Assessment of price and cost competitiveness of the European Union and its Member States
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Trends in price and cost competitiveness are important indicators of economic performance. However, the appropriate level of relative competitiveness depends on economic circumstances. A cyclically advanced economy might warrant a loss in competitiveness in order to reduce excess demand. In liberalised capital markets, a high expected real rate of return may also imply an appreciation of the currency thus already pricing in a higher level of overall productivity and income. Finally, catching-up dynamics, implying relative price movements within an economy, render difficult the case of appropriate economic price and cost data to assess relative competitiveness. Therefore, without further information about the economic situation of the economy, no firm conclusion about the appropriateness of the level of competitiveness is feasible.

Within EMU, changes in the real exchange rate relative to other participating countries may be warranted because of asymmetric shocks, catching-up dynamics, different cyclical position, or policy measures taken in individual Member States. An assessment of the appropriateness of these relative developments is beyond the scope of this Weekly Review as it would require in-depth country specific analysis, for which this note provides some background information.

The euro vis-à-vis the world

Standard measures of real and nominal effective exchange rates often include only currencies of industrialised countries. However, as emerging markets and transition economies play an increasing role in international trade, it is important to include them in measures of effective exchange rates (EER).

The effective exchange rate of the euro against the currencies of 32 countries representing more than 85% of total extra-euro area exports shows that the cost and price competitiveness of the euro area is currently favourable due to both the depreciation of the euro since its inception and low price and cost inflation vis-à-vis its trading partners.

The lack of data makes it impossible to compute real effective exchange rates against such a large group of trading partners based on

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1 The narrow definition of price and cost competitiveness should not be confused with the popular usage of the term competitiveness, which refers to a broad assessment of economic performance. The generic term competitiveness embraces not only the notion of price and cost competitiveness but adds other elements such as product quality, services, punctuality, and flexibility, in sum the strength of a country’s export sector. Concerning other measures of competitiveness, attention focuses on composite indicators like global competitiveness. One reference for these global indicators is the Global Competitiveness Report of the World Economic Forum, which ranks countries by their “current competitiveness” and “growth competitiveness”.

2 This group is composed by the group of 12 industrialised countries (Australia, Canada, Denmark, Japan, Mexico, Sweden, Switzerland, New Zealand, Norway, Turkey, UK and US) plus 4 Central and Eastern countries (Czech Republic, Hungary, Slovenia, Poland) and Russia, 9 Asian countries (China including Hong Kong, India, Indonesia, Korea, Malaysia, Philippines, Singapore and Thailand), 2 countries of Latin America (Argentina and Brazil) and 4 others (South Africa, Israel, Egypt and Iceland). Data come from the European Commission unless otherwise stated.
deflators other than the CPI, which also includes non-traded goods. Moreover, since traded goods are usually not homogenous (traded goods are usually imperfect substitutes) the interpretation of the indices has to be treated with caution. In addition, CPIs are not independent of the exchange rate, since they include imported goods, and therefore changes in competitiveness are understated. Consequently, other measures of relative prices such as unit labour costs (ULC), even if these deflators are not uniformly superior indicators of competitiveness, should be included. Unfortunately, such indicators are available for a restricted group of countries only.

The euro vis-à-vis the group of 12 industrialised countries

The nominal effective exchange rate of the euro against the group of 12 industrialised countries had been quite stable since the beginning of the year; the recent appreciation compensating the depreciation of spring. In October 2001, the NEER of the euro was 6% above its 2000 average, but still 8% below its inception-level.

The real effective exchange rate has followed closely the path of the nominal rate. However, lower price and cost inflation in the euro area compared to its trading partners resulted in a bigger “improvement” in real terms. Although the recent appreciation of the euro has led to a 2% “deterioration” of the cost competitiveness over the third quarter of 2001, the euro still displays a total gain of 13% since its inception.

The real exchange rate of the euro is currently very favourable whatever the deflator. Export prices have the advantage of excluding non-traded goods, but they have other drawbacks; among others they may be heavily influenced by pricing to market behaviour. The two measures based on unit labour cost – in the whole economy (ULCE) and in the manufacturing sector (ULCM) – have closely tracked each other. In mid-November, the real effective exchange rate of the euro (based on ULC) was 15% below its long-term average.

Equilibrium exchange rate

The Commission and other major international institutions have long held the view that the euro is undervalued with respect to its long-term equilibrium fundamentals, while the US dollar

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3 Because traded and non-traded goods prices diverge over time, as they often do for various reasons such as different sector productivity growth rates (the Balassa-Samuelson effect), aggregate price indices could be misleading indicators of the prices of traded goods.

4 Real effective exchange rate indices based on unit labour costs in the manufacturing sector (labour cost per unit of output) have often been identified as useful indicators of international competitiveness for a variety of reasons: they capture cost developments in an important sector exposed to international competition. By focusing on costs rather than prices, ULC avoid some of the endogeneity problems of the CPI and export price measures; they offer a reliable gauge of the relative profitability of traded good, and finally, by construction, they bring into focus the largest component of non-traded costs and of value added, thus proxying for significant developments in total variable costs.

5 The group of 12 is composed by Australia, Canada, Denmark, Japan, Mexico, Sweden, Switzerland, New Zealand, Norway, Turkey, UK and US.
is overvalued. Empirical studies on the euro’s equilibrium rate tend to corroborate the view that the euro experienced some overshooting, thus implying that there is scope for appreciation. There is less of a consensus, however, on the magnitude of the gap between the actual and the equilibrium rate. Such differences can be mainly explained by the model used, the large confidence intervals for the estimated coefficients and the estimation period.

In August 2001, the Commission services updated their estimates\(^6\) of the real equilibrium exchange rate for the euro, the dollar and the yen. The data used covered the period 1980:Q1 to 2000:Q4. Chart 2 below indicates that at the end of 2000 the euro was 12% below its equilibrium level in real effective terms. Taking into consideration subsequent movements in exchange rates, the estimates would suggest that in the third quarter of 2001 the euro was around 7% below its equilibrium. These results are in line with other assessments as the IMF Staff Report for the 2001 Article IV Consultation with the US stated that “the US dollar is at least 20% stronger than its medium-term equilibrium level” and as the OECD Secretariat’s calculation (OECD Economic Surveys: Euro area (May 2001)) points to an undervaluation of the real effective exchange rate of the euro of about 10% in the second half of 2000.

However, direct interpretations of equilibrium measures or extrapolations should be avoided as concept of equilibrium rate is time-varying. Chart 1 below points to a falling equilibrium exchange rate of the euro in 1996-2000 (except for a pause in 1998). In the model, the fall is mainly caused by a decline in relative productivity compared to the euro area’s trading partners.

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**Box 1: Double export weighting system**

Domestic producers face competition from the various foreign producers in their domestic market. Similarly, exporters face competition in foreign markets from other exporters (“third-market effect”). Calculating indicators of price or cost competitiveness should thus take account of both competition with foreign producers and other exporters. A double export weighting scheme takes account of:

i. each of these countries’ contribution to the total supply of competing goods (including the supply by domestic producers) in each separate domestic market and.

ii. the relative importance of each market in the given country’s international trade.

As a result, a country’s weight is higher than the direct export share if it is especially well integrated into the world economy. While, for instance, the direct export share of the euro area vis-à-vis Japan is small, Japan being a strong competitor in third markets increases its role as competitor.

**Table 2: weights for the euro effective exchange rates (%) against the 12**

<table>
<thead>
<tr>
<th>Country</th>
<th>Bilateral exports weights</th>
<th>Double export weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>27.6%</td>
<td>30.2%</td>
</tr>
<tr>
<td>UK</td>
<td>32.3%</td>
<td>25.9%</td>
</tr>
<tr>
<td>DENMARK</td>
<td>4.2%</td>
<td>4.1%</td>
</tr>
<tr>
<td>NORWAY</td>
<td>2.3%</td>
<td>2.2%</td>
</tr>
<tr>
<td>SWEDEN</td>
<td>6.6%</td>
<td>6.5%</td>
</tr>
<tr>
<td>SWITZERLAND</td>
<td>11.6%</td>
<td>8.2%</td>
</tr>
<tr>
<td>CANADA</td>
<td>2.4%</td>
<td>2.2%</td>
</tr>
<tr>
<td>JAPAN</td>
<td>5.5%</td>
<td>12.4%</td>
</tr>
<tr>
<td>TURKEY</td>
<td>3.5%</td>
<td>3.8%</td>
</tr>
<tr>
<td>AUSTRALIA</td>
<td>1.9%</td>
<td>2.5%</td>
</tr>
<tr>
<td>NEW ZEALAND</td>
<td>0.3%</td>
<td>0.4%</td>
</tr>
<tr>
<td>MEXICO</td>
<td>1.8%</td>
<td>1.5%</td>
</tr>
<tr>
<td>sum</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

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More precisely, the ratio of productivity in the tradable sector over productivity the non-tradable sector has increased by less in the euro area than in its trading partners. The steady increases in the net foreign asset position of the euro area in particular to that of the US has only partly offset the impact from such changes in relative productivity.

In any event, it should be borne in mind that the concept of equilibrium exchange rate is only relevant in the long term and that exchange rates should not always stick to their equilibrium values; this latter should only be achieved when the economy has reached both internal and external equilibrium. Therefore, any divergence from the equilibrium value has to be assessed in view of economic conditions.

**Developments within the European Union**

The analysis of the developments of price and cost indicators within the euro area has attracted more and more attention since the launch of the euro. This is justified by the fact that in some cases, deviating price and cost trends among euro area Member States could lead to a build-up of competitive imbalances which might ultimately hamper economic growth and cause unemployment in individual Member States. In most cases, however, longer-term changes in relative prices and costs may be justified by changes in economic fundamentals related e.g. to a catching-up in the level of economic development, changes in non-price competitiveness factors, or changes in underlying savings and investment patterns. Moreover, differences in cyclical positions may cause movements in relative costs and prices in the short term, which are warranted, but could also represent imbalances. Finally, the trends observed since the beginning of EMU do not necessarily indicate movements away from the appropriate level of competitiveness as the starting positions might not have reflected an equilibrium position. Therefore, an in-depth assessment of movements in real exchange rates requires a comprehensive analysis of the economic situation in each country. Keeping this in mind, the next part provides a descriptive overview of recent movements in intra-euro area cost (based on ULCE) competitiveness indicators.

**Deteriorating in cost competitiveness**

Spain, Ireland, Portugal and the Netherlands lost ground in terms of cost competitiveness vis-à-vis the euro area.

In **Spain** and **Portugal**, this corresponds to above average wage and cost increases related to advanced cyclical positions. In Spain, indexation clauses of the wages on CPI led to a continued increase in wages in 2001. For the second quarter of 2001, Spain displayed the biggest increase in wages of all euro area participants. Moreover the declining unemployment rate – although still very high, about 13% - also put some pressure on wages. The same scenario applies to Portugal where the rise in inflation expectations (HICP = 3.4% in September), tightness of the labour market (unemployment around 4%) and some generous pay increases awarded in the public sector led to an acceleration in wages. However, some appreciation may be warranted as these economies are catching-up with the euro countries. In the case of Portugal, nevertheless, the large current account deficit (10% of GDP) may indicate an unwarranted loss in competitiveness. As a matter of fact, competitiveness as measured by ULC but also by GDP deflator, has been deteriorating in Portugal since 1996.

From the data available, **Ireland** recorded the biggest annual rise in total labour costs in 2001. In the **Netherlands**, the increase in costs has followed the decline of the unemployment rate, thus pointing to cyclical factors as the cause.
Improvement in cost competitiveness

Greece, Germany and Austria have improved their cost competitiveness. In Germany and Austria, this is due to the continued wage moderation. In Greece, unit labour costs decelerated further due to a restrictive incomes policy in the public sector and a moderate wage settlements in the private sector. All in all in 2001, the increase in real wages is less than the expected growth in productivity, implying a further deceleration in unit labour costs in 2001.

In the other EMU member countries, cost competitiveness has been broadly stable. In France, until now, the effect on labour costs of the shorter working week has been to a large extent offset by cuts in social security contributions paid by employers and by relatively strong productivity gain.

Recent movements between the euro area and other EU-Member States

In Denmark, the nominal effective exchange rate of the Danish Krone has been very stable, as it is part of the ERM II. The real effective exchange rate has appreciated, as wage developments have been less moderate than in the euro area.

In Sweden, the depreciation of the Krona vis-à-vis the euro in 2000 led to a depreciation of the nominal effective exchange rate. However, at the end of the third quarter of 2001, the trend reversed and led to a small appreciation of the krona. Nevertheless, as wages continue to be moderate, the real effective exchange rate continue to be favourable in terms of cost competitiveness.

In the UK, the appreciation of the Pound Sterling vis-à-vis the euro combined with higher cost inflation has led to a strong appreciation of the real effective exchange rate. However, one has to note that the exposed sector in the UK is less important than in other EU countries and the service industry is less affected by changes in price competitiveness.