

Price level convergence and competition in the euro area

This article provides an overview of the extent of price level differences in the euro area and outlines the main factors behind them. While a degree of price level dispersion across countries and regions can be expected in all currency areas due, for instance, to differences in national income levels, large differences in the prices of tradable goods and services could be viewed as an indication of insufficient market integration and competition. The data available suggest that price level dispersion for many tradable goods and services remains higher between euro area countries than within individual countries, implying that further improvements in the functioning of the Internal Market are possible. The introduction of the euro represents a further step in the integration of markets in Europe. By eliminating uncertainties associated with exchange rate fluctuations, reducing transaction costs and increasing price transparency, the conditions for trade and competition should improve in the euro area, leading to further convergence of price levels for tradable goods and services. Nevertheless, barriers to trade and effective competition between euro area countries remain. This would require additional efforts to be made to adapt regulations and enhance competition in European product markets in order to reap the full benefits of the Internal Market. Moreover, integrated and well-functioning product markets would facilitate the conduct of the stability-oriented monetary policy of the ECB.

I Introduction

Over the past decade, important steps have been taken in Europe to reduce trade barriers and liberalise markets, especially product markets. These steps, which have taken the form of both domestic and EU-wide reforms (such as the Internal Market Programme, the liberalisation of a number of utility industries and more stringent competition policies), have all contributed towards increasing the intensity of domestic and cross-border competition within the EU. With increased competition, production can be expected to become more cost-efficient and innovative, resulting in a larger choice of products at lower prices. Furthermore, increased competition and innovation should lead to productivity gains and improved growth and employment prospects, while more flexible and efficient markets would allow for faster adjustment to economic shocks. This, in turn, would facilitate the conduct of monetary policy in the euro area.

The introduction of the euro is an important step in the further integration of the Internal Market as it eliminates the possibility of exchange rate fluctuations, thus stimulating trade and investment. Moreover, the introduction of the euro banknotes and coins further reduces transaction costs and increases price transparency across borders.

In turn, this should increase the strength of competition and, over time, reduce price level dispersion in the euro area.

This article focuses on differences in the price levels of goods and services in the euro area and the main reasons for them, with particular emphasis on the impact of competition. Price level dispersion across countries in an integrated economic area is often used as an indicator of the degree of market integration. As European product markets become increasingly integrated, price level dispersion for tradable goods and services can be expected to decline. Therefore, large, persistent differences in the price levels of products which are easily tradable across borders could signal that barriers to trade and competition within the euro area remain. Prices of non-tradable goods and services can also be expected to converge to the extent that income levels converge in the euro area. Overall, however, some degree of price level dispersion in the euro area can be expected to remain, as the examples of other currency areas with well-integrated markets have shown.

The remainder of this article is structured as follows: Section 2 describes the main factors behind price differences across countries and

regions; Section 3 sets out some of the ways of measuring price dispersion in the euro area; Section 4 considers how price dispersion has evolved over time; Section 5 looks at the effects of competition on price

levels and economic developments; and Section 6 concludes by discussing the main policy implications of price level dispersion and convergence.

2 Why do price levels differ between locations?

The theory of the “law of one price” states that, in integrated markets where there are no transportation costs, internationally traded products should sell at the same price in different locations (measured in a common currency). Differences in price levels would result in arbitrage, i.e. products being bought at locations where prices are relatively low and sold at locations where prices are relatively high, thereby adjusting supply and demand so that price levels converge. Empirically, the law of one price only appears to hold for a few globally traded goods at the wholesale level (such as commodities).

Many products, mainly services, are not easily tradable across borders, although an increasing number are becoming tradable under the influence of market liberalisation and technological advances. The prices of these non-tradable products are determined by local rather than international supply and demand conditions. In particular, differences in *national income levels* play an important role in explaining why price levels differ between countries. The underlying theory is based on the so-called Balassa-Samuelson effect which states that countries with higher productivity levels in the tradable goods sector will also have higher wage levels in this sector than other countries, while prices for tradable goods are set internationally. Assuming that wages become equal between sectors, e.g. due to labour mobility, the wage level in the non-tradable sector and the economy as a whole will tend to be higher than in countries with lower productivity levels. However, as productivity is normally lower in the non-tradable goods sector than in the tradable goods sector (and more equal across countries), the costs of producing non-tradable goods will be higher and lead

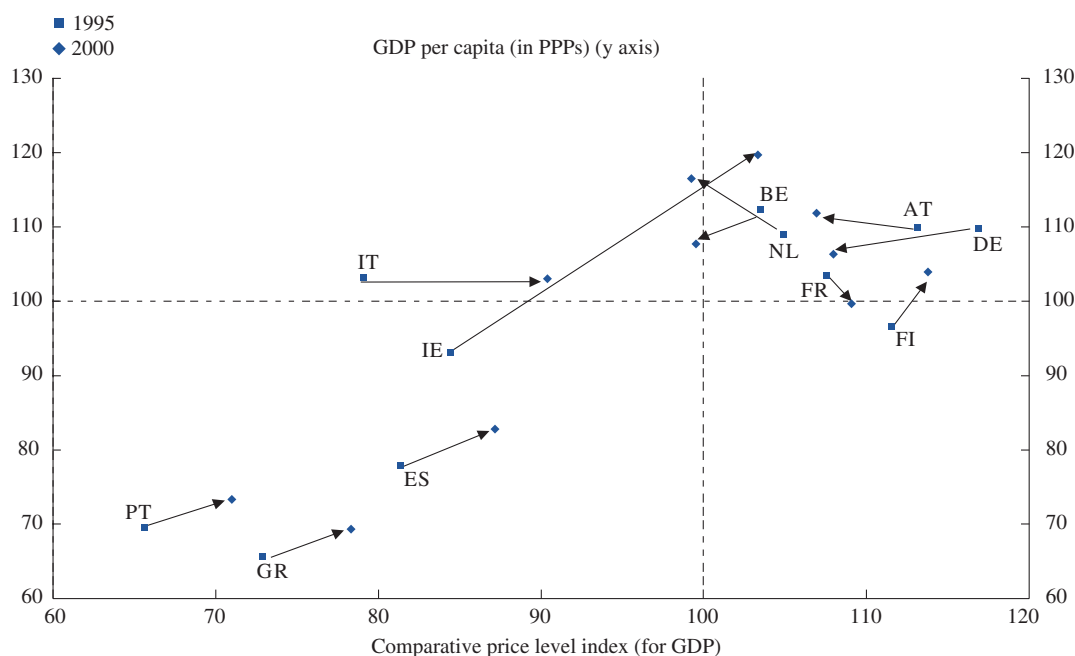
to higher relative prices for non-tradable goods. Accordingly, countries with higher productivity levels in the tradable sector and overall higher living standards (or GDP per capita levels) would tend to have higher non-tradable goods and overall price levels. This relationship is confirmed by most empirical studies. To the extent that productivity levels across countries tend to converge, price levels can also be expected to converge. Chart I shows that the relative movements in price and income levels in euro area countries between 1995 and 2000 were broadly in line with economic theory.

Other country-specific reasons for differences in price levels include differences in *national macroeconomic policies and cyclical positions*, which, in the short run, can have effects on price level developments. Moreover, differences in *national indirect and other taxes* influence selling prices. While it has been observed that indirect taxes tend to increase price differences, they are generally not considered to be a major factor in explaining price level dispersion across countries. This is partly because differences in VAT rates across euro area countries are relatively small (between 15 and 21%). However, in the case of some products, such as alcoholic beverages, tobacco or liquid fuels, excise duties and other taxes can account for a large proportion of price level dispersion between countries. Finally, *transportation costs and national preferences* reflecting cultural and linguistic differences offer natural explanations as to why market conditions and prices differ between countries. In the past, changes in the *nominal exchange rate* have also contributed to movements in comparative price levels between euro area countries from one year to the next (see also Box I).

Chart I

Price and income levels in euro area countries in 1995 and 2000

(euro area average = 100)



Sources: European Commission, OECD and ECB calculations.

Factors explaining price level differences which are more industry or product-specific include information and local production costs, market size, imperfect competition owing to market concentration, collusive company behaviour, product differentiation, companies' pricing strategies and regulatory frameworks. Most of these factors have a bearing on the intensity of competition in different markets. Changes in these factors could stem from technological advances, such as the Internet, which has reduced information costs, or government measures, such as the Internal Market Programme, liberalisation of network industries and, as is

the case of the euro area countries, the adoption of a single currency which reduces cross-border transaction costs and increases price transparency. Such changes should benefit arbitrage and increase competition, thus helping to lower price dispersion from one location to another.

In view of the above, a number of country-specific reasons, such as income differentials, and the intensity of domestic and cross-border competition in markets are important factors in explaining price level dispersion in the euro area.

3 Measures of price level dispersion in the euro area

A number of methodological and statistical issues arise when measuring and comparing price levels across countries. For instance, when making comparisons, prices of similar products should be selected. However, even products that appear to be identical are often modified to suit national or local market

conditions arising due to preferences or regulations, or are different in terms of quality. Moreover, product ranges change over time, making it difficult to analyse how prices for a particular product have developed historically. Furthermore, similar methods need to be followed when collecting price

Box 1

Measuring price levels

In order to make aggregate price level comparisons between countries, detailed price data for a broad set of products across countries are necessary. By converting the price levels into a common currency, it is possible to see which country is the most expensive overall. While the Harmonised Index of Consumer Prices is generally used to analyse the evolution of prices over time, price convergence analysis requires price level data for a spatial comparison across countries for a comparable and representative product selection. For this purpose, and in order to provide internationally comparable volume measures of GDP and its components, Purchasing Power Parities (PPPs) are often used. PPPs are calculated by the OECD and by Eurostat for all EU countries. In their simplest form, PPPs are nothing more than price relatives, calculated by dividing the price of a product (in local currency) by the price of the same product in another country (also in local currency). Accordingly, PPPs indicate the income in local currency which is needed in each country in order to buy the same volume of goods and services. Expressed another way, PPPs are the rates of currency conversion which equalise the purchasing power of different currencies by eliminating the differences in price levels between countries. The ratio between PPPs and nominal exchange rates shows the comparative, or relative, price level, from which it is possible to tell which countries are more expensive to live in. If the nominal exchange rate is the same as the PPP, the comparative price levels will be the same in the two countries. In the case of the euro area countries, it is no longer necessary to convert prices into a common currency since all prices have effectively been expressed in euro since 1 January 2002 (formally, prices have been expressed in euro since 1999, given that from 1999 to 1 January 2002 national currencies were only a denomination of the euro).

PPPs are calculated for individual products, product groups and the main aggregates of GDP. Eurostat's PPP calculations cover more than 200 product groups and are based on market prices, including taxes, of comparable and representative goods and services available within the EU. New price surveys are made in at least three-year intervals and the resulting parities are updated annually by means of detailed national price indices. In most cases, the surveys are carried out in the national capitals of EU Member States and are adjusted to be representative of the national average.

In addition to price level indices from Eurostat and the OECD, a number of firms specialised in data collection offer more specific price level data with a narrower market definition and coverage of specialist sectors. Some of these firms also collect retail prices based on bar-code scanner data which are particularly detailed and have the advantage of high frequency.

data. In particular, the type of outlet (e.g. supermarkets or specialised retailers) should be as similar as possible, and prices should be representative for the country as a whole. As these requirements are difficult to meet in full, a degree of caution when interpreting cross-country price level differences is appropriate.

At an aggregate level, comparative price levels can be constructed for comparison between countries (see Box 1). As Chart 2 shows, most euro area countries have price levels in terms of household final consumption expenditure that are relatively close to the euro area average. While price levels in

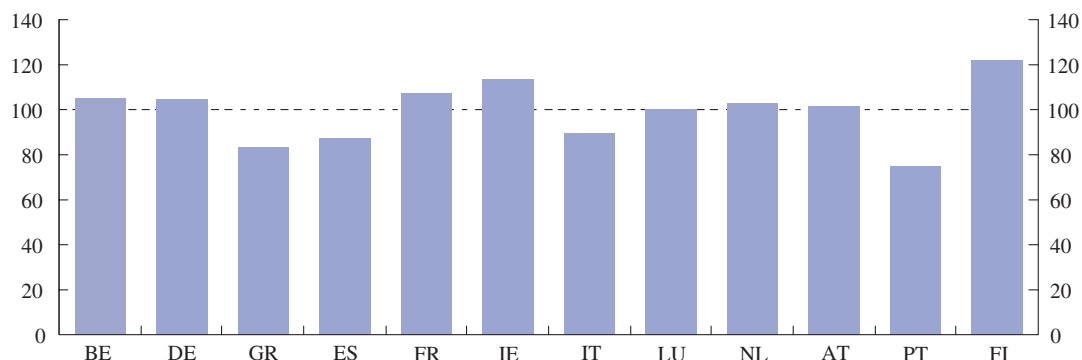
Greece, Spain and Portugal are somewhat lower than the euro area average, those in Ireland and Finland are somewhat higher.

A comparison of prices for specific product categories reveals a slightly larger dispersion across euro area countries than at the aggregate level (see Table 1). As can be expected, tradable goods, such as food, clothing and furnishings, tend to show a lower degree of price dispersion than less or non-tradable goods and services, such as rents, communications and education. This is due to the higher exposure of traded goods to cross-country price arbitrage and competition. In addition, product categories that are strongly affected by national regulations or

Chart 2

Comparative price level indices for euro area countries in 2000 (household final consumption expenditure)

(euro area average = 100)



Sources: Eurostat and ECB calculations.

taxes, such as alcoholic beverages and tobacco, tend to show a relatively high degree of price level dispersion across countries.

For individual products or product groups, market-specific price data are collected by a number of specialised firms and industry associations. The European Commission has analysed supermarket prices based on bar-code scanner data which show that price differences are relatively high across euro area countries. As shown in Table 2, price dispersion is highest in the case of mineral water, where the price is almost four times higher in Finland than in Spain.

Other products, such as coffee and flour, also show large differences between countries, with prices in the most expensive country between two and three times higher than in the cheapest country. Based on a larger set of prices of supermarket products (excluding indirect taxes), the Commission finds that prices in Germany, Spain and the Netherlands are relatively low compared with other euro area countries, while prices in Greece and Finland are relatively high. Moreover, "pan-European brands" are generally more expensive but vary less in price across countries than "generic products".

Table 1

Comparative price level indices for selected product categories in 2000 (household final consumption expenditure)

(euro area average = 100)

Product category	Highest	Lowest	Coefficient of variation ¹⁾
Food and non-alcoholic beverages	115 (Finland)	87 (Spain)	9.2
Recreation and culture	122 (Finland)	87 (Greece)	9.6
Clothing and footwear	117 (Luxembourg)	79 (Portugal)	9.9
Furnishings, household equipment	115 (Netherlands)	78 (Portugal)	10.6
Restaurants and hotels	126 (Finland)	84 (Portugal)	11.9
Transport	129 (Finland)	75 (Greece)	13.9
Electricity, gas and other fuels	132 (Netherlands)	66 (Greece)	16.3
Health	137 (Finland)	62 (Greece)	18.8
Education	169 (Luxembourg)	63 (Portugal)	29.4
Communications	159 (Finland)	68 (Greece)	29.7
Alcoholic beverages, tobacco	175 (Ireland)	72 (Spain)	30.2
Rentals for housing	141 (Ireland)	33 (Portugal)	30.9

Sources: Eurostat and ECB calculations.

1) The coefficient of variation is used to show relative dispersion, i.e. the spread around its mean value. It is defined as the ratio of the standard deviation to the sample mean. The higher the value, the higher the degree of price level dispersion between countries.

Table 2
Price indices of selected supermarket products in euro area countries in 1999-2000

(euro area average for each product = 100, including VAT; no data available for Luxembourg)

	Pan-European brands			Generic products					
	Carbonated drinks – Cola	Shampoo	Instant coffee	Butter	Flour	Ground coffee, coffee beans	Granulated sugar	Milk (Uht), half fat	Mineral water
Belgium	107	90	94	101	:	86	89	90	95
Germany	79	84	89	90	117	83	:	97	131
Greece	99	:	78	:	:	135	:	:	88
Spain	101	77	88	125	88	56	89	82	47
France	85	102	94	102	119	112	120	103	69
Ireland	100	128	101	79	:	186	114	:	174
Italy	95	85	135	128	145	78	:	123	59
Netherlands	126	127	87	87	64	72	87	88	82
Austria	98	100	104	105	118	:	106	:	72
Portugal	89	93	119	101	76	102	100	80	
Finland	121	114	109	82	73	91	96	139	184
Coefficient of variation	14.2	18.1	16.2	16.6	28.9	37.1	12.3	20.8	47.5

Sources: European Commission, "Economic Reform: Report on the functioning of Community product and capital markets" ("Cardiff report"), 2001 and ECB calculations. See also European Commission, "Price differences for supermarket goods in Europe", 2002. The table shows the price level in each euro area country for a selection of supermarket products in relation to a simple euro area average. "Pan-European brands" are defined as those brands available in at least seven EU countries, while "generic products" are brands available in fewer than seven EU countries.

4 Price level convergence in the euro area

With regard to the development of price level dispersion over time, a number of studies have found that price level convergence, both within the EU and the euro area, was especially evident in the late 1980s and early 1990s, particularly for tradable goods. This was probably a consequence of the implementation of the Internal Market Programme which reduced barriers to trade and increased cross-border competition. In the second half of the 1990s, price convergence appears to have slowed down, possibly also due to the downward convergence of inflation rates in the euro area countries.

There is no reason to expect prices to converge towards the same level in all euro area countries. In integrated national markets, some degree of regional price level dispersion remains. The level of such regional price dispersions within countries can be used as a benchmark to evaluate how much further price convergence in the euro area may go. Most studies which have compared the

situation between euro area countries and within individual countries conclude that price level dispersion tends to be greater between countries than within them. For example, the European Commission found that while the maximum price level variation across eleven EU countries for various branded consumer electronic products was around 30-40%, measured as the difference between maximum and minimum prices as a percentage of the minimum price, the price level difference inside EU countries was usually around 10-20%.¹ This result also applies to the euro area countries. Similarly, the Commission concluded in 2002 that price differences of supermarket goods within EU countries are in general four to six times smaller than those across EU countries.

Drawing a comparison with the situation in the United States, a well-integrated currency area of a similar size to the euro area, the

¹ European Commission, "Price dispersion in the Internal Market", 2001.

Commission found that the dispersion of price levels between EU countries for six product categories² was 15% in 1998, compared with 12% between 15 US cities. Price level dispersion was found to be lower in the United States for all product groups, and even more so in the case of the tradable categories. However, another study, based on city data for 165 goods and services, suggests that the scope for further price level convergence of tradable goods in the euro area may be more limited (see Table 3). According to this study, the price level dispersion of tradable goods in euro area cities was already relatively close to the US situation in 1999. The somewhat surprising result that the price dispersion of non-tradable goods and services was greater in US cities than in the euro area can mainly be explained by the significantly higher weight of housing in the United States and the inclusion of high house price data for New York, which distorts the results. The European Commission's report excludes data for New York and concludes that price level dispersion was higher for housing in the EU than in the United States in 1998.

countries will tend to increase towards the price level in the higher-income countries. Conversely, the effect of increased competition on the price levels of tradable goods and services is generally considered to be downwards. In both cases, prices should tend to converge across countries. However, depending on the starting position and timing of measures to open up markets to competition in different countries, price dispersion may increase rather than decrease in the short term. Liberalisation in the electricity and telecommunication markets, for instance, has resulted in increasing price differentials for some types of customers and services although the overall price level in the euro area for these utilities has declined. Importantly, price convergence is not a sign of efficient markets *per se*. Price levels can be similar across countries even if markets are not functioning particularly well in terms of competitive pressures and market efficiency. For instance, collusive behaviour between firms could result in low price dispersion with prices remaining at a non-optimal level. However, a downward movement of prices in a market where competitive pressures are increasing, combined

Table 3
Price dispersion in euro area and US cities

Price index		Standard deviation ¹⁾ of prices across locations		
		1990	1995	1999
Euro area (11 cities)	Overall	0.12	0.12	0.10
	Tradables	0.11	0.07	0.05
	Non tradables	0.26	0.32	0.28
United States (14 cities)	Overall	0.15	0.14	0.16
	Tradables	0.04	0.03	0.03
	Non tradables	0.51	0.49	0.56

Source: J. Rogers, G. Hufbauer and E. Wada, "Price level convergence and inflation in Europe", Institute for International Economics, Working Paper 01-1, 2001. Reprinted with permission.

1) The standard deviation measures the spread or dispersion of the data. A low standard deviation indicates a low dispersion.

The direction of price movements resulting from closer integration differs between tradable and non-tradable goods and services. To the extent that countries with lower income levels in an integrated economic area gradually tend to catch up with richer countries in terms of living standards and productivity levels, it can be expected that non-tradable prices in these

with a convergence of prices across countries, is, on balance, likely to indicate an improvement in the functioning of these markets.

2 Grocery items, housing, utilities, transportation, healthcare and miscellaneous goods and services (including entertainment, restaurant meals, clothes and alcoholic drinks), adjusted for indirect taxes. See European Commission, "Price levels and price dispersion in the EU", European Economy No. 7, July 2001.

To sum up, even in a highly integrated currency area, some degree of price level dispersion is likely to persist. However, comparisons of price level differences between euro area countries and within

individual euro area countries and the United States suggest that there may be scope for some further price level convergence within the euro area.

5 The effects of competition

Perfectly competitive markets are generally perceived to be an ideal situation in which resource allocation is the most efficient and overall welfare gains for the economy are the greatest. This stems from the fact that in a competitive market, no participant can dominate the market and producers will compete through cost efficiency and innovation, thereby keeping prices and profits at optimal and low levels. Furthermore, increased competition and innovation should lead to productivity gains and improved growth and employment prospects.³ However, in most markets, firms tend to hold a degree of market power. This implies that they have a degree of influence on their prices and profits through other means of competition. Such means may include product differentiation, branding, after-sales services, control of distribution networks or measures to restrict market entry through collusive behaviour, strategic alliances or strategic price setting. In these markets, price and profit levels would normally be higher than in a perfectly competitive market.

A strengthening in the level of competition can therefore be expected to have a downward effect on prices for a period of time, until a new lower equilibrium price level is reached. These effects can be relatively important and long lasting, as price developments in the telecommunication sector over the last four years have shown.⁴ However, it is also possible that the prices of some products and services may rise in the short term following liberalisation and an increase in competition, particularly in markets where the incumbent firm has been subsidised by the state or has cross-subsidised its activities in different markets. Although faced with the considerable methodological

problems of measuring competition, most empirical studies tend to support the notion that more intense competition increases efficiency and exerts downward pressures on costs and prices. In addition, price adjustments appear to be faster in more competitive markets.⁵ Similarly, empirical evidence generally supports the view that increased openness to international trade, i.e. competition from abroad, generates positive welfare and income effects.

As the competitive environment changes over time, owing, for instance, to market developments, trade liberalisation and structural reform, or technological advances, the redesign and adaptation of competition laws and policies in order to ensure effective competition represent a constant challenge for policy-makers. In the EU, the Commission is responsible for overseeing competition policy in the Internal Market, which applies to two broad areas: enterprise conduct (covering antitrust and mergers and acquisitions control) and state interventions (state aid). Although significant barriers to trade and competition have been removed in the EU, in particular as a result of the implementation of the Internal Market Programme, and the share of intra-euro area trade as a percentage of GDP has steadily increased, it is difficult to assess the full impact of these developments on domestic competition. The above-mentioned

³ For a more detailed description of the economic benefits of product market reform, see the ECB's Monthly Bulletin, "Product market reforms in the euro area", August 2001.

⁴ See ECB, "Price effects of regulatory reform in selected network industries", March 2001.

⁵ See, for example, S. Nickell, "Competition and Corporate Performance", *Journal of Political Economy* 104(4), 1996 and M. Asplund and R. Friberg, "Links between Competition and Inflation", *Quarterly Review of Sveriges Riksbank* 3/1998.

differences in the price levels of goods and services which are tradable across borders and monitoring exercises such as the European Commission's annual Cardiff report signal, however, that the strength of competition differs across euro area countries and that barriers to trade within the euro area, for instance in services markets, remain.

Several factors account for the restrictions in competition and market distortions in the euro area. These include state aid (which, although generally declining, is still significant in certain sectors such as rail and air transport), the continued strong role of the public sector, the degree of transparency of public procurement rules, and issues concerning the harmonisation of technical standards and patent rules. Other contributing factors include cross-country differences in taxation, labour market rigidities and fragmented financial markets. In addition, there are a number of exceptions to the basic idea of free circulation of goods and services within the Internal Market. The car market, for example, has a so-called block

exemption from competition rules in the EU. Recently, however, a number of changes in its regulatory framework have been adopted (see Box 2).

The introduction of the euro represents a further step in European integration. Having eliminated uncertainties associated with exchange rate fluctuations, thus stimulating trade and investment, it acts as a catalyst for further economic integration. Furthermore, with the introduction of the euro banknotes and coins, transaction costs have been reduced and prices have become more transparent across countries. This should improve the conditions for trade, investment, labour mobility and competition in the euro area. Consequently, price level dispersion across euro area countries should tend to decline over time and, for tradable goods and services, most likely in a downward direction. Nevertheless, as there are signs that barriers to trade and competition in euro area product markets remain, there is scope for further efforts to enhance effective competition in Europe.

Box 2

Car price differentials, car sales and distribution rules in the euro area

Car prices in the euro area show large and persistent differences across countries. The table below shows the difference (as a percentage) between the most expensive euro area country and the cheapest, for various car segments. The table indicates that there are substantial price differences across countries for the three broad car segments presented in this table. Furthermore, comparing the situation in November 2001 with that of November 1998, on balance, price differentials remained relatively constant.

Car price differentials in the euro area

(percentage price differentials before indirect taxes, expressed in euro, comparing the most expensive euro area country with the cheapest)

Car segments (average of five best-selling cars)	1/11/1998	1/11/1999	1/11/2000	1/11/2001	1/5/2002
Average small car	23.8	21.7	21.7	22.9	21.2 ¹⁾
Average medium car	23.7	21.4	23.2	28.0	26.0
Average large car	22.7	20.1	22.4	21.9	20.0

Source: European Commission.

1) Average of four best-selling cars.

Car sales and distribution in the EU have not so far been subject to standard EU competition rules. Instead, the sector is currently regulated by a block exemption (Commission Regulation (EC) No. 1475/95), which enables manufacturers to grant dealers exclusive sales rights in defined regions under a set of rules that effectively

limits competition and trade across countries. The main argument used in favour of this exemption is that motor vehicles are technically complex products requiring trained sales and service staff to secure a sufficient level of quality for consumers.

However, in view of the competition problems identified by the European Commission, reflected in the significant and persistent price differences described above, the Commission presented on 17 July 2002 a comprehensive reform of competition rules for the motor vehicle sector to replace the existing block exemption regulation, which expires at the end of September 2002. The underlying idea of this proposal is to strengthen domestic competition in the Member States' motor vehicle sectors and to improve the functioning of the Internal Market in this industry, without jeopardising consumer protection. The changes include, inter alia, greater possibilities for cross-border purchases of new cars, the flexibility for car dealers to open up secondary sales outlets in another part of the EU and sell cars of more than one brand and the possibility to sub-contract after-sales servicing. The new regulation enters into force on 1 October 2002 with a one-year general transition period to allow for the adaptation of existing contracts. A longer transition period until 30 September 2005 applies for dealers wishing to open additional outlets anywhere in the EU.

The new set of rules for the car industry is likely to increase cross-border and national competition over time and thus exert downward pressure on car prices, especially in the most expensive countries, resulting in a convergence of car price levels across the EU. Although the impact of these measures on the euro area HICP is difficult to estimate with precision, a noticeable impact cannot be excluded given the considerable weight of sales of new motorcars, spare parts and maintenance and repair of personal transport equipment in the HICP index (nearly 6%).

6 Concluding remarks

Price level dispersion across countries in a highly integrated economic area can be used as an indicator of market integration and the strength of competition. While price dispersion has declined in the euro area since the late 1980s, the cross-country dispersion of prices still appears to be higher than within individual countries. In particular, with regard to price differences of tradable goods and services, this would indicate that further improvements in the functioning of the Internal Market are possible.

While high price level dispersion across regions in the euro area could indicate a relatively low degree of economic integration, price level dispersion does not, in itself, constitute a problem for the single monetary policy of the ECB, as its aim is defined in terms of the rate of change in the HICP for the euro area as a whole. However, market forces and reforms which increase competition and flexibility can exert downward pressures on price levels and, at

the same time, reduce the extent of price level dispersion over time. Such structural changes in price levels can have temporary repercussions on HICP inflation. Examples of such developments have been evident in recently liberalised utility markets and could also occur due to future structural reforms. In the longer term, a new equilibrium price level will be established and the relative magnitude of the supply and demand effects and their distribution across sectors of the economy will determine the overall readjustment of relative prices, while changes in the general price level are determined by monetary developments.

Taking a broader perspective, efficiently functioning and competitive product markets are in the interest of European citizens at large. Increased competition should not only make production more cost-efficient and innovative, but also increase the real incomes of consumers through lower price levels. In addition, increased competition and

innovation should lead to productivity gains and improved growth and employment prospects while, at the same time, making the economy more flexible, thereby allowing for faster adjustment to economic shocks. This, in turn, would facilitate the conduct of monetary policy in the euro area.

The need for structural reforms to increase competition and market integration in EU product markets is well recognised by policy makers. This includes the need for well-designed national and EU-wide competition

policies, promoting effective competition and integrated markets. Furthermore, efficient product markets are dependent on well-functioning capital and labour markets, implying that a comprehensive reform approach is desirable. Finally, the introduction of the euro and technological advances such as the Internet are further promoting cross-border price transparency and lowering information costs, thus contributing to more integrated euro area product markets which, in turn, should reduce price level dispersion in the euro area.