

## Germany's competitive position and foreign trade within the euro area

Joining monetary union represented a major turning point for the German economy. The introduction of the euro means that foreign trade with euro-area partner countries can now be conducted in a common currency. As a result, there are no longer any exchange rate risks, and transaction costs are reduced. The launch of monetary union therefore promised a further increase in trade with the other countries of the euro area. Besides creating trade, monetary union is also expected to redirect trade. Enterprises may find it more (cost-)effective to substitute intra-EMU trade for some of the trade previously conducted with non-euro-area countries. However, the empirical findings on German foreign trade in the first four and a half years of monetary union only partially substantiate these lines of reasoning. There has indeed been quite sharp growth in Germany's trade with its EMU partners since 1999, but the increase in trade with countries outside the euro area has been even greater. When these findings are being interpreted, however, due account has to be taken of the fact that growth differentials and shifts in price competitiveness have mainly stimulated trade in goods with non-euro-area countries.

## Theoretical considerations relating to the impact of monetary union on foreign trade

### *Economic findings*

Following the customs union and the single market, monetary union is a further step in European economic (and political) integration. Economists have long been discussing the implications of such regional and monetary integration for foreign trade. The literature identifies three mechanisms, in particular, through which a monetary union might generally stimulate trade among the participating countries.

- First, there are declining transaction costs because cross-border trade within the currency union (intra-trade) can be conducted in a single currency and therefore no longer entails an exchange of currencies.
- Second, in the monetary union there are no longer any fluctuations in the nominal exchange rates. In principle, this should encourage intra-trade. Although it is fundamentally possible to hedge against exchange rate risks, this incurs currency hedging costs which increase along with the length of the planning horizon. Over extended periods, however, an enterprise engaged in foreign trade will be able to protect itself directly against exchange rate fluctuations only with difficulty or not at all. This is likely to apply mainly to small and medium-sized enterprises which have only limited means to deploy indirect hedging, say, by diversifying their production sites across national borders, and this, it is argued, might pose an obstacle to

precisely such enterprises in developing their foreign trade.<sup>1</sup>

- Third, it is to be expected that increased price and cost transparency will lead, via lower prices, to an upturn in demand and thus – at least in real terms – to more intense trade.

It is reasonable to assume that, for these reasons, exporting enterprises benefit from the creation of a monetary union. Furthermore, firms for which the costs of foreign trade have hitherto presented a barrier should also increasingly start to participate in cross-border trade. This is likely to lead to an acceleration in the foreign trade of countries taking part in monetary union. Such an effect is described as “trade-creating”.

*Trade-creating effects and...*

Another – at least theoretical – outcome of a monetary union is the redirection of trade. For the reasons mentioned, monetary union makes cross-border trade within the single currency area more attractive than trade with non-euro-area countries. Intra-trade therefore tends to replace the exchange of goods with non-euro-area countries if such trading is still subject to exchange rate uncertainty and matching transaction costs. Following the creation of a single currency area and the associated intensification of intra-trade, the share of intra-trade in the total foreign trade

*... trade-redirecting effects*

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<sup>1</sup> In the literature, there are varying assessments of the impact of exchange rate risks on foreign trade. The available studies suggest that the trade of industrial countries, in particular, is only slightly curtailed, if at all, by exchange rate risks. See IMF, *World Economic Outlook*, September 2003, p 92 f.

of the countries participating in the currency union should therefore increase.

*Empirical findings*

Empirical studies come to very widely varying conclusions with regard to the quantitative impact of a monetary union on foreign trade. Andrew Rose, for example, uses a gravity model which is expanded by the membership of a currency union to show that the members of a monetary union can have bilateral trade flows which are three times as large as those of other countries.<sup>2</sup> However, his dataset covers mainly fairly small and comparatively poor countries as well as currency unions which each have one large dominant economy. The findings are therefore not directly applicable to European monetary union. Recent studies also take account of the causes of the intensity of trade between, for example, neighbouring countries that are not due solely to monetary union.<sup>3</sup> With an estimated growth in the volume of trade amounting to just over 50 %, these studies produce significantly lower, albeit still substantial figures. On the basis of various studies, the British Treasury recently came to the conclusion that joining European monetary union might increase the United Kingdom's trade with the euro area by between 5 % and 50 % without simultaneously affecting the trade of goods with other countries.<sup>4</sup> The wide spread of the figures cited reveals the large degree of uncertainty surrounding such estimates of monetary union's effects on foreign trade. Moreover, it is to be expected that such effects will be achieved only in the long term and not after just a few years. Despite such reservations, it is interesting to study the relevant experience of Germany in the first

few years after the changeover to the single currency.

### Development and major determinants of German foreign trade since the launch of monetary union

Overall, there has been a sharp increase in German foreign trade since the launch of monetary union. This was especially the case in 1999 and 2000. Up to the first half of 2003, exports of goods grew by a seasonally adjusted average of 7 % in nominal terms with a matching figure for imports of 5½ %. Part of the growth – mainly in imports – was due to higher prices, however. In real terms, the annual increase was therefore only 6 % on the export side and just over 3½ % on the import side.<sup>5</sup>

*Development of German foreign trade*

Trade in goods has also increased significantly faster than gross domestic product (GDP). The German economy's degree of openness, defined as the sum of exports and imports of goods in relation to GDP, was roughly 56 % in the first half of 2003. It was therefore higher than in the late 1980s for the Federal Republic of Germany as its territory was defined at that time. On the import side, the continuing economic downturn of the past three years

*Increasing degree of openness*

<sup>2</sup> See A K Rose (2000), One money, one market: Estimating the effect of common currencies on trade, *Economic Policy*, 30, pp 7-45.

<sup>3</sup> See A K Rose and E van Wincoop (2001), National money as a barrier to international trade: The real case for a currency union, *American Economic Review*, 91(2), pp 386-390.

<sup>4</sup> See HM Treasury (2003), EMU and Trade, p 60.

<sup>5</sup> As far as possible, export and import figures have been deflated using the relevant price indices or, alternatively, using unit value indices.



has ultimately had a dampening impact on the activities of German importers.

Owing to the comparatively rapid export growth, Germany has been able to achieve a further slight increase in its real market share in world trade since the launch of monetary union. Between 1998 and 2002, this share went up by around 1 percentage point to 10½ %, after having already picked up from its 1995 low in the three years before. The German economy's regained competitive strength also has to be seen in the context of new opportunities for foreign trade expansion arising mainly from the opening of the central and east European economies (see explanatory notes on pages 20-21).

*Increasing real global market shares*

Regionally, at an average annual rate of 6 % in the past four and a half years, the expansion of German foreign trade (exports and imports taken together) with non-euro-area countries was sharper in real terms than the growth in intra-trade (3½ %).<sup>6</sup> However, this had also been the case, for example, in the eight years prior to monetary union. The expected effects of monetary union (and at least in some respects, those of the single market) in boosting and redirecting trade – which should have benefited mainly intra-trade – are not immediately identifiable in these figures for Germany.

*Intra-trading versus external trading*

As already mentioned, when evaluating these discrepancies, due account should be taken of the fact that the effects which monetary union has on foreign trade undoubtedly emerge only in the long term and may therefore appear, if at all, only in embryonic form during the period observed. In the periods under observation here, experience has shown that the effects emanating from the growth of export markets and the composition of goods demanded by non-residents are dominant. Furthermore, changes in price competitiveness have an influence on the development of exports and imports.<sup>7,8</sup> More-

*Reasons for the discrepancies*

<sup>6</sup> In order to ensure comparability, Greece (which did not adopt the euro until 2001) was assigned to the euro area for the entire period under observation.

<sup>7</sup> Although foreign demand has a direct impact only on German exports, it also has an indirect, albeit weaker impact on imports owing to the large import content of the exports.

<sup>8</sup> The extent to which changes in price competitiveness affect foreign trade as a whole (exports and imports) depends on enterprises' pricing behaviour and on the elasticities of exports and imports. It may be assumed that an improvement in price competitiveness stimulates exports and dampens imports; the net effect can only be determined empirically. For Germany, econometric studies indicate that, in terms of their price competitiveness, exports have a higher elasticity than imports, thus producing a positive net effect.

over, not only have there been shifts in price competitiveness between Germany and non-euro-area countries – resulting primarily from changes in the euro exchange rate. There have also been shifts in price competitiveness within the euro area owing to varying developments in costs and prices.

*Growth differentials*

Taking the period 1999-2003 as a basis, the growth of the non-euro-area economies has been distinctly more rapid than that of Germany's partner countries in the euro area. The International Monetary Fund (IMF) estimates growth in the world economy during this period to have averaged 3½ % annually; if Germany is excluded, however, the euro area expanded up to the first half of 2003 by an annual average of no more than just under 2½ %. Non-euro-area trading partners' demand for German goods is therefore also likely to have been stronger.

*Structure of demand*

Given the existing patterns of specialisation in German foreign trade with a concentration on capital goods (including motor vehicles), the structure of foreign demand may also have been a major factor in the development of exports. There are only incomplete relevant data on this, however. Moreover, IMF and OECD estimates of fixed capital formation for the period 1999-2003 show hardly any differences between the advanced economies as a whole and the euro area (excluding Germany). Thus, the structure of demand evidently does little to explain the discrepancies in regional export developments.

A similar picture to that in world economic growth emerges if developments in import

demand in Germany's major markets are considered. Since the launch of monetary union, imports of goods by the other euro-area countries – Germany's major export market accounting for roughly 43½ % of all German exports – have risen by an annual average of no more than 2½ % in real terms whereas the IMF estimates that global trade has grown by just under 5 % during this period.<sup>9</sup>

*Regional demand developments*

As already mentioned, other competitors have contributed to these regional differentials. These countries are attempting to establish their place in the international division of labour. Especially important, from a German perspective, is the fact that the two-way trade in goods with the countries of central and eastern Europe has been showing decidedly buoyant growth since the opening of the Iron Curtain. These countries' geographical proximity to Germany, cost advantages in production and the high level of German direct investment in the region have all been major factors in this development.

*Increasing importance of central and east European countries*

The above-mentioned demand trends both in and outside the euro area have been accentuated by changes in price competitiveness. The depreciation of the euro in the first two years of monetary union led for a time to a significant improvement in the price competitiveness of the German economy (and of the other euro-area economies) vis-à-vis the non-euro-area economies. Even the ensuing ap-

*Shifts in price competitiveness...*

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<sup>9</sup> The IMF bases its calculation of world trade on total exports and imports of goods. As the differentials in the average growth rates are minor, however, the basic statement that global economic growth has been markedly stronger than the growth in other euro-area countries' intra-imports of goods still holds.

## International competitiveness of the German economy and of the other euro-area countries

An economy's international competitiveness is determined by a whole series of price and non-price factors. In general, price competitiveness is assessed with particular reference to cost and price relationships between the domestic economy and its foreign competitors after adjustment for exchange rates – ie expressed in one currency. Such indicators are calculated in a variety of ways for both Germany and the euro area as a whole. Experience has shown that the best indicators of real price competitiveness are those which capture the relative prices and costs of internationally traded goods as comprehensively as possible.<sup>1</sup> The indicators used for Germany are the relative deflators of total sales and unit labour costs in the corporate sector, both of which show a quite similar profile. For the euro area, the ECB provides comparable indicators with the real effective exchange rate of the euro based on unit labour costs in the economy as a whole and the GDP deflator.<sup>2</sup>

For the period since the launch of monetary union, these indicators largely show a comparatively favourable degree of price competitiveness for both Germany and the euro area as a whole. For example, based on the deflator of total sales in the period from early 1999 to the second quarter of 2003, Germany's mean price competitiveness vis-à-vis its major non-euro-area trading partners was around 10½% up on its long-term average since 1975. For the euro area as a whole, the comparable real external value of the euro based on the GDP deflators likewise points to competitive advantages (of roughly 7½%).<sup>3</sup> In both cases, the main reason for this was the depreciation of the euro in the first two years of monetary union. An additional factor from the German perspective was that, owing to a lower rise in costs, domestic enterprises' price competitiveness also showed

an improvement against that of competitors from other euro-area countries.

In addition to price and cost factors, which are captured by the described indicators, an economy's international competitiveness is also influenced by other variables such as product quality, customer service, punctuality of delivery, capacity for innovation and flexibility. Such qualitative features are difficult to capture in their totality. For that reason, the result of enterprises' foreign trade activities is often used as a basis, and shares of the world market which reflect all competitive factors are applied as a reference variable for assessing competitiveness. Nevertheless, when interpreting world market shares, it should be borne in mind that, up to a point, they are "backward-looking" indicators which tend to reflect an economy's past strengths and weaknesses rather than its future ones.

Furthermore, the world market shares which are normally used and which are based on nominal variables may give a distorted impression if there are sharp exchange rate movements. The sharp depreciation of the euro against the US dollar in 1999 and 2000, for example, led to a decline in Germany's (nominal) share of the world market although other indicators, such as growth in (real) exports and relative costs and prices indicated an improvement in price competitiveness. The assessment of an economy's competitive position should therefore be based on real (rather than nominal) world market shares which are adjusted for exchange rate and price effects.<sup>4</sup>

In the recent past, the German economy's real world market shares have largely been consistent with its price

<sup>1</sup> For indicators of price competitiveness, see Deutsche Bundesbank, Real exchange rates as an indicator of international competitiveness, *Monthly Report*, May 1994, pp 45-57, and The indicator quality of different definitions of the real external value of the Deutsche Mark, *Monthly Report*, November 1998, pp 39-52. — <sup>2</sup> See European Central Bank, Developments in the euro area's international

cost and price competitiveness, *Monthly Bulletin*, August 2003, pp 67-74. — <sup>3</sup> The relevant time series only stretches back to 1991, however. — <sup>4</sup> For the calculation of real world market shares, see Deutsche Bundesbank, Foreign trade and payments, *Monthly Report*, November 2002, p 40. — <sup>5</sup> The exports listed in the customs statistics, showing the fob value of the goods, were used for the calculation. —

competitiveness on the world markets (see adjacent chart).<sup>5</sup> Since the mid-1990s, Germany has recorded a sharp increase in real world market shares – an increase which continued after the launch of monetary union. At 10½% in 2002, Germany gained a larger share of the world market than at any time since the early 1990s.<sup>6</sup>

What is noteworthy in this context is that, of all the euro-area countries whose price competitiveness benefited in a similar fashion from movements in the euro exchange rate, it is, above all, Germany that has significantly expanded its real world market share since the launch of monetary union (+1 percentage point). The other euro-area countries' total share of real global exports remained nearly unchanged during this period, however. If individual countries are considered, it was only Ireland – a country catching up with the advanced economies – that likewise achieved a slight gain in market share (around ¼ percentage point), while Italy and Belgium lost ground somewhat internationally.

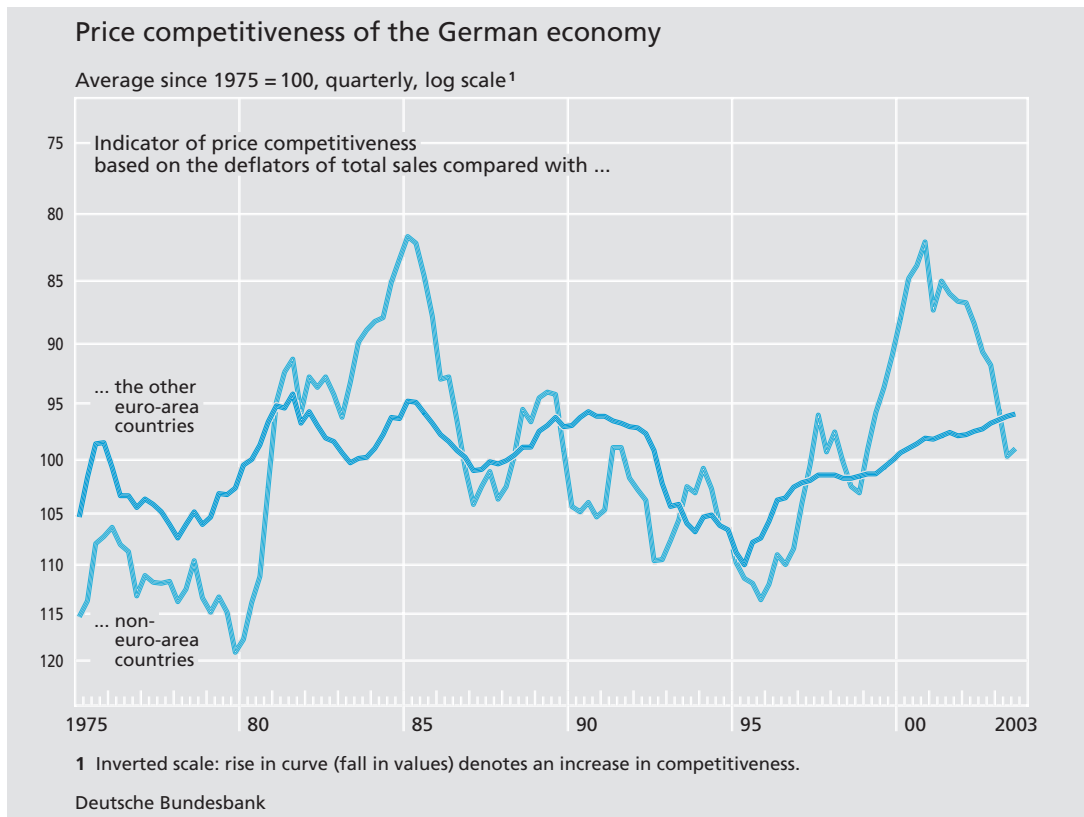
The shifts in shares of world trade are also to be seen in the context of the advances made by the emerging economies in South-East Asia and the ongoing integration of central and eastern Europe into the global economy. This has resulted in the industrial countries suffering losses in overall market shares in foreign trade since they have been replaced in some cases by other suppliers. By contrast, the German economy has been able to strengthen its international competitive position, mainly because it has used the opportunities presented by trade with the countries of central and eastern Europe. The geographical proximity to Germany of these economies has undoubtedly been a major advantage in this process.

<sup>6</sup> The subsequent decline in world market share was caused not only by a deterioration in price competitiveness but also by domestic output being redirected to eastern Germany in the wake of reunification. — <sup>7</sup> At 1999 prices. — <sup>8</sup> Inverted scale: rising curve (decline in values) denotes an increase in competitiveness — <sup>9</sup> Compared with 19 industrial countries based on the deflators of total sales. — <sup>10</sup> See



Owing to a high level of direct investment, German enterprises have also opened up new markets in this region and ensured the competitiveness of their domestic output, as far as this has been possible, by means of cost-effective subcontracting of supplies.<sup>10</sup> At the same time, there has been a sharp increase in the two-way trade in goods (by an annual average of just under 12% since the launch of monetary union). This now accounts for 13% of total German foreign trade (exports and imports combined) and a good 22% of trade with non-euro-area countries.

also Deutsche Bundesbank, Germany's relative position in the central and east European countries in transition, *Monthly Report*, October 1999, pp 15-27.



appreciation of the single currency up to the early summer of 2003 did not entirely offset this competitive edge. In the second quarter of 2003, German enterprises' price competitiveness vis-à-vis economies outside the euro area was still somewhat better than on a long-term average since 1975, which may serve in this context as a yardstick for a neutral competitive position. That is at least the case when applying the broadly defined indicator of the German economy's price competitiveness based on the price deflators of total sales, which the Bundesbank calculates on an ongoing basis. The price and cost advantages enjoyed by German producers become clearer if the entire period since the introduction of the euro is taken into consideration. The mean price competitiveness of the German economy in this period has

been 10½% better than on a long-term average.

Since the launch of monetary union, there have also been shifts in the price competitiveness of the German economy vis-à-vis the other countries of the euro area. Owing to the single currency, however, these shifts have been due to differing developments in prices and costs among the individual participating countries rather than to exchange rate movements. By mid-2003 the price competitiveness of German producers in relation to that of their euro-area competitors had improved quite significantly (namely, by around 5%) compared with its level at the end of 1998. If the mean indicator value for the period since early 1999 is taken as a basis (as done above for the non-euro-area countries)

*... also within the euro area*



and compared with its long-term mean value, it becomes apparent that, by this yardstick, Germany has possessed competitive advantages within the euro area, too, since the adoption of the euro (around 2%), although these have been smaller than those vis-à-vis non-euro-area countries.

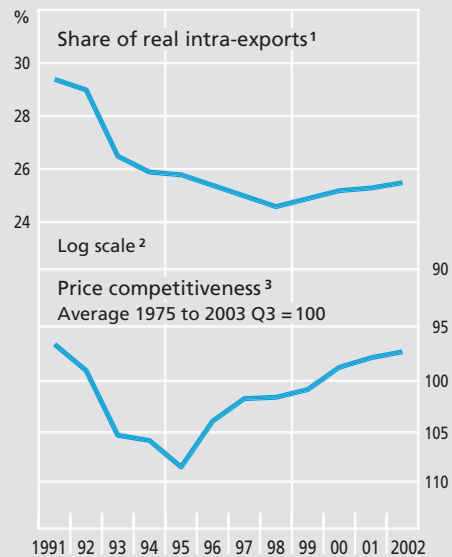
*Wage cost indicators*

A similar, though not quite so favourable picture is produced by measuring competitiveness on the basis of relative unit labour costs in the corporate sector rather than on deflators of total sales. On this basis, Germany's competitive position vis-à-vis the other euro-area countries during the period from early 1999 to mid-2003 was somewhat less favourable than when the deflators of total sales are used. The difference is mainly attributable to cost advantages deriving from imported inputs, which are reflected in the more broadly defined indicator of total costs.

*Interim outcome*

It may be noted provisionally that the described dynamics of demand as well as the marked improvement in German producers' price competitiveness have contributed to the comparatively sharp growth in German foreign trade with these non-euro-area countries and may have partially obscured the supposed effects of monetary union. Moreover, the recent downturn in the euro area has curbed Germany's cross-border trade in goods with partner countries in the monetary union; even the slight improvement in Germany's competitiveness vis-à-vis the other euro-area countries has not been able to offset this development entirely. Despite the comparatively slight increase in German exports of goods to other euro-area countries,

### Germany's competitive position within the euro area



1 At 1999 prices. — 2 Inverted scale: rise in curve (fall in values) denotes an increase in competitiveness. — 3 Compared with the other euro-area countries.

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German exporters have increased their market shares not only in the world market as a whole but also within the euro area.

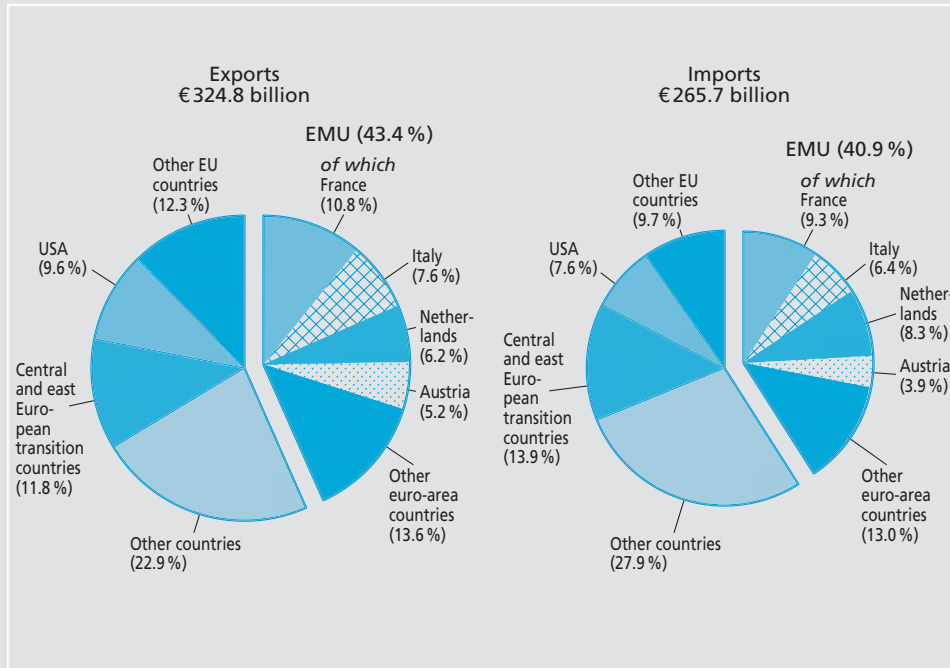
### German intra-EMU trade since the launch of European monetary union

The increases in market share within the euro area are revealed by expressing German exports to other euro-area countries as a ratio of intra-EMU trade as a whole (in real terms). In the first half of 2003, this indicator amounted to around 25½%. Since 1998, the last year prior to monetary union, it has

*Increases in market share also within euro area*

## Regional breakdown of German foreign trade

2003 H1



Deutsche Bundesbank

therefore increased by roughly 1 percentage point.<sup>10</sup>

The fact, described here, that German exporters have held their own well in comparison with suppliers from other euro-area countries is occasionally also modelled by export performance. This is not based on market shares but on exports in comparison with export market potential. Since German exports to the other euro-area countries since the launch of monetary union have grown more rapidly than those countries' intra-imports overall, German suppliers' export performance in the euro area, between the launch of monetary union and mid-2003, increased by an average of just under 1½ % annually.<sup>11</sup>

If the growth of German exports to the individual euro-area countries is considered, these exports likewise reflect (in addition to other factors) both demand effects and changes in price competitiveness. Between early 1999 and the first half of 2003 German

*Exports to individual countries*

<sup>10</sup> The calculations of German market shares of total euro-area exports are based on Eurostat data. To avoid double counting as well as errors and omissions, the regional classification of these data does not entirely match the methodology used by the Federal Statistical Office. In particular, flows of goods from non-euro-area countries are captured as transactions with non-euro-area countries only by the country to which they were delivered for customs purposes. For the intra-trade flows, this means that they are ascribed to the country of consignment and not to the actual country of origin.

<sup>11</sup> For the purpose of the calculation, the other euro-area countries are regarded as a single economic area. The OECD, in its *Economic Outlook*, uses a comparable procedure for determining export performance. For the methodology, see M Durand, J Simon and C Webb (1992), OECD's indicators of international trade and competitiveness, *OECD Economics Department Working Papers* No 120, p 21.

enterprises achieved a disproportionately large increase in exports to, for example, the comparatively strong-growth countries of Spain (annual average growth of 10½%), Greece (8%) and Ireland (7%) while these countries simultaneously lost very significant ground – if measured by the deflator of total sales – to domestic suppliers. This also applies, albeit to a lesser extent, to Italy, which is also a major market for German exports within the euro area (+7½% between early 1999 and the first half of 2003) but whose economy showed no more than relatively moderate growth in the period under review. In the case of other countries – such as Belgium, Portugal and Austria – where cost developments were more unfavourable than in Germany or which had growth rates below the euro-area average, the increase in German exports was slower than in German intra-exports overall.

*Breakdown of  
exported goods*

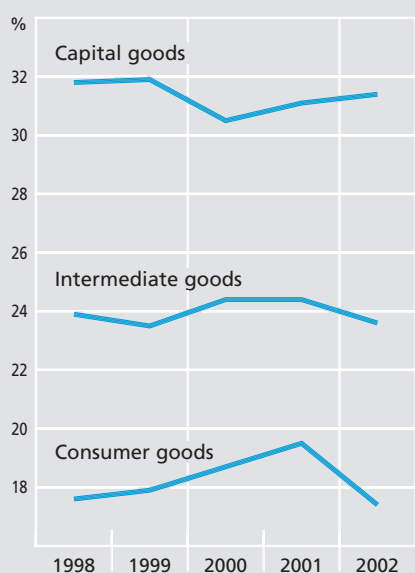
Identifying the change in German exporters' euro-area market share in terms of the breakdown of goods is more difficult than a regional analysis. German exporters' specific (real) market shares in intra-trade in intermediate, capital and consumer goods may be calculated in line with their predominant use either for production or consumption;<sup>12</sup> these have remained virtually unchanged since the launch of monetary union, however. To which product categories Germany's gain in market share is to be attributed is therefore initially unclear. At all events, the data show that cross-border trade in capital goods – as a share of Germany's total foreign trade – increased in real terms in the first three years of monetary union; this applies *pro rata* to intra-



trade in capital goods as well. Nevertheless, given the global weakness in investment, these shares fell perceptibly in 2002. On the export side, the German capital goods sector had a roughly 31½% share of aggregate intra-trade in this segment last year. Germany's (real) export market shares in the euro area are smaller in the case of intermedi-

<sup>12</sup> For these three goods segments, the BEC (Broad Economic Categories) classification is used. Intermediate goods include unprocessed or processed food, drinks, other material such as building materials, paper, textiles, metals, fuels and lubricants (with the exception of petrol) as well as parts and accessories for capital goods and motor vehicles, predominantly produced for use in production. Capital goods include machinery and motor vehicles but not private motor vehicles and associated parts and accessories. Consumer goods are deemed to be durable and non-durable goods produced for consumption but excluding food, drinks, private motor vehicles and relevant accessories.

Germany's shares of  
intra-EMU exports  
by category of goods\*



Source: Eurostat and Bundesbank calculations. — \* At mean values.

Deutsche Bundesbank

ate goods (23½%) and consumer goods (17½%).<sup>13</sup>

*No classification  
of exported  
goods*

One serious drawback of the classification of goods by Broad Economic Categories is its failure to assign what in recent times has been an increasing proportion of goods to one of the three main categories. This applies, for example, to private motor vehicles even though it is precisely this sector that is of major importance for the German economy, with motor vehicle and vehicle parts – accounting latterly for 19% of total German exports – playing a very significant role in the export sector, too. Moreover, it is mainly with motor vehicles that Germany has achieved its notable track record of success in exports over the past few years. However, the aforementioned growth differential and

(price) competitiveness mean that this has been achieved, for the most part, outside the euro area. In any case, between 1999 and 2002, total German exports of motor vehicles went up by an annual average of 9½%, which was a significantly faster rate of increase than that in exports as a whole. The only area in which German exporters achieved comparable rates of growth was in information and communications technology (ICT) even though exports of this category of goods slumped in 2002. By contrast, at around 7%, German motor vehicle exports to other euro-area countries grew (in nominal terms) at only a slightly faster pace than German intra-exports overall.

In the case of German imports of goods, the other euro-area countries have, to a small extent, surrendered "market shares" to non-euro-area countries (down from 46% to 45% in real terms) since the launch of monetary union. In actual fact, the opposite might have been expected – not only on account of the trade-creating effect of monetary union but also because of the temporary depreciation-induced gain in price competitiveness by enterprises in the euro area vis-à-vis suppliers from non-euro-area countries. What was evidently more significant, however, was the strong competition from central and east European countries in the German market. By the end of the period under review, these countries had increased their share of German imports to 14%. In the past four years German imports from the other

*Imported goods  
by region and  
category*

<sup>13</sup> The analysis by region and category of goods presented here is based on annual figures up to and including 2002.

euro-area countries have shown only very weak growth mainly in those categories of goods "occupied" by the new competitors, such as mechanical engineering products, ICT and vehicles.

However, when euro-area suppliers are compared with each other, differing developments in prices and costs – in addition to special factors – have certainly played a part. For example, countries with above-average rises in costs, such as Italy, Greece and Portugal, have lost market shares to German intra-imports while countries with a flatter development in costs, such as Austria and Finland, have gained shares. The special developments in ICT, which has been subject to sharp fluctuations during the past few years, has impacted on German imports from Ireland. Despite showing a fairly large decline in some years, in the first half of 2003 they were still significantly up on the corresponding figures prior to monetary union.

### Summary and conclusions

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#### *Conclusion*

There has been a marked increase in German foreign trade during the past four and a half years, although the launch of monetary union is likely to have played no more than a

minor role in this development. Factors of greater significance were undoubtedly the, at times, strong demand stimuli (principally from outside the euro area), the relatively favourable price competitiveness of German suppliers and the trend towards the internationalisation of production, which was given a further boost by the integration of the central and east European transition countries. Not least for that reason, German foreign trade with non-euro-area countries has increased more sharply than intra-trade with the euro-area partner countries. Even so, German enterprises have also held their own in competition with suppliers from the other euro-area countries and have slightly increased their market shares of intra-EMU exports. This demonstrates – as do other indicators – the competitiveness of the German export sector compared with enterprises from other euro-area countries. However, the fact that the high rates of growth in German foreign trade were achieved mainly in 1999 and 2000 and the marked flattening of exports since 2001 during the global economic downturn also reveal the major importance of a favourable world economic environment for German foreign trade. The generally expected upturn in the global economy and in world trade is therefore likely to provide the German economy with a new impetus.