer price index based on the 1995 basket of goods. The measured rate of inflation is affected mainly by methodological revisions as well as by the updated weights.

⁶ The price statistics nevertheless show that there were some sharp increases in retail trade prices during 2001 in the run-up to the changeover. This may be seen as an indication that fairly sharp price increases in 2001 had been used to "prepare for" price reductions in January 2002. (See, for example, Institute for Applied Consumer Research, *Preisbeobachtungen vor, während und nach der Einführung des Euro*, December 2002). In this connection, however, it should be pointed out, that – especially in the food sector – prices had generally been pushed down to a very low level as a result of fierce competition for market share. This had been triggered by the market entry of a major new competitor in the retail sector in the second half of 1998 and continued until the Federal Cartel Office, in the late summer of 2000, prohibited the unfair practice of selling below cost price.





Consumer price developments since the euro changeover

In the not quite two years since the introduction of euro cash, the rise in consumer prices has remained within fairly narrow bounds. On an average of the two years, inflation was no higher than 1¼%. This is distinctly less than in the first half of the 1990s and also somewhat less than the average in the period from 1995 to 2001. Moreover, due account should be taken of the greater burden of indirect taxes, without which the price increase would have been even smaller.

Price changes generally moderate ...

This positive outcome is due in part not only to a slight decline in food prices, following a sharp rise in 2001 and early 2002, but also to comparatively moderate increases in energy prices. Over the entire period since the beginning of 2002, upward pressure on prices due to the crude oil market has been more than offset by alleviating factors related to the exchange rate. Energy taxes were increased at the beginning of 2002 and again in 2003, however. Price reductions in the case of food were associated with the waning of the BSE and foot-and-mouth disease crises and the lessening of the impact of the very cold winter weather at the turn of 2001-02. Even so, food was still discernibly more expensive than at the end of 2000.

... in the case of both energy and food ...

The noticeable price increase for industrial goods in the consumer price index is due mainly to the higher tax on tobacco. If tobacco products are excluded, the underlying tendency, if anything, is for prices to decline. Information processing machinery as well as

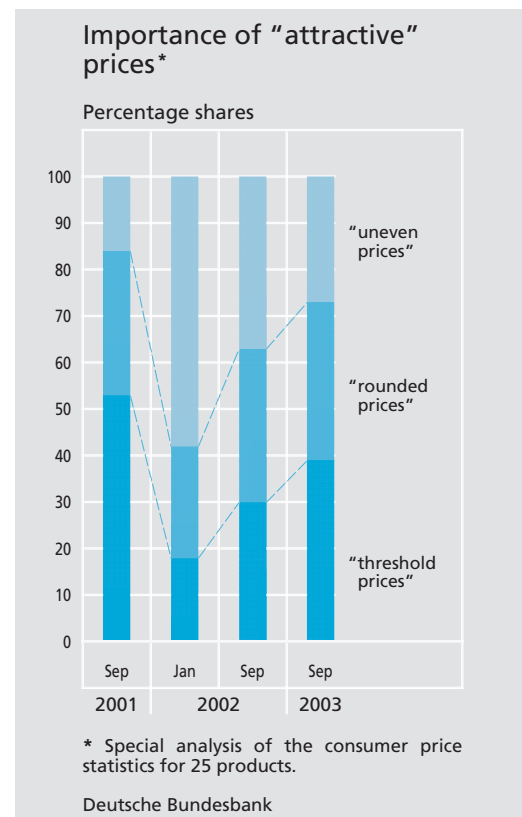
... as well as industrial goods and services

shoes and clothing have become less expensive. In the field of services, the pace of inflation has become noticeably slower since the final quarter of 2002. At the end of the period under review, the year-on-year rate of increase was less than 1½%. The increase in rents slowed to scarcely more than 1% annually. The low rate of consumer inflation reflects the subdued rise in wage costs helped by generally moderate pay settlements as well as a pronounced negative wage drift. Persistently weak domestic demand also restricted the scope for raising prices.

Price patterns and price diversity

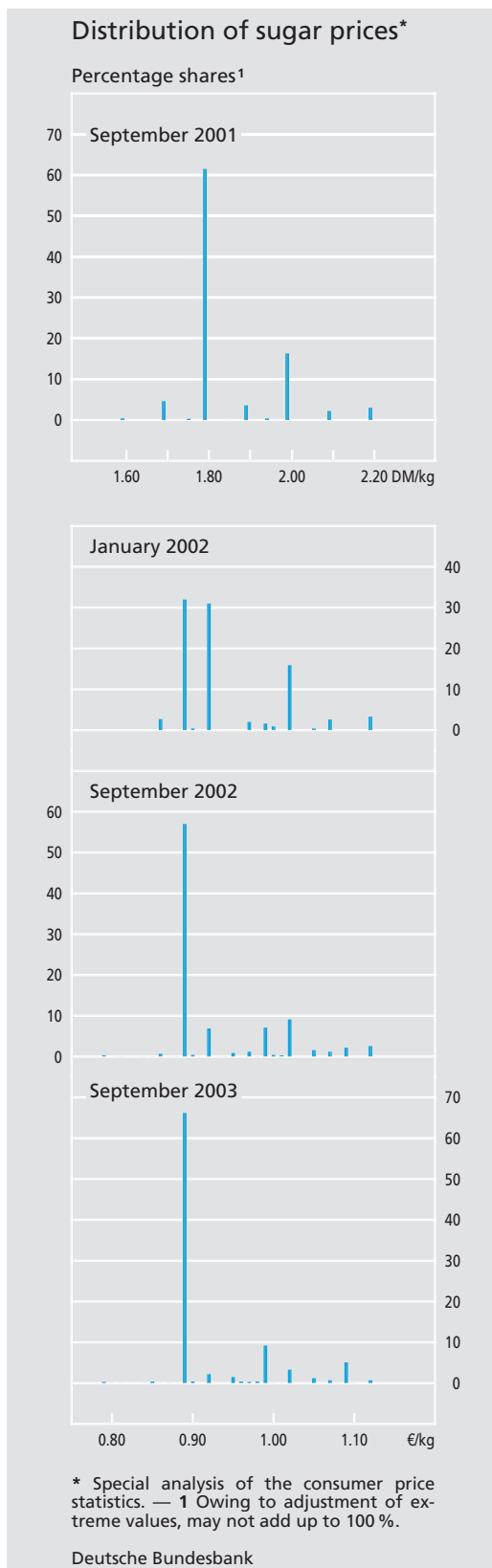
*Initial increase
in price
variations ...*

Consumer prices had to be stated in euro by the time the cash changeover took place in January 2002, if not earlier. Many products had, in fact, already been priced in both the old and new currencies before then, but the familiar D-Mark prices had predominated in the retail trade and in the case of service providers up to the end of 2001. The special study of the consumer price statistics revealed that this had been determined by (psychologically important) "threshold prices". In the case of services, "rounded" prices predominated. The changeover from D-Mark to euro was accompanied by a widening between the incremental price points. The exchange rate of DM1.95583 to €1 meant that only just over half of the prices possible earlier were available.⁷ In order to retain the former "real" gradations, consideration had to be given to prices that had end digits which differed from the familiar ones. It therefore came as no surprise that price patterns



altered with the changeover from D-Mark to euro. Whereas previously, on an average of the 25 products studied, more than half of the prices ended in a 9 and a further 30% ended in a 5 or a 0, the relevant figures in euro were less than 20% and 25%, respectively, in January 2002. At the same time, the distributions of prices fanned out, with an increase in the number of different prices for each product. This development was encouraged by the tendency of many vendors to display prices in both currencies and to retain the traditional D-Mark prices. In such cases, the price in euro was an exact conversion of

⁷ In some countries, the euro changeover brought an increase in the range of incremental price points. In Belgium, for example, the number of possible prices more than doubled, and the retail trade also made use of the additional possibilities. See National Bank of Belgium, The adaptation of prices to the changeover to the euro, December 2002.



the old D-Mark price but was often “odd” and unfamiliar. The increased variation in prices is likely to have restricted price transparency during the changeover period.

During the past two years, the price pattern has largely returned to normal. The number of “threshold” prices, for example, has increased again. However, with a share of just under 40% (up to September 2003) they have not quite regained their former significance. In the special study, however, “rounded” prices occurred somewhat more often than before. In the retail trade especially, prices ending in a 5 were more prominent than before the changeover, thus countering the non-availability of half the prices possible earlier. The share of “rounded” prices has risen to 35% in total. In the case of both goods and services, however, “odd” prices also occurred somewhat more frequently than two years earlier.

... followed by return to normal price structures

For most products, the concentration of individual prices on a small number of key price points now matches the situation prior to the introduction of euro cash. In the case of sugar, for example, the price of DM1.79 had a share of more than 60% at the end of 2001. In January 2002, the price of €0.89 and the exactly converted price of €0.92 each accounted for just over 30%. In the months that followed, €0.89 became the predominant price even though there were still several other prices, including “unattractive” ones, which were, admittedly, of no major significance. In the case of coffee filter paper, there were two predominant prices: DM0.99 and DM2.99. In January 2002, most prices were

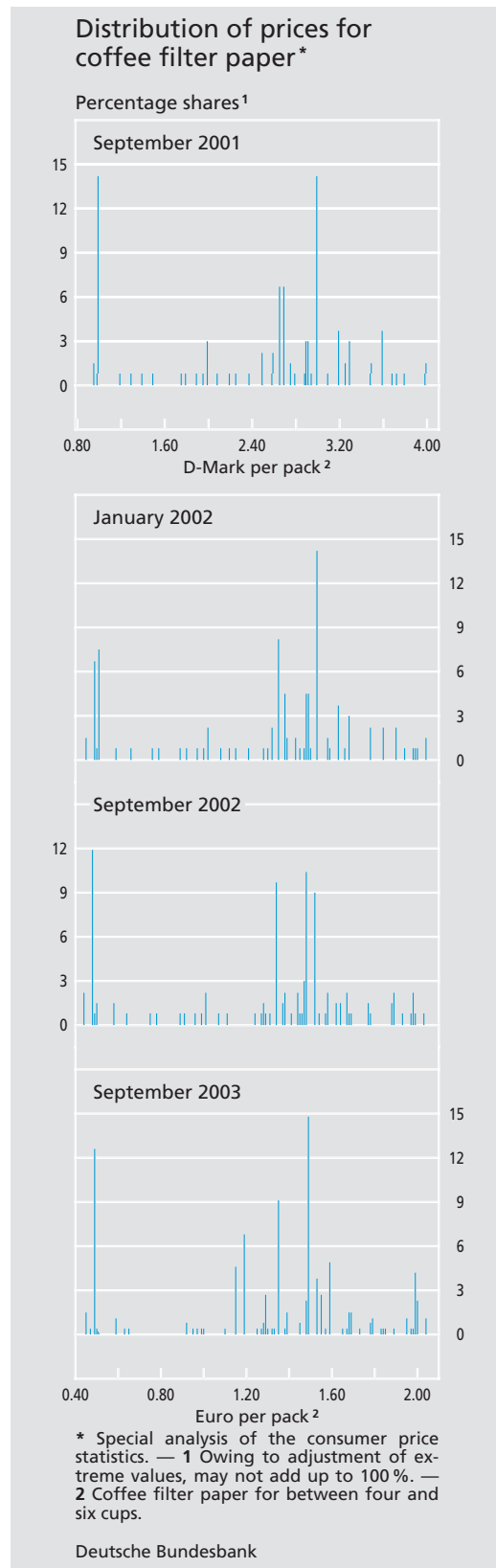
Sugar and filter paper as examples

initially converted exactly. Subsequently, two new key price points emerged: €0.49 and €1.49. At €1.35, a new “rounded” price became significant – one that had not been customary in this context prior to the introduction of the euro.

This is a typical example of price patterns gradually returning to normal following a period of variation accompanying the change-over to the euro. Although, at the time of going to press, the number of different prices was still somewhat larger than before the changeover, the majority of such additional prices are of no major significance. In actual fact, during 2002 and 2003 new key price points emerged, sometimes ending in a 5 rather than a 9. Furthermore, it is becoming apparent that the conversion of prices was not always to the disadvantage of the consumer. In the case of sugar, the new predominant price is just under 3% below the old key price point. For coffee filter paper, the prices are 3% and 2½% lower, respectively.

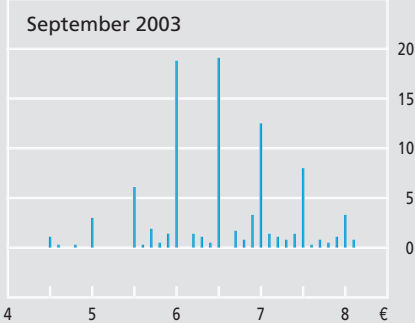
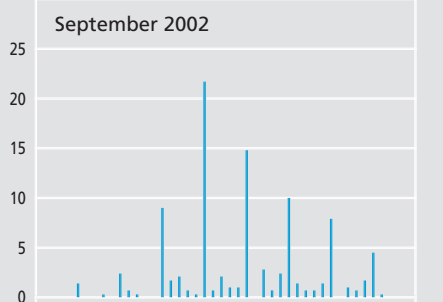
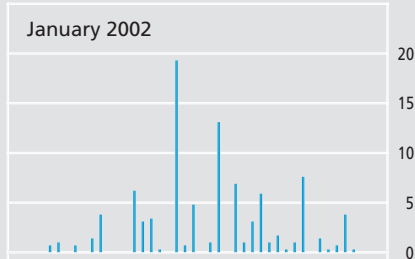
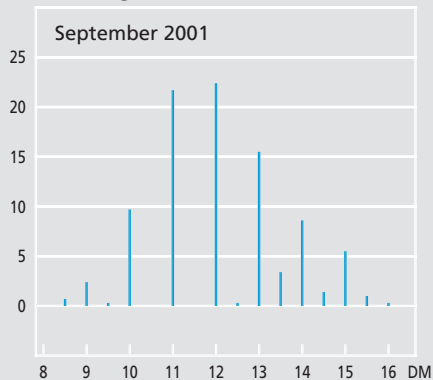
*Counter-
example:
cinema tickets*

The situation is different with regard to cinema tickets. In the D-Mark era, virtually all cinema prices were priced in full D-Mark amounts (or, at most, amounts ending in 50 pfennigs), whereas almost the entire range of 10 cent gradations are now used in the relevant price range. Nevertheless, even now, the most important prices end in 50 cents or are for full euro amounts. There has been a significant price rise. Many cinema tickets became noticeably more expensive in January 2002, and this trend has continued, albeit at a slower pace. Immediately prior to the changeover, DM11, DM12 and DM13



Distribution of prices for cinema tickets*

Percentage shares¹



* Special analysis of the consumer price statistics. — 1 Owing to adjustment of extreme values, may not add up to 100%.

Deutsche Bundesbank

were the most important prices, whereas these are now €6, €6.50 and €7.

Subsequent adjustment of excessive price changes?

It is well known that there were fairly large price increases for some goods and services in connection with the euro changeover.⁸ Given that price developments have generally been subdued recently and that pricing has returned to normal, there arises the question as to whether the exceptional price increases at the time of the changeover have now been cancelled out or whether the introduction of the euro has encouraged a permanent jump in the general price level. Any adjustments are not necessarily apparent in the form of price reductions. Subsequent price increases may, in fact, be smaller than usual or be made less frequently. The crucial factor is whether the “new” price path converges over a somewhat longer period with the “traditional” price path before the effects of the euro.

Convergence with a traditional price path

The particular difficulty of this kind of study is that the price trend without the euro changeover cannot be observed directly but can only be inferred from empirical regularities in the past. For that reason, price equations for individual goods and services constructed on major cost components, such as producer prices, wages, rents and other input prices, were estimated on the basis of the period

Method of study

⁸ See, for example, Deutsche Bundesbank, Appendix: Introduction of euro banknotes and coins – price developments in January 2002, *op cit*, p 9.

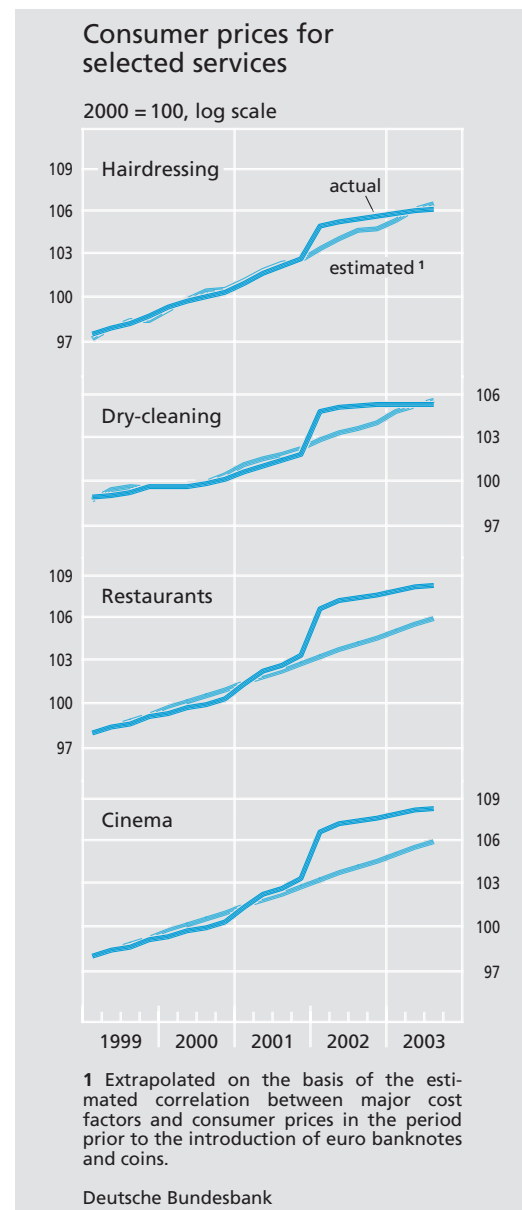
from the beginning of 1991 to the end of 2000. Restricting the time-frame to the period up to 2000 is intended to eliminate any influences from the run-up to the introduction of euro cash. Projections excluding euro factors were derived from the estimated relationships using the actual input price developments and were compared with the actual path of consumer prices. As a rule, there is quite a close and stable relationship between consumer prices and major cost factors, which means that an extrapolation over a period of three years would appear permissible.

Underlying situation

As the introduction of euro banknotes and coins was accompanied by noticeable price movements, especially for individual services, the analysis below will focus on these. In January 2002, the cost of hairdressing went up by an average of 1.9%. Prices of cinema tickets increased by 2.3%. Dry cleaning a suit cost 2.5% more. The index for restaurants, cafés and takeaways went up 2.1%. These were all exceptional monthly price movements, each of which led to a sharp rise in the year-on-year rate.⁹

Prices changed sooner rather than later

Comparing estimated and actual price developments shows, first, that, in the case of these services, there are almost no indications of previously deferred price increases subsequently being put into effect. Instead, the actual prices at the end of 2001 were largely consistent with the development to be expected on the basis of the long-term relationships. Second, price movements after the surge in prices at the beginning of 2002 were, in most cases, smaller than usual. For



example, dry-cleaning a man's suit did not become much more expensive throughout 2002, and the average price remained stable in 2003. There was a distinct flattening-out of price developments in the case of hair-

⁹ At this juncture, it should again be pointed out that by no means all vendors put up prices in January 2002. According to calculations based on the special study, just under 45% of prices for the products mentioned were increased, 10% were lowered and, at all events, just less than half remained unchanged (apart from very minor price changes).

dressing, too. Consequently, the “price excess” in the case of these two services had, on average, been eliminated by the late summer of 2003. Although a slow convergence with the estimated long-term price path may be noted in the case of restaurants and cinemas, a certain “price exaggeration” still exists at present according to the method described. Owing to the many problems involved in estimating counterfactual price developments excluding the effects of the euro, these findings should, of course, be interpreted with caution. Nevertheless, they do indicate that the “price exaggeration” accompanying the introduction of euro banknotes and coins was often subsequently eliminated in line with developments in costs. This suggests that, to a considerable extent, the price surge in January 2002 was due to anticipatory effects. The elimination of price exaggerations contributed to what was, by and large, a subdued rise in the prices of services in 2003.

Price perception and price reality

*Consumers’
price
perception ...*

Official pronouncements on the limited impact that the introduction of euro cash had on prices have met with public incomprehension in many cases. Many consumers felt price rises were much sharper than was indicated by the official statistics. This has also been reflected in the responses to the question about price developments in the past 12 months, as collected in the monthly consumer surveys of the European Commission. Interpreting the balance of opinions as to whether there have been more or less sharp

price rises or price reductions is no easy matter. Nevertheless, the fact that the balance showed a marked increase, particularly at the start of 2002, and subsequently persisted at a very high level suggests that the public perception of prices and the prices revealed in the statistics no longer matched for a time.¹⁰ In earlier years, there had been quite a close correlation between “price perception” and “price expectations for the immediate future”, as derived from the balances, and price developments as actually measured. The change in price expectations shows that consumers did not anticipate a much faster rate of inflation after January 2002. Even so, despite quite a sharp downward adjustment during 2003, the price perception indicator has

¹⁰ Consumers are asked whether, in their view, prices have risen a lot, moderately or slightly in the past 12 months, whether they have stayed about the same or whether they have, in fact, fallen. The qualitative responses are then used to calculate weighted balances, which are shown as percentages. If all consumers state that prices have risen sharply, the resulting value is +100. If all consumers state that prices have fallen, the resulting value is -100. (See European Commission, The joint harmonised EU programme of business and consumer surveys, *User Guide*, October 2003). In the Flash Eurobarometer the European Commission asks more directly whether prices have changed more in favour or to the detriment of consumers in the wake of the euro changeover or whether rises and falls balanced out. In October and November 2003, more than 90% of the members of the German public surveyed were, with hindsight, of the opinion that prices tended to have been converted to their disadvantage (EOS Gallup Europe, The euro, two years later, *Flash Eurobarometer 153*, December 2003, p 17f). The figure 12 months earlier had been 88% (EOS Gallup Europe, The euro, one year later, *Flash Eurobarometer 139*, December 2002, p 32f). The idea that the changeover was unfavourable to consumers has thus become entrenched. Strictly speaking, however, the outcome of this survey merely implies that the majority of consumers in Germany believe that prices have been adjusted upward more frequently. This is consistent with the findings of the special study of the individual price data from the official statistics (see Deutsche Bundesbank, Consumer prices and the changeover from Deutsche Mark to euro, *op cit*, p 20) although it is not inconsistent with the statement that the direct price effects of the euro changeover overall were indeed upward, albeit not very strong.

... and the
official price
statistics

so far remained at an historically very high level.

In statistical terms, however, there are no indications whatsoever that the consumer price statistics do not provide a representative overall picture. Indeed, it should be pointed out that the prices for a representative basket of 750 goods and services are precisely recorded every month by almost 600 employees of the statistical offices in 190 reporting areas or 40,000 reporting units. In total, around 350,000 individual prices are included in the calculation of the German consumer price index. This suggests that the official statistics have provided a sufficiently realistic record of consumer price developments both before and after the introduction of the euro.¹¹

This is also revealed clearly by the fact that the official consumer price index does indeed show the higher prices for some services of which many consumers complained. For the majority of households, however, their importance in terms of consumption is not very great and they therefore tend to have a low weight in the overall basket of goods. As mentioned above, prices for hairdressing rose by an average of 1.9% throughout Germany in January 2002, but their weight in terms of expenditure does not amount to even 1%. Moreover, the special analysis of the individual price data shows that prices were raised only by roughly half of the hairdressing salons observed by the official statistics. Those raising prices did so by around 6% on average.¹² There were also hairdressers who lowered their prices. The accumulation of relatively sharp price increases in the case of



some services, as perceived by the general public, is therefore clearly identifiable in the individual data from which the official consumer price index is calculated.

Areas of major significance in terms of expenditure, such as housing rents, remained largely unaffected by the euro changeover; in

¹¹ Studies on the effects on prices of the euro cash changeover are often based on very much smaller samples and can therefore make only a very limited claim to being representative. The Institute for Applied Consumer Research (IFAV), which has analysed price developments relating to the cash changeover on behalf of the Federation of German Consumer Organisations, started in mid-2001 with a sample of 1,151 prices for goods and 349 prices for services, for example. By the time the surveys ended in December 2002, the sample had shrunk to 697 prices for goods and 282 prices for services (Institute for Applied Consumer Research, *Preisbeobachtungen vor, während und nach der Einführung des Euro*, December 2002).

¹² This figure ignores minor price changes (up to five cents).

the case of many retail goods, countervailing effects were in play. Detailed surveys on price perception confirm that consumers ascribe upward pressure on prices to certain services as well as food and, in some cases, did indeed give nuanced replies to the question about the causes.¹³

*Reasons for
change in price
perception*

It would therefore be interesting to know how this change in households' perception of prices – as depicted in, say, the European Commission's consumer surveys – may have come about. One likely reason is that, given the actual conversion factor of 1.95583, the commonly used "rule of thumb" method of converting euro prices into D-Mark by using a ratio of 1:2 overstates the D-Mark value by 2.3%, thus working to the disadvantage of the euro. Furthermore, the individual consumer is likely to notice "spectacular" price increases more than correct conversions, moderate price increases or price reductions, all of which are included in the consumer price index. In addition, according to the Bundesbank's opinion polls on the acceptance of the euro, some sections of the general public continued to have reservations about the new currency after the euro banknotes and coins had been introduced.¹⁴ Finally, difficulties in using the new banknotes and coins may have contributed to a feeling of uneasiness. According to surveys commissioned by the European Commission, members of the German public, just two years after the cash changeover, had become better accustomed to using the euro and, according to their own statements, no longer convert back to D-Mark as often as they used to when doing their day-to-day shopping.¹⁵ This has not cor-

rected the assessment of price effects resulting from the changeover, however.

Economic and social psychologists have shown experimentally that price changes from D-Mark to euro are often overestimated. Even in the case of a precise conversion by the vendor, the consumer often perceives an increase in price. The effect is stronger in the case of persons who expected a price surge generally from the euro changeover.¹⁶ This is explained by the fact that calculation errors are noticed less frequently if the results of the calculation match personal expectations. In the literature on psychology, this phenomenon is known as "selective error correction". That could be one major reason for the widespread unease about the price effects of the euro changeover.

*"Selective error
correction"*

Other experimental studies for the period prior to the introduction of euro banknotes and coins concluded that, as our price perception had been geared to nominal values for many years, the value and/or appropriate

*"Anchor
effects"*

¹³ See L Fischer, C Katzer and G Kiell, *Der Teuro und die Geldillusion*, *Wirtschaftspsychologie* 2002, Heft 4, pp 43-60, especially pp 55-57.

¹⁴ Deutsche Bundesbank, *Bundesbank surveys on euro acceptance*, Press release of 11 March 2002. The Flash Eurobarometer (EOS Gallup Europe, *The euro, two years later*, December 2003) shows that many Germans' mistrust of the new currency has not yet faded even in the fifth year of economic and monetary union. Sixty per cent of those surveyed were not of the opinion that the new currency had contributed to price stability in the euro area (p 37f) and more than 50% held the view that the introduction of the euro had been disadvantageous for Germany (p 45f).

¹⁵ See EOS Gallup Europe, *The euro, one year later*, *Flash Eurobarometer 139*, December 2002, p 16f, and p 24ff, and EOS Gallup Europe, *The euro, two years later*, *Flash Eurobarometer 153*, December 2003, p 3f and p 9ff.

¹⁶ For an overview see E Traut-Mattausch, S Schulz-Hardt, T Greitemeyer and D Frey, *Euro-Einführung: Die gefühlte Inflation*, *Die Bank* 2003, Heft 6, pp 372-375.

price of a product or service in euro was often rated (and accepted) at a higher level than in D-Mark.¹⁷ Since the conversion ratio of nearly 1:2 means that the new euro prices look much lower than the old prices in D-Mark, the perceived inflationary impact of the euro can scarcely be explained in those terms, however.¹⁸

Implications for the real economy

*More cautious
spending
behaviour*

Given sharp price increases in the case of individual products, the lack of transparency (for a time) with regard to prices as well as the temporarily changed perception of prices, there arises the question of the shorter-term implications of the euro-cash changeover for the real economy. In connection with the changeover to the euro, the European Commission asked whether households tended to buy more because they did not realise how much they were spending or whether they tended to buy less because they were afraid to spend too much. The vast majority of those surveyed in Germany regarded the second category as applying to them.¹⁹ It can be concluded from this that consumers in Germany have become more cautious in their spending behaviour.

*Weak
consumer
spending*

For some time now, household consumption spending has not been showing an underlying trend increase. At around €300 billion in the third quarter of 2003, spending was no higher than two years previously. Nevertheless, given the fact that up to mid-2003 the economy as a whole stagnated – and actually threatened to go into recession – it would be

wrong to attribute weak consumer spending predominantly, let alone exclusively, to the introduction of the euro. After all, there has been hardly any increase in households' disposable income for quite some time now, and the labour market situation has deteriorated substantially. Since the introduction of euro cash, the private saving ratio has increased by ½ percentage point in seasonally adjusted terms to almost 11% of late. The upturn in saving had already begun a year earlier, however, having reached a low point in the second half of 2000 at a ratio of 9½%.

This restraint in consumption has had a particularly severe effect on two sectors, in which there were noticeable price movements accompanying the euro changeover. Turnover in the catering trade (restaurants, cafés, ice parlours and snack bars) fell dramatically in the course of 2002 and has not recovered since. In the first half of 2002, turnover was already 3% down on the year. In the second half of 2002, the decline increased to nearly 9% and, at -8%, was scarcely any better in the first half of 2003. In the case of cinemas, for which information is available from the German Federal Film Board,²⁰ the decline in turnover set in some-

*Decline in
turnover of
restaurants
and cinemas*

¹⁷ See, for example, E Jonas, T Greitemeyer, V Graupmann, C Triebel and D. Frey, *Preisschätzung in Euro vs. nationaler Währung – ein interkultureller Vergleich*, *Wirtschaftspsychologie* 2002, Heft 4, pp 36-42. This effect soon subsided after the euro cash changeover, however. See, for example, E Jonas, T Greitemeyer, V Graupmann and D Frey, *Gewöhnung an den Euro – Experimentelle Untersuchungen zur Schätzung von Preisen in DM vs. Euro vor und nach der Einführung des Euro*, *Wirtschaftspsychologie* 2002, Heft 4, pp 29-35.

¹⁸ See L Fischer, C Katzer and G Kiell, *Der Teuro und die Geldillusion*, *op cit*, p 52.

¹⁹ EOS Gallup Europe, *The euro, two years later*, December 2003, p 13f.

²⁰ See *FFA intern*, No 1/02, No 2/02, No 1/03.

what more slowly with year-on-year growth of 7% still being posted in the first half of 2002. The second half of the year then produced a downturn of almost 11%, however. The data for the first six months of 2003 show a decline of 12½%. Even though there are a wide variety of reasons for the fall in turnover in the case of restaurants and cinemas, the “overshooting” of prices in connection with the euro changeover has undoubtedly been a factor.

Outlook

In summary, it may be stated that the changeover to prices in euro has now come a long way. There is still a somewhat wider diversity

of prices than before the changeover, and signs of excessive prices may be found in the case of some products. Nevertheless, key price points have emerged for many goods and services as they did in the D-Mark era. The retail trade and service providers have been flexible in adapting to the new situation. This means that the halving of the number of available prices is unlikely to have generated additional price rigidities. According to the surveys of the European Commission, using the new currency is causing consumers fewer and fewer problems, even though consumers still often convert back to D-Mark when making major purchases. Given the continuing low rates of inflation in the euro area, the new currency is likely to be generally held in increasingly high esteem.