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## Report AIECE Working Group on Foreign Trade Autumn 2006

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## Abstract

Annual production growth in the world economy exceeded 4½% for four years in a row and is expected to continue to do so in 2007. However, growth next year will be lower than in 2006. This is by far the strongest run since the early seventies and is above all due to the staggering performance of the emerging markets. World trade growth over the past four years has averaged 8½% and is forecast to fall back only slightly to 7½% in 2007, still above the potential rate of growth. Strong demand has triggered spectacular price increases for raw materials and energy, pushing up world inflation above the comfort zone of the monetary authorities. The price hike of primary commodities seems to have peaked, partly as a consequence of reduced demand and increased supply for these goods and partly in reaction to the expected overall cooling of the world economy. We project a decline of the oil price to $ 60 per barrel in 2007, from $ 66 per barrel in 2006. External imbalances increased further in 2006, and the trade deficit of the United States is expected to remain high in 2007, undermining the stability of the US dollar in the long run.



*Key words: International trade, forecast*



## Abstract in Dutch

De BBP-groei in de wereld lag de afgelopen vier jaar steeds boven 4½% en de verwachting is dat dit ook in 2007 nog het geval zal zijn. De groei in 2007 zal wel iets lager uitkomen dan in 2006. Zo'n aaneengesloten periode van aanhoudend hoge groei is niet meer voorgekomen sinds het begin van de jaren zeventig. Zij is vooral te danken aan de bijzondere prestaties van de opkomende markten. De volumegroei van de wereldhandel in de laatste vier jaar bedroeg gemiddelde 8½%, terwijl voor 2007 slechts een lichte terugval naar 7½% wordt voorzien, meer dan de potentiële groei. De sterke toename van de vraag heeft de prijzen van grondstoffen en energie sterk opgedreven, waardoor de binnenlandse inflatie in de meeste landen de doelstellingen van het monetair beleid overstijgt. De prijsstijging van primaire producten lijkt nu over haar hoogtepunt, ten dele door prijssubstitutie aan de vraag- en aanbodzijde van de markt, maar ook door de afkoeling van de wereldeconomie. Wij projecteren een daling van de olieprijs naar $ 60 per vat in 2007, van gemiddeld $ 66 per vat in 2006. De internationale betalingsbalansonevenwichtigheden zijn in 2006 verder toegenomen, en verwacht wordt dat het lopende-rekeningtekort van de Verenigde Staten in 2007 hoog zal blijven, waardoor de stabiliteit van de dollar op termijn verder wordt ondermijnd.

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# Preface

This CPB document contains the half yearly forecasts of the AIECE Working Group on Foreign Trade. The AIECE is the Association of European Conjuncture Institutes, having 42 members and observing institutes, representing 20 countries and 4 international organisations. The membership is open to independent European institutes involved in surveying economic development and macroeconomic forecasting. Independent is interpreted as not directly being involved in conducting economic policies and not representing certain economic interests. The main objective of the association is to intensify the exchanges between its members with a view to improve their insight into international economic developments. The CPB is a long-standing member of this organisation.

Twice a year world economic issues are discussed in the general assembly of the AIECE. Major points on the agenda are the general report on the European outlook, prepared in turn by one of the institutes, and the presentation of selected special studies. Two standing working groups report on respectively the development of world commodity prices, and on world trade. In a special session reports are discussed on longer-term prospects and structural change. These reports are meant to give a general assessment of developments in the respective fields.

The analyses of the Working Group on Foreign Trade are largely based on forecasts provided by AIECE member-institutes with respect to their own country. The working group provides forecasts for non-European countries and unifies the assumptions on dollar exchange rates and primary commodity prices. As a consequence, the working group sometimes reassesses the trade forecasts submitted by member institutes for their own country, taking account of the calculated export market growth, price competitiveness and shadow import prices.

To stimulate the discussion at the General Meeting of the Association this reports also provides a summary of two recent studies by members of the Working Group relating to the subject of international trade.

Coen Teulings
Director

## AIECE Working Group on Foreign Trade

| | |
|---|---|
| COE | Chambre de Commerce et d'Industrie de Paris, Paris |
| CPB | Netherlands Bureau for Economic Policy Analysis, The Hague |
| DULBEA | Département d'Économie Appliquée, Bruxelles |
| IKCHZ | Foreign Trade Research Institute, Warsaw |
| INSEE | Institut National de la Statistique et des Études Économiques, Paris |
| ISAE | Istituto di Studi e Analisi Economica, Roma |
| KOPINT | Institute for Economic and Market Research, Budapest |

# 1 Current trends and Prospects for the World Economy

*Global economic growth was strong in the first half of 2006. In many countries, including the euro area, growth even accelerated, despite oil prices reaching new record highs. Inflation in the United States gathered speed and is now clearly above the comfort zone of the Federal Reserve. We expect a gradual unwinding of the cycle going into 2007. However, the outlook for the world economy is still favourable. Economic growth in the United States is likely to soften more than elsewhere, prompted by the housing slowdown. Oil prices and the impact of widening current account imbalances are major uncertainties surrounding the projection of the global economy.*

## 1.1 Softer housing market will decelerate US economic growth

US real GDP rose by 3.9% at an annual rate in the first semester, up from 3.3% in the second half of last year. Actual and core inflation accelerated strongly and forced the Fed to increase the short-term interest rate. Partly as a consequence the boom of the housing market ended. The US outlook remains positive but economic growth is projected to fall from 3½% in 2006 to 2¾% next year, slightly below potential. With monetary policy no longer accommodating and mortgage rates clearly up, the housing market is likely to cool further, with negative effects on housing investment and private consumption. Weaker output growth is likely to reduce inflation, allowing the Federal Reserve to reduce policy rates in the second half of next year. Despite weaker economic growth and falling oil prices, the US current account deficit is projected to stay at record highs.

## 1.2 Deflation era in Japan ends and China powers on

Economic growth in Japan finally seems to have overcome the structural difficulties it has faced since the beginning of the nineties. Also the labour market has started to recover. Boosted by exports and business investments, GDP growth is projected at 2¾% in 2006, falling back to 2¼% in 2007. Japanese consumer prices have started to rise in the course of the year, after falling continuously in the seven preceding years. This price rise led to the end of the zero rate policy of the Bank of Japan: it raised its policy rate to ¼% in July, signalling that the miserable deflationary period has finally ended.

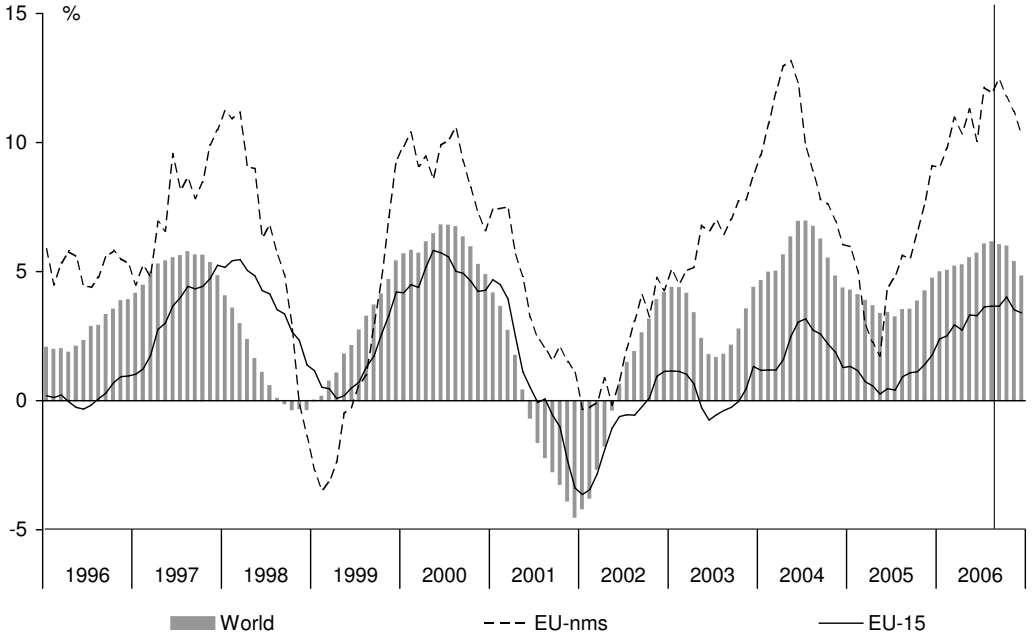
In the first semester, Chinese economic growth accelerated to 10.8% from a year earlier. Investment, up 31% in nominal terms, contributed to this extremely strong GDP growth. The authorities tightened monetary policy somewhat and took administrative measures to curb investment. These measures are likely to have some effect, but GDP growth is projected to decelerate only slightly in 2007. Softer import growth of China and of the United States are projected to lead to somewhat lower GDP growth in the rest of emerging Asia.

## 1.3 Upswing in euro area gathers speed but slowdown at hand

In the first half of this year, real GDP in the euro area increased by 2.8% at an annual rate from the previous period, clearly above potential output growth and up from 2.0% and 1.5% in the second respectively first semester of last year. Strong world demand for European export of goods and services plays an important role in the upswing, but a recovery in investment is also noticeably contributing. To a lesser extent, this also holds for private consumption as an unexpectedly strong drop in unemployment is raising consumer confidence. With wage increases remaining moderate and a cyclical upswing in labour productivity underway, core inflation in the euro area did not pick up, in contrast to the United States.

The projected slowdown in the rest of the world negatively influences the prospects for Europe. Figure 2.2 clearly shows that Europe cannot escape the world cycle, particularly in the goods producing sectors. The globalization has brought about a remarkable synchronization of the cycles in various parts of the world.

**Figure 1.1 Industrial production growth (% annual change of 3mma)**




The tightening of monetary policy by the ECB and budgetary constraints in Germany and Italy also contribute to the expected slowdown in 2007. GDP growth in the euro area is projected to soften to 2%, from 2½% in 2006. Inflation is forecast to decline marginally, helped by falling oil and other raw material prices, neutralizing the upward effect on euro area inflation of the hike in the German VAT rate.

## 1.4 The new member states of the EU perform well

Economic growth accelerated in all Central European countries in the first quarter of 2006, and remained fairly strong in the second quarter. The average year-on-year growth was about 6% in the first half of this year. This is the best economic performance since the start of the transition. Growth in most countries is broadly based, driven by healthy output growth in construction and manufacturing, in some countries enforced by a strongly expanding services sector. Net exports have given an important impetus to growth, helped by strong increases of FDI in the automobile industry, not least in Slovakia. Labour markets in the region have also improved markedly, the major exception being Hungary where the unemployment rate has recently not declined. Mainly as a consequence of high energy prices, domestic inflation pressures are still high, also in comparison to the euro area.

**Table 1.1 Main assumptions and world trade forecast, 2005 -2007**

| | Spring 2006 | | | Autumn 2006 | | |
|---|---|---|---|---|---|---|
| | 2005 | 2006 | 2007 | 2005 | 2006 | 2007 |
| | annual percentage changes or levels | | | | | |
| GDP volume | | | | | | |
| Euro area | 1.4 | 2.0 | 1.9 | 1.4 | 2.4 | 1.9 |
| United States | 3.5 | 3.2 | 3.0 | 3.2 | 3.5 | 2.8 |
| Japan | 2.8 | 2.9 | 2.3 | 2.6 | 2.8 | 2.3 |
| Exchange rates | | | | | | |
| Dollar per euro | 1.24 | 1.21 | 1.23 | 1.24 | 1.26 | 1.30 |
| Yen per dollar | 109.9 | 115.0 | 111.0 | 110.3 | 116.0 | 114.0 |
| World trade volume of goods[a] | 7.3 | 9.6 | 8.3 | 7.5 | 9.6 | 7.5 |
| Exports EU-15 | 4.4 | 7.4 | 6.3 | 4.5 | 7.4 | 5.3 |
| Exports C+E Europe | 7.8 | 10.4 | 7.9 | 7.8 | 9.7 | 7.6 |
| World trade prices ($) | 5.9 | 1.8 | 0.7 | 5.8 | 5.3 | 1.6 |
| Crude oil (level, $/b) | 54.4 | 62.1 | 60.8 | 54.4 | 65.9 | 59.9 |
| Non-energy commodities | 10.1 | 16.0 | – 5.0 | 10.1 | 24.0 | – 4.0 |
| Manufactured goods[b] | 2.2 | – 0.3 | 1.3 | 2.2 | 2.3 | 3.3 |

[a] Average of imports and exports.
[b] Derived from world export price, oil price and price of non-energy commodities.

## 1.5 Risks to the outlook

The slowdown of the US economy seems certain, but speed and depth of this slowdown are highly uncertain. If households feel an intense need to start saving again, private consumption and housing investment would be weaker than in the baseline projection. On the other hand, favourable financial conditions (strong profitability, healthy balance sheets and low capital costs) could lead to a stronger increase in business investment in the United States, but also in the euro area and Japan.

Core inflation in the United States may remain high, forcing the Fed to increase interest rates further which would prompt a sharper drop in economic growth in 2007.

The oil market remains an important source of uncertainty for the short-term economic outlook. Increasing geopolitical tensions could lead to higher oil prices with negative consequences for global economic growth. On the other hand, the lagged response of supply and demand from the strong oil price rise in recent years is uncertain; a bigger positive impact on supply or negative impact on demand could ease tensions at the oil market and dampen the oil price in the near future. Furthermore, geopolitical tensions do not need to stay on an upward trend; they may ease with a dampening effect on the oil prices.

Finally, as long as the imbalances in current account positions are big, the risk of disruptive currency adjustments remains. A strong depreciation of the dollar is likely to have a negative short-term impact on economic growth of the euro area, the more so when there is contagion through capital markets.

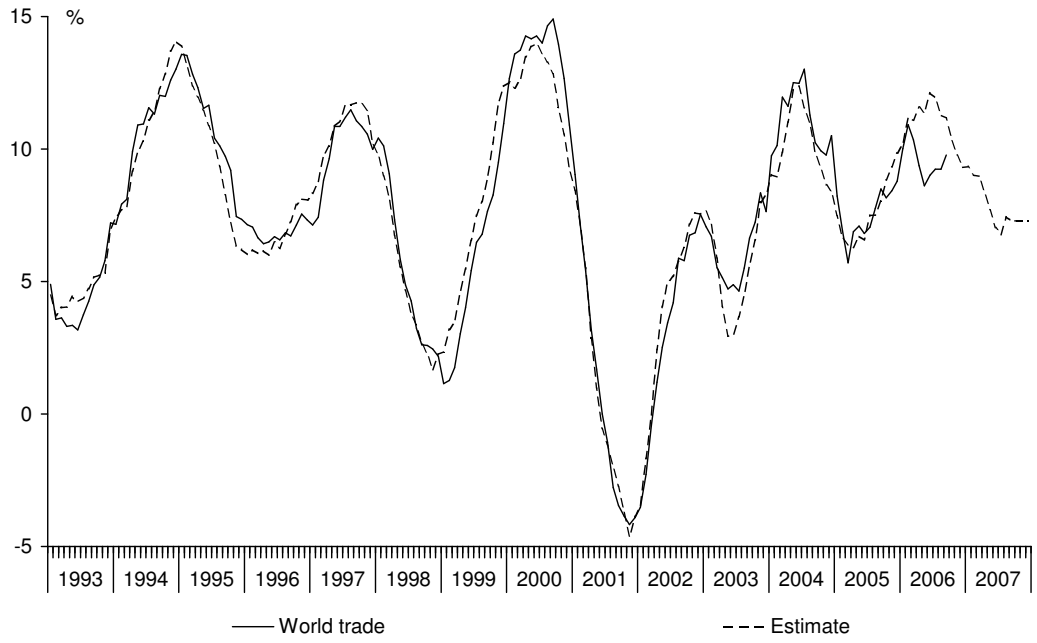
# 2 World merchandise trade volumes

*The upward trend in world trade has continued in the first eight months of 2006.[1] This was mostly due to strong import growth of the advanced economies. The projected slowdown of global output is reflected in world trade growth, softening to 7½% next year from 9½% in 2006.*

## 2.1 Overall growth of world trade

Annual increases of world trade accelerated in the course of 2005, but unexpectedly fell back in the first quarter of this year. Trade growth decelerated in spite of a further acceleration of world industrial production, a very rare phenomenon (see figure 2.1). Particularly trade of emerging markets and developing countries fell short of expectations at the start of 2006. In the second quarter trade growth rebounded and at the end of the third quarter the historical relation between trade and industrial production growth seems to have been restored.

**Figure 2.1 World trade volume and estimates based on world industrial production (annual changes %)**




Annual production growth has been on a declining trend since the summer, and forward looking indicators point to a further deceleration in the remaining months of the year. The deteriorating production outlook for next year points to a renewed slowdown of world trade (see figure 2.1). The average rate of growth in 2007 is estimated at about 7½%, against 9½% this year.

[1] Information on the recent development in world trade can be found in the monthly CPB World trade monitor available at http://www.cpb.nl/eng/research/sector6/data/trademonitor.html

Import elasticities have been rising since the middle of the nineties[2]. This sudden increase of approximately 0.5%-point is probably connected to an acceleration of globalisation trends. Increased outsourcing and, as a consequence, rapidly increasing re-exports could explain most of the structural shift in the import elasticity. Ongoing research at CPB points in this direction. Table 2.1 contains information on the development of domestically produced exports and re-exports between 1995 and 2000 for a number of European countries[3]. The data are based on OECD input-output tables for these countries. The average share of re-exports in total exports of goods and services for this group of countries increased from approximately 11% in 1995 to 16½% in 2000. The annual rate of value growth in the second half of the nineties was on average 8½% for domestically produced exports and 12¾% for re-exports. For some countries, i.e. Germany, the Netherlands and Finland, the disparity was much more pronounced. The high share of re-exports in France in 2000 suggests similarly high growth differentials for this country as well. Data for the Netherlands point to a continuation of these trends in the first half of the current decade. Calculations by the statistical office in Germany confirm our findings[4]. Between 1991 and 2002 German re-export values increased by 13.9% per year, against an average annual growth rate of domestically produced exports of 5.4%. The import intensity of total exports of goods and services thus increased from 27% to 39% over these years. Tentative calculations suggest that at this moment the share of re-exports in total merchandise exports of Western Europe may be close to 25%.

**Table 2.1 Domestically produced exports and re-exports of goods and services in European countries**

| | 1995 | | 2000 | | 1995/2000 | |
|---|---|---|---|---|---|---|
| | Domestically produced | Re-exports | Domestically produced | Re-exports | Domestically produced | Re-exports |
| | bln euro | | | | annual percentage changes | |
| Germany | 379 | 43 | 570 | 92 | 9 | 17 |
| France | . | . | 274 | 97 | . | . |
| United Kingdom | 220 | 9 | . | . | . | . |
| Netherlands | 135 | 44 | 184 | 82 | 6 | 13 |
| Belgium | 105 | 32 | 153 | 53 | 8 | 11 |
| Finland | 33 | 1 | 53 | 2 | 10 | 19 |
| Sweden | 71 | 1 | 114 | 2 | 10 | 9 |
| Denmark | 41 | 5 | 67 | 5 | 10 | 0 |

[2] Report AIECE Working Group on Foreign Trade, Autumn 2003.

[3] CPB, Macro Economische Verkenning 2007, September 2006 (Dutch).

[4] Statistisches Bundesamt, Volkswirtschafliche Gesamtrechnungen, September 2004. (http://www.destatis.de/download/d/veroe/exportextvoe.pdf)

## 2.2 Trade volumes by region

In view of robust GDP growth and terms-of-trade gains for exporters of oil and other primary commodities, import growth of the emerging economies and developing countries was rather weak in the first half of 2006. More recently import demand of these regions seems to have picked up again, but import growth in 2006 will remain below the forecasts produced at the start of this year. Particularly import growth of OPEC countries decelerated strongly in 2006 from a booming trend in 2005. This might have been caused by physical import bottlenecks or lack of investment opportunities, but it is more likely that OPEC has drawn lessons from the dramatic boom-bust cycles after earlier oil price shocks. As a consequence, OPEC now has a very big current account surplus.

**Table 2.2 World trade volume of goods, 2005-2007**

| | Exports | | | Imports | | |
|---|---|---|---|---|---|---|
| | 2005 | 2006 | 2007 | 2005 | 2006 | 2007 |
| | annual percentage changes | | | | | |
| World | 7.5 | 9.6 | 7.5 | 7.7 | 9.1 | 7.2 |
| Advanced economies | 4.9 | 7.9 | 5.8 | 5.8 | 7.1 | 5.6 |
| EU-15 | 4.5 | 7.4 | 5.3 | 4.9 | 7.9 | 6.0 |
| United States | 7.5 | 10.0 | 7.5 | 6.7 | 6.5 | 5.0 |
| Japan | 5.5 | 11.5 | 7.5 | 6.0 | 3.5 | 4.0 |
| Emerging economies | 11.0 | 11.6 | 9.4 | 10.9 | 12.3 | 9.8 |
| Transition countries | 7.8 | 9.7 | 7.6 | 10.6 | 14.9 | 11.4 |
| Asia | 13.0 | 14.0 | 11.8 | 10.1 | 11.5 | 9.5 |
| Africa and Middle East | 6.5 | 3.0 | 2.0 | 15.5 | 12.0 | 10.0 |
| Latin America | 9.2 | 11.5 | 7.5 | 10.1 | 12.0 | 8.0 |

Import demand of the transition economies in Central and Eastern Europe has stayed relatively strong, reflecting the catching-up process with the rest of Europe, now well underway. Export growth in Central Europe is also very buoyant. In the first half of 2006 export growth of nearly all new member states accelerated. Outsourcing by firms from Western Europe contributes heavily to this favourable export trend. On top of that, the new member states benefit from the growth revival in the Western Europe. Trade balances in the region are improving, although some countries (Latvia, Bulgaria) are still coping with huge deficits.

Import demand of the EU-15 accelerated from a 5% rate of growth in 2005 to 8% in the current year, but import growth of the other advanced economies remained stable or even decelerated somewhat (Japan). Next year trade growth in Europe and the United States is forecast to slow in line with the production outlook.

## 2.3 Export performance and price competitiveness

Annex 3 provides information on the short-term development of export performances and relative prices in a common currency for the various countries and regions. Table 2d shows that almost all of the Western European countries are loosing export market shares in 2005, 2006 and 2007. The only exceptions this year are Germany, France and Finland. Usually the US and Japan are also losing shares, but currently are on a winning streak. Central European countries are systematically gaining market shares, as do the other emerging market economies.

Short-term changes of export market shares partly depend on changes in price competitiveness, shown in table 5c of annex 3. Competitiveness of the non-oil exporting emerging economies, including Central European countries, improve in the years 2005-2007, which is consistent with the gains of export market shares. The same holds for the relative trade variables of the United States and Japan. However, also Western European countries experience an improvement of competitiveness, at least in 2005 and 2006, but loose market shares. This is partly due to a delayed effect of relative prices on export performances. But the most important reason is a disturbance in the relative volume and price data caused by the spike in energy prices. All data refer to total trade in goods and the rapid rise in energy prices leads to an increase in the relative export price of oil exporters, mirrored by declining relative prices in almost all other countries.

To come up with a more sensible analyses of export performance and competitiveness we have constructed trade data excluding energy for all countries and regions from 1975 onwards. On top of that we have split the volume and dollar price development of total world trade into 8 categories. This enables us to correct relative volume and price movements for differences in the export product mix of each country and region. The results are presented in figure 2.2 and 2.3 for major countries and regions.

**Figure 2.2 Export performance, 1975-2006**

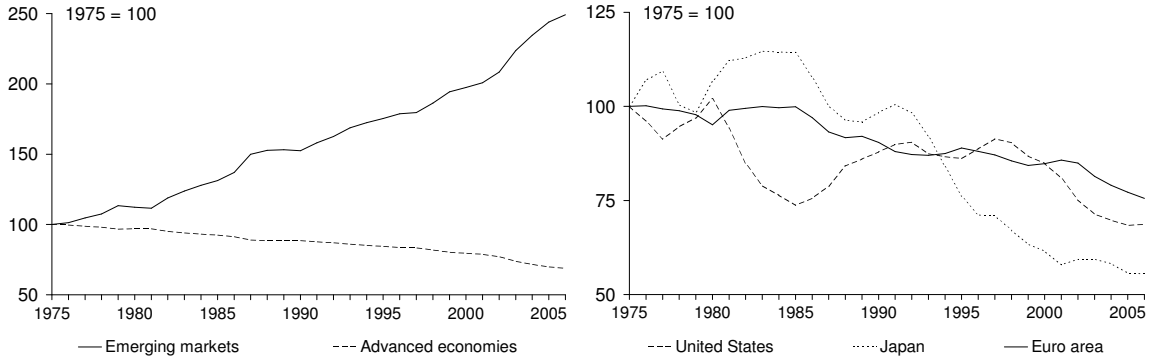
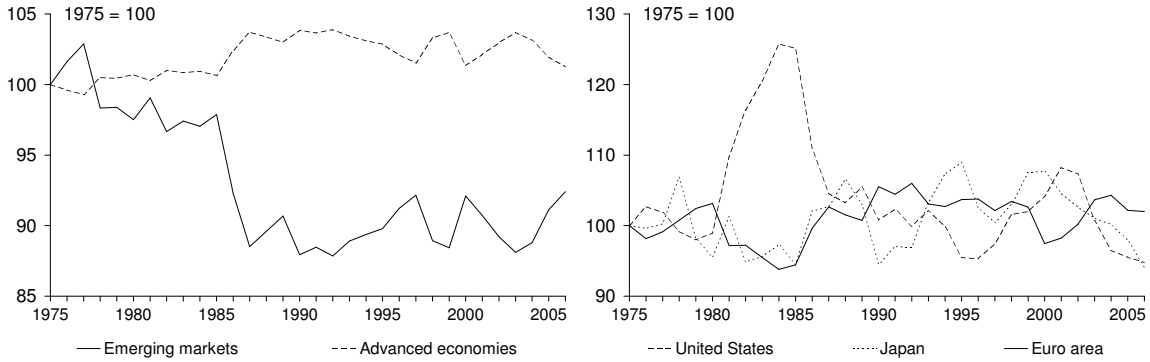


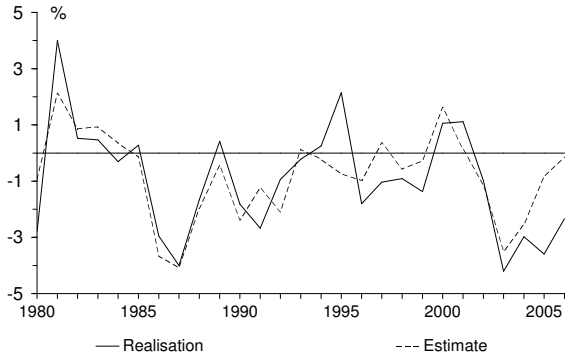
**Figure 2.3 Relative export prices in a common currency, 1975-2006**



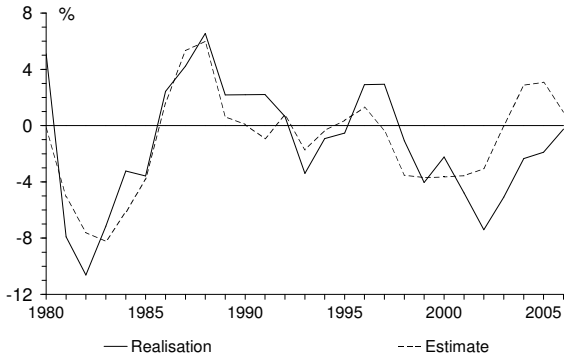

It is clear that the emerging market economies gain volume shares continuously, whereas the advanced economies loose systematically ground on the world market. These trends are determined by structural factors, rather than changes in price competitiveness. However, prices do play a role. We have estimated the relation between export market shares and lagged relative export prices for major countries and regions (figure 2.4).

**Figure 2.4 Export performance estimates, 1980-2006**

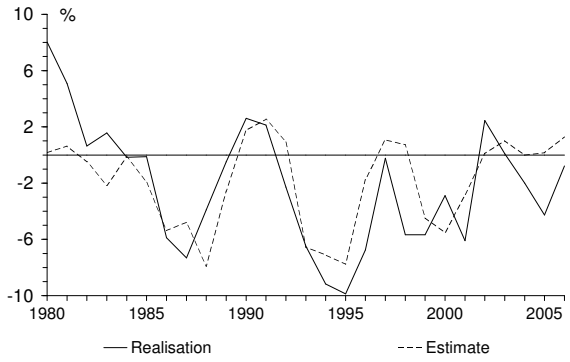
**Euro area**



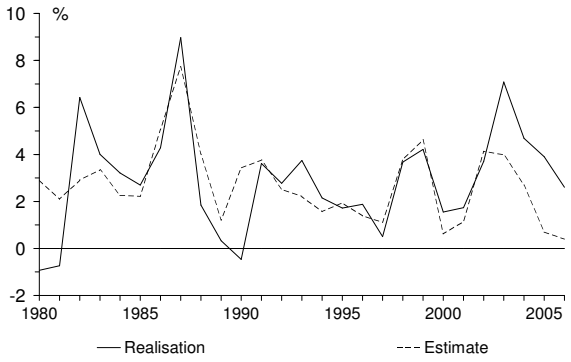

**United States**




**Japan**




**Emerging Markets**



The price substitution elasticities vary between −1 and −1½ and the average lag is ½ to ¾ year. The positive trend constant for the emerging markets is 2½% per year and the constant term for the advanced economies varies from −¾% for the euro area, via −1¼% for the US to −2¼% for Japan. The relatively large negative constant for Japan is due to outsourcing and off-shoring to the rapidly developing emerging markets in the rest of Asia. The relatively slow autonomous downward trend in market shares of European exporters should probably be attributed to various factors. The analyses includes intra-European trade and particularly cross-border trade over short distances is less viable to competition from outside the euro area. The continuing integration of the internal market may have helped as well. Outsourcing and off-shoring of industrial activities in Europe was probably also less than in the United States and Japan over the whole period. However, over the past couple of years, increasing direct investments in Central Europe seem to have speeded up this trend. One remarkable feature in the most recent years is the below-par performance of all advanced economies and a further strengthening of the export performance trend of the emerging economies, particularly China. These features have been taken into account in the export forecasts for 2007.

# 3 Trade prices

*Following hefty rises in 2005, prices for raw materials and energy rose again spectacularly in 2006. For next year we foresee some commodity price reductions. Manufacturing prices in the currencies of the exporters are also on the rise, mainly driven by higher raw material costs.*

## 3.1 Trade prices in national currency terms

Average export prices in the currencies of exporters increased by 4½%, almost equalling the rise in 2005. The major contributions came from the rise in raw material prices, particularly metals, and energy costs. Next year world export price inflation may come to a halt if raw materials and energy prices decline as projected.

**Table 3.1 World trade prices of goods in national currencies, 2005-2007**

| | Exports | | | Imports | | |
|---|---|---|---|---|---|---|
| | 2005 | 2006 | 2007 | 2005 | 2006 | 2007 |
| | annual percentage changes | | | | | |
| World | 4.8 | 4.5 | 0.4 | 5.0 | 4.7 | 0.5 |
| Advanced economies | 3.0 | 3.4 | 1.2 | 5.3 | 5.0 | 0.1 |
| EU-15 | 2.7 | 3.3 | 1.4 | 4.5 | 4.7 | – 0.2 |
| United States | 3.1 | 3.3 | 2.0 | 7.0 | 5.0 | 1.0 |
| Japan | 1.9 | 4.0 | 0.0 | 10.6 | 12.0 | – 1.5 |
| Emerging economies | 7.1 | 5.8 | – 0.4 | 4.5 | 4.3 | 1.0 |
| Transition countries | 9.2 | 9.7 | – 1.8 | 3.7 | 7.1 | 0.9 |
| Asia[a] | 3.1 | 2.7 | 0.6 | 4.3 | 2.9 | 0.8 |
| Africa and Middle East[a] | 25.0 | 13.0 | – 4.0 | 5.0 | 4.0 | 1.0 |
| Latin America[a] | 8.5 | 9.0 | – 0.5 | 5.5 | 6.0 | 2.0 |

[a] On a US dollar basis.

Manufacturing prices in the currencies of the exporters show annual increases of approximately 1½% over the years 2005-2007. This is above the long-term trend, determined by structural unit labour costs in the exporting industries. For the past five years structural unit labour costs, defined as wages costs relative to structural productivity, have declined by approximately 1% annually. Industrial wages in the advanced economies did not accelerate at all, in spite of the rising CPI inflation. Increased competition from emerging markets is often mentioned as the main reason for the weak real wage development in the industrial sectors of the advanced economies. The upward trend in the manufacturing prices seems solely due to the pass-trough of raw material prices, which take up about 10% of total production costs. From the healthy profit growth of most industrial firms we may also conclude that the pass-trough of higher input prices into internationally traded manufactures has been more or less complete. Lagged effects

of the pass-trough on international prices could therefore be very small, in which case the projected increase of manufacturing prices in 2007 could prove too high.

Import prices in national currency terms of almost all countries increased in 2005 and 2006. The rise in commodity prices was again the major force. It contributed markedly to the world wide acceleration of CPI inflation. Exchange rates were almost stable and hence had little impact on the import price developments. Next year import prices are more or less stable, helped by the projected decline of oil and raw material prices. Euro area import prices may even decline somewhat as the euro is expected to appreciate a bit against most other currencies.

## 3.2 Trade prices in US dollars

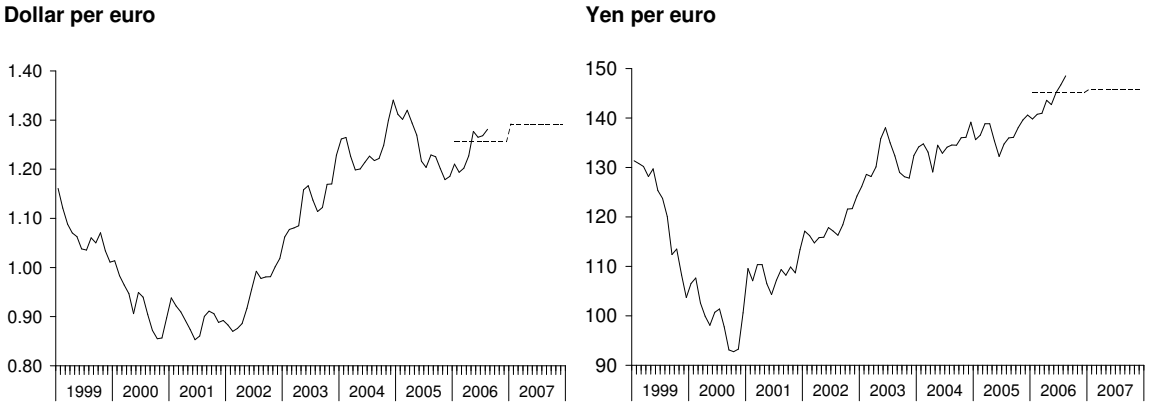
The relatively stable exchange rates (see figure 3.1) explain why international prices in US dollars move more or less in line with national currency prices. Next year dollar price inflation is slightly higher compared to the national currency inflation, given the projected minor depreciation of the dollar in 2007.

**Table 3.2 World trade prices of goods in dollars, 2005-2007**

| | Exports | | | Imports | | |
|---|---|---|---|---|---|---|
| | 2005 | 2006 | 2007 | 2005 | 2006 | 2007 |
| | annual percentage changes | | | | | |
| World | 5.8 | 5.3 | 1.6 | 5.8 | 5.4 | 1.7 |
| Advanced economies | 3.4 | 3.9 | 3.3 | 5.6 | 5.5 | 2.0 |
| EU-15 | 2.6 | 4.5 | 4.4 | 4.5 | 5.9 | 2.8 |
| United States | 3.1 | 3.3 | 2.0 | 7.0 | 5.0 | 1.0 |
| Japan | 0.1 | – 1.3 | 1.8 | 8.6 | 6.3 | 0.2 |
| Emerging economies | 8.7 | 6.8 | – 0.3 | 6.2 | 5.2 | 1.2 |
| Transition countries | 12.5 | 9.7 | – 1.5 | 7.5 | 6.8 | 1.1 |
| Asia | 4.9 | 4.5 | 0.8 | 6.2 | 4.7 | 1.0 |
| Africa and Middle East | 25.0 | 13.0 | – 4.0 | 5.0 | 4.0 | 1.0 |
| Latin America | 8.5 | 9.0 | – 0.5 | 5.5 | 6.0 | 2.0 |

The terms-of-trade of the exporters of primary commodities increased in 2005 and 2006, but are forecast to decline in 2007. These developments are, of course, mirrored in the terms-of-trade of the advanced economies and the emerging markets in Asia. This is particularly visible in the data for Japan.

**Figure 3.1 Euro exchange rates of the US dollar and the yen, 1999-2007**




## 3.3 Demand for oil, OPEC production and oil prices

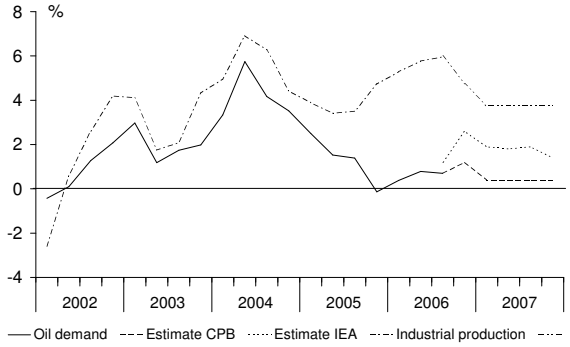
Usually we leave this subject in the hands of the Working group on Commodity Prices. Not to express any opinion on what is currently happening on the oil markets seems rather odd, given the prime importance for world trade in general at the moment.

Oil prices have shot up since the end of 2001. Worldwide underinvestment in the past 15 years in up- and downstream activities as well as a surge in demand from the emerging markets, more particularly China, both contributed to the strong rise in oil prices. Apart from that, geopolitical developments increased the risks on the supply side, as excess capacity was strongly reduced. Recently oil prices have come down quite a lot, from almost $ 80 to less than $ 60 per barrel. Two reasons could be mentioned for the decline: firstly decreasing geopolitical risks in the Middle East and secondly the fear of oversupply in view of increasing stocks and the projected slowdown of the world economy in 2007.

This section describes the likely development of oil demand in the world up to the end of 2007. It analyses the likely consequences for OPEC production and how this may affect oil prices. Oil demand projections are usually taken from the IEA or from recent OPEC studies. So far this year both organisations have systematically overestimated the demand trend for oil in the world (see right hand figure 3.2). We expect that oil demand will only increase by 0.7 mbd in 2006. Already in the course of 2005 demand started to slow relative to GDP and industrial production growth in the world (see left hand figure 3.2). Price substitution still works, not only in relation to total energy demand, but also through a shift of oil to other energy sources, especially natural gas.

**Figure 3.2** **World industrial production and oil demand and 2006 increase world oil demand: revolving estimates by IEA**

**World industrial production and oil demand**




**IEA estimates of 2006 world oil demand growth (mbd)**

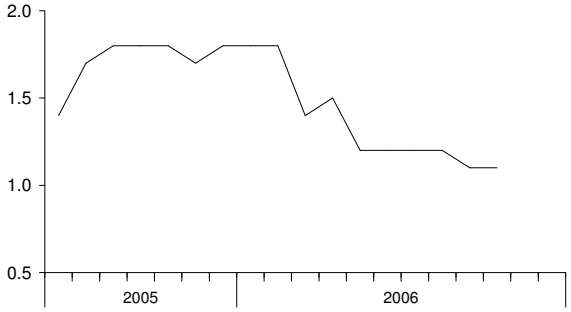
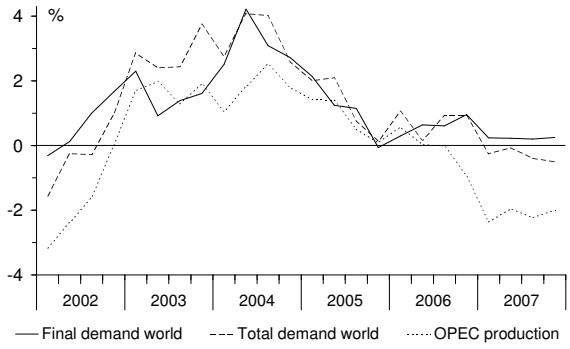
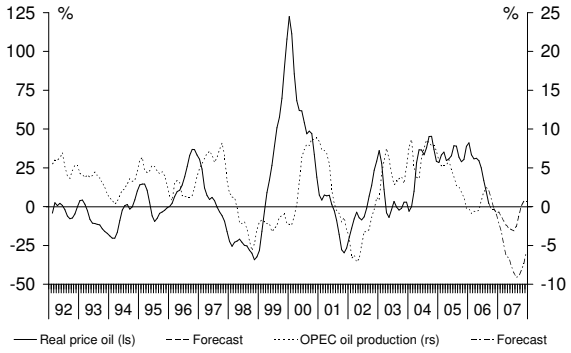



**Figure 3.3** **Crude oil world demand, OPEC oil production and real world market price of oil**

**Crude oil world demand and OPEC production**




**OPEC oil production and real world market price of oil**




The IEA still forecasts a rather strong pick up of oil demand growth from now on (left hand figure 3.2). We consider this implausible given the continuing substitution effects, which act with quite long time lags, and the projected slowdown of the world economic next year. We estimate only a marginal increase of final demand for oil next year. This year, a growing share of oil production went into stockbuilding, which is not likely to continue for much longer. Assuming no change in stockbuilding next year, which might prove too optimistic, then leads to a decline of total world oil demand in 2007.

Most analysts, including the IEA, are rather optimistic about the supply increases outside OPEC next year, particularly in the CIS-countries and in Africa. Even the OECD oil production might increase somewhat, which is a change in trend. In a risk-free scenario, overall non-OPEC supply is expected to increase by 1.7 mbd, leaving demand for OPEC oil at more than 2 mbd below the actual production level in this year (see left hand figure 3.3). OPEC already decided

to cut production from November 1 by 1.2 mbd. Our analyses shows that this might not be enough to balance the market in 2007.

The projected changes in the supply demand balance for oil implies that excess capacity in the world would be restored to over 5 mbd, that is even above the comfort level cited by the IMF[5]. The risk premium in connection with supply disturbances would thus decline, but it is hard to forecast by how much. To get a rough idea of where oil prices may be heading in the next year, we plotted demand for OPEC oil against the real price developments of oil over the past 15 years (see right hand figure 3.3). At first instance these variables seem clearly correlated. Surprisingly, real price changes often precede the oil production changes of OPEC. This underlines the often mentioned "too little too late" approach by OPEC in fixing the production quota. Figure 3.3 suggests that the current price forecast for Brent crude in 2007 at $ 60 per barrel does not seem to entail an upward risk.

[5] IMF, World Economic Outlook, April 2005.

# 4 External imbalances

*External imbalances persists and are therefore increasing the risk of a confidence shock in the US economy*

External imbalances further increased in 2005 and 2006, partly driven by the hike in primary commodity prices (annex 3, table 6c). The weight of primary commodities in the exports of the Middle-East, Africa and Latin America helped to increase the trade surplus. But the trade balance of emerging Asia improved as well, in spite of the higher raw materials and energy bill. China's surplus is growing very rapidly, contributing to the already high trade tensions with the United States, who would like to see a much faster realignment of the renminbi. The deficit of the US will increase to some $ 860 bln in 2006. The trade balances of Japan and almost all European countries deteriorated as well in 2005 and 2006, but Germany managed to consolidate its large surplus.

The forecast decline of raw materials and energy prices helps to reduce the imbalances a bit in 2007. But the smaller surpluses of the primary commodity producers is mainly reflected in the growing surpluses of emerging Asia, Japan and Germany. The trade balance of Germany also improves through the deceleration of internal demand, caused by the hike in the VAT rate. The huge deficit of the United States remains approximately as high as in the current year, in spite of the fall in energy prices and the slowdown of domestic demand. Only very large shocks to the US economy in the form of increased risk premiums can reduce the deficit. Simulations with the NiGEM model[6] suggest that such shocks do not necessarily harm Europe to a great extend, mainly because of a sharp decline in real interest rates outside the US.

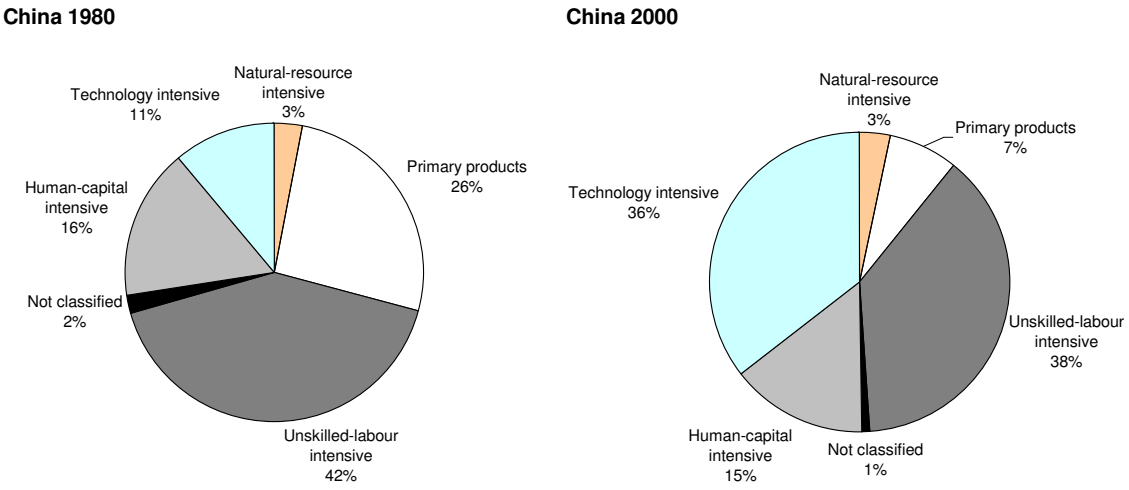
[6] Euroframe-EFN, 2006, Economic Assessment of the Euro Area: Forecasts and Policy Analyses, Autumn Report (http://www.euro-frame.org/)

# 5 China's emergence and European foreign trade[7]

## 5.1 Stylised facts

The high growth rates of the Chinese economy over the past two decades in combination with its sheer size and its transition towards a market economy have turned China into a respectable player on the world market. China is now the second biggest supplier of import goods for the European Union, after the United States, while it was only the 44th supplier in 1978. Between 1980 and 2000 the share in Chinese exports of primary products has declined drastically, whereas the share of technology-intensive exports has increased strongly, partly as a result of outsourcing by advanced economies (Figure 5.1). However, China's forte is still in the low-skilled labour-intensive production of goods. The ten most important export products account for 73% of the total Chinese exports (Table 5.1).

**Figure 5.1 Chinese exports by factor intensity**




Sources: Own calculations based on Feenstra and Lipsey (2005); classification based on Hinloopen and Van Marrewijk (2006).

European exports to China have also increased substantially, but clearly less steeply than imports from China. This also holds for other trading partners of China. Some fear that in the future China will not only have a massive export of low-skilled products but also thrive in exports of high-skilled products and therefore no longer needs to import high-skilled products from the European Union. However, if the Chinese could produce everything more cheaply at home, their exporters would find that the euros and dollars earned would be worthless.

[7] This paragraph highlights some of the findings of a recent CPB study by Wim Suyker and Henri de Groot (September 2006). http://www.cpb.nl/eng/pub/cpbreeksen/document/127/

**Table 5.1 China[a] tradables with strong revealed comparative advantage and large national export shares**

| Top 10 export products 2000 | | | | Percentage share of | | |
|---|---|---|---|---|---|---|
| SITC-2 (2-digit) | Product group | Factor intensity | RCA China | Total Chinese exports | World export in product | Import to export ratio |
| 84 | Apparel and clothing | Unskilled-labour | 4.5 | 13.6 | 24.8 | 0.0 |
| 89 | Manufactured articles | Technology / human-capital / unskilled-labour | 3.3 | 13.4 | 18.3 | 0.1 |
| 77 | Electrical machinery | Technology | 1.1 | 10.5 | 6.3 | 0.8 |
| 76 | Telecommunication, audio, video apparatus | Human-capital / technology | 1.6 | 8.9 | 9.0 | 0.3 |
| 75 | Office machines | Technology | 1.5 | 8.6 | 8.2 | 0.3 |
| 85 | Footwear | Unskilled-labour | 6.3 | 5.2 | 34.6 | 0.0 |
| 65 | Textile yarn | Unskilled-labour | 1.6 | 4.6 | 9.0 | 0.6 |
| 69 | Manufactured metals | Human-capital | 1.5 | 3.1 | 8.5 | 0.2 |
| 83 | Travel goods | Unskilled-labour | 7.4 | 2.6 | 40.8 | 0.0 |
| 82 | Furniture | Unskilled-labour | 2.3 | 2.4 | 12.8 | 0.0 |
| Total | | | | 73.0 | | |
| **China top 10 RCA, 2000** | | | | | | |
| 83 | Travel goods | Unskilled-labour | 7.4 | 2.6 | 40.8 | 0.0 |
| 85 | Footwear | Unskilled-labour | 6.3 | 5.2 | 34.6 | 0.0 |
| 57 | Plastics in primary forms | Technology | 5.6 | 0.1 | 30.6 | 0.0 |
| 81 | Prefabricated buildings | Unskilled-labour | 4.7 | 1.5 | 25.8 | 0.0 |
| 84 | Apparel and clothing | Unskilled-labour | 4.5 | 13.6 | 24.8 | 0.0 |
| 89 | Manufactured articles | Technology / human-capital / unskilled-labour | 3.3 | 13.4 | 18.3 | 0.1 |
| 82 | Furniture | Unskilled-labour | 2.3 | 2.4 | 12.8 | 0.0 |
| 88 | Photo apparatus | Technology / human-capital | 2.2 | 2.2 | 12.1 | 0.2 |
| 32 | Coal | Primary products | 2.1 | 0.7 | 11.3 | 0.0 |
| 65 | Textile yarn | Unskilled-labour | 1.6 | 4.6 | 9.0 | 0.6 |
| Total | | | | 46.3 | | |

[a] China is an aggregate of China, Hong Kong and Macau special administrative regions, China free trade zones.

Sources: Own calculations based on Feenstra and Lipsey (2005); Factor intensity classification based on Hinloopen and Van Marrewijk (2006).

Eichengreen and Tong[8] answer the question as follows: "Non-specialist observers are sometimes led to conclude that, if current trends continue, it will not be many years before China dominates the market for virtually every type of good. Economists of course understand that even a large country has a comparative advantage. China will consequently specialise in the production and export of those goods in which its factor and organisational endowment give it a comparative advantage while importing the rest." Thus, China will not dominate all export markets in the future. However, a stronger performance of China in the production of high-skilled products may change the terms of trade in a way that is detrimental for the EU. The

[8] Eichengreen and Tong, 2006, How China is reorganizing the world economy, Asian Economic Policy Review, vol 1, no 1.

European economies may have to export more to import the same amount of Chinese goods and services.

## 5.2 Impact on European labour markets

It is frequently claimed that globalisation will necessitate huge labour market adjustments and result in increasing income inequality. Similar claims are made in relation to the emergence of China. A simple look at the facts suggests that the steep increase in trade with China did not have a noticeable impact on the pace of restructuring or on unemployment. The pace of shifts in sectoral employment is fairly stable in the EU-15 and are not accompanied by any noticeable rise in friction unemployment. The unchanged pace of changes in the sectoral pattern fits with other indications of limited outsourcing by European firms.[9] Furthermore, exports to China are also creating employment in the European Union. It is a fallacy that the number of jobs are given and a rise in employment in one country (China) has to lead to a fall in other countries (the EU countries). In the longer term, the number of European jobs is determined by the labour supply, the tax burden and labour market institutions. Nevertheless, it is useful to have an impression of the direct impact of trade with China.

We have explored the impact on Dutch employment. Three effects can be distinguished: the number of Dutch jobs involved in exports to China, the numbers of Dutch jobs involved in re-exporting goods imported from China and the number of jobs 'lost' due to imports from China (i.e. the number of workers needed to produce the goods currently imported from China). Those effects are calculated for 2004. Input-output information is used to incorporate intermediate deliveries needed to produce the final products. In 2004, exports to China were good for around 15 thousand Dutch jobs. Most of those jobs can be found in the sectors "machinery and equipment" and in "medical, precision and optical instruments". The employment impact of re-exporting goods imported from China is somewhat less important but clearly not negligible: around 8 thousand Dutch jobs. Thus, exports to China and re-exports of goods from China provide around 23 thousand jobs. Around 35 thousand Dutch workers would be needed to produce (in nominal terms) the goods that are currently imported from China and that are not re-exported. Most of them would work in the sector textile and footwear and in the sector office, accounting and computing machinery. However, as Chinese import prices are lower, producing the same in nominal terms would mean producing less in physical and real terms or to have Dutch wages for those workers comparable with that of Chinese workers, i.e. considerably less than the normal Dutch wage rate. Moreover, some of the Chinese products cannot be produced here. The numbers presented above have the advantage that jobs involved

[9] Euroframe-EFN, 2005, Economic Assessment of the Euro Area: Forecasts and Policy Analyses, Spring Report (http://www.euro-frame.org/)

in exports are highlighted, avoiding a focus on the impact of imports only. As a comparison, the estimated net number of US jobs lost due to international trade is 2.4% in 2003[10].

## 5.3 Long-term scenarios up to 2040

This section explores China's role in the world economy up to 2040 with WorldScan, CPB's applied general equilibrium model for the world economy. The original study compares the outlook under two different set of assumptions concerning the globalization trends: the global economy scenario and the regional communities scenario. In this summary we restrict ourselves to the first scenario, in which world trade and global economic growth are boosted by trade liberalisation, economic integration and the emphasis on efficient functioning markets. Additional international trade agreements result in this scenario in significant reductions in tariffs and non-tariff barriers. Furthermore, trade is facilitated by more transparent and uniform customs procedures. Innovation and international competition spur labour productivity all over the world. As a consequence of the smooth functioning of national and international goods and services markets, China's economic growth remains very high: 8.5% per year up to 2020. In the two following decades, economic growth diminishes, but remains at a high level.

**Table 5.2 Sectoral value added and production growth by sector in China and EU-15 under the Global Economy scenario**

| | Sectoral value added | | | | Production growth by sector | |
|---|---|---|---|---|---|---|
| | 2002 | | 2040 | | 2006-2040 | |
| | China | EU-15 | China | EU-15 | China | EU-15 |
| | % national income | | | | annual percentage changes | |
| Agriculture and food | 19.0 | 5.3 | 8.1 | 1.8 | 8.8 | 2.0 |
| Energy and raw materials | 5.9 | 2.3 | 8.6 | 4.7 | 5.5 | 5.3 |
| Chemicals and minerals | 7.4 | 4.4 | 0.3 | 1.3 | 9.3 | 4.4 |
| Capital goods | 11.3 | 9.5 | 0.9 | 3.5 | 9.7 | 3.4 |
| Other manufacturing | 13.0 | 5.6 | 5.1 | 2.6 | 10.7 | 2.8 |
| Trade and transport | 19.4 | 19.7 | 19.2 | 14.9 | 9.0 | 3.0 |
| Business services | 5.4 | 16.1 | 10.7 | 21.9 | 6.4 | 2.7 |
| Other services | 18.5 | 37.1 | 47.0 | 49.4 | 5.3 | 2.3 |

Source: WorldScan calculations.

Trade liberalisation and the move towards more private responsibilities are not only boosting output growth of China but also that of the EU-15. High GDP growth in the EU-15 is accompanied by wider income dispersion. The ratio of unskilled to skilled wages is expected to widen, from an EU-15 average of 0.62 in 2002 to 0.52 in 2040. However, the unemployment

[10] Groshen, Hobijn and McConnell, 2005, US jobs gained and lost through trade a net measure. Federal Reserve bank of New York, Current Issues in Economics and Finance, volume 11, no 8.

rate drops as there are stronger incentives for the unemployed to find a job and as the burden for employers to attract employees falls. The sectoral production reallocation is reflected on the shifts of labour shares (Table 5.3). The economic events modelled in the Global Economy scenario cause high labour reallocation rates in the long run.

To sum up, the most significant development is the considerable increase in bilateral trade flows between the EU-15 and China. While the changes are rather pronounced in the Global Economy scenario, they are also significant even when trade barriers are left at roughly the same levels as in 2002. These increased trade flows, however, are only partly responsible for the significant labour and production reallocation towards the services sectors expected to take place in the EU-15.

**Table 5.3 Bilateral trade flows China and EU-15 and labour reallocation EU-15 by sector, 2002 and 2040 under the Global Economy scenario**

| | Exports China to EU-15 | | Exports EU-15 to China | | Labour reallocation EU-15 | |
|---|---|---|---|---|---|---|
| | 2002 | 2040 | 2002 | 2040 | 2002 | 2040 |
| Sectoral Shares | % | | | | | |
| Agriculture and food | 2.3 | 1.1 | 3.3 | 3.5 | 4.9 | 1.6 |
| Energy and raw materials | 0.7 | 0.1 | 0.7 | 12.4 | 1.1 | 1.9 |
| Chemicals and minerals | 7.0 | 5.4 | 8.3 | 7.5 | 4.3 | 1.3 |
| Capital goods | 30.9 | 26.1 | 45.2 | 24.5 | 11.2 | 4.3 |
| Other manufacturing | 28.2 | 52.2 | 11.6 | 9.5 | 6.1 | 2.9 |
| Trade and transport | 21.2 | 14.8 | 14.4 | 7.4 | 20.7 | 16.5 |
| Business services | 7.6 | 0.2 | 10.4 | 19.3 | 12.3 | 17.0 |
| Other services | 2.2 | 0.0 | 6.2 | 15.9 | 39.3 | 54.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Worldscan calculations.

## 5.4 The medium-term outlook and simulations up to 2010

Medium-term economic developments may diverge from the long-term scenarios sketched in the previous section. This section provides an assessment of the medium-term outlook for the Chinese economy and its impact on the global economy. As existing tensions may lead to crises, this section also analyses the impact on China and the EU of several possible shocks to the Chinese economy. We have examined an inflationary shock, increased reliance on export-led growth, problems in the financial sector and a global currency realignment. These analyses are carried out with NiGEM, the empirical NIESR macro model of the world economy. Here we will not present the detailed results but instead focus on the general consequences of these shocks.

*Increases in inflationary pressures could* build up for several reasons. The Chinese economy is already growing at near capacity. The government might move towards a more market-based pricing regime for energy, raise rural income leading to higher food prices or curtail migration to the cities, raising the wage floor for unskilled industrial labour. The inflation shock would reduce China's GDP and trade volumes. Declining imports harm suppliers but the deterioration of Chinese competitiveness favours competitors on the world market. But rising Chinese export prices also deteriorate the terms-of-trade of other countries and hence their growth prospects. The overall effect on other countries depends on the size and structure of the bilateral trade flows. GDP growth in the euro area might improve somewhat, but growth in the United States is expected to deteriorate.

*Increased Chinese reliance on export-led growth* might result from the government's growing anxiety over rural discontent which was underlined by the key economic focus of its recently approved 11th Five-Year Plan giving top priority to building a new socialist rural area and a socialist harmonious society. The government's principal strategy in maintaining social stability has always been to ensure robust economic growth. Under these circumstances, the government could increase its reliance on the tried and tested growth strategy of export-led growth. This raises GDP growth in China and increases the current account surplus. As the rise in Chinese output is assumed to be supply driven, there is little impact on the output gap or on domestic inflation. Imports would tend to rise with output, and this would support growth in China's trading partners. A rise in the current account surplus indicates a rise in national savings, and this shift in the balance between saving and investment in the world economy puts downward pressure on inflation and real interest rates everywhere. The ultimate impacts on output in the euro area and the United States are small, as the positive effect of lower long-term rates is offset by a fall in export market shares of both regions. Growth would be marginally higher in the euro area and marginally lower in the US. However, the significant improvement in the terms of trade that accompanies higher Chinese exports would raise welfare and real consumption in both regions.

*An increase in China's risk premium* could result from problems in the financial sector. While much progress has been made in strengthening the financial system a risk of a systemic failure in the system remains high. Due to the underdeveloped and tightly controlled capital market in China, financial risks in China are concentrated in the banking sector. Bank deposits as a percentage of GDP from households and companies are twice as high as in the major OECD economies. Steady efforts have been made in recent years to reduce non-performing loans (NPLs) and the latest official estimate of the level of NPLs in the banking sector stood at 10% at the end of 2005. However private estimates are in the range of 30%. Overheating of real estate markets across major cities in China is a new key risk. The risk-based capital weightings issued by the banking regulator in early 2004 have encouraged banks to lend to consumers,

mainly in the form of mortgages. Should the real estate bubble burst, recent loan portfolios could also turn non-performing.

The impact of a rise in the risk premium of Chinese assets in the event of a systemic failure in the financial system is analyzed under a nominal targeting regime at the central bank. Chinese long term real interest rates rise, whilst there is no rise in the currency risk premium on Chinese assets. Despite the major risk of contagion, it is assumed that the shock to the banking system is effectively contained within China, and that international spillovers are limited to trade effects. Higher domestic real interest rates reduce both domestic demand and the supply capacity of the economy, although the depreciation of the renminbi initially offsets the fall in domestic demand. In the longer term output settles on a lower trajectory with diminished imports whilst exports are little affected. Chinese export prices fall initially because there is excess capacity in the economy, improving the terms of trade of others. The overall effects on the euro area and the US are slightly negative.

*A global currency realignment* might result from widening current account imbalances in major economies. The upward trend in both current account surplus and foreign exchange reserves in several large East Asian economies contrasts sharply with the deterioration in the US external position. Moreover, China has recently surpassed Japan as the largest holder of foreign exchange reserves in the world. Should such massive imbalances in global savings and investment position were to unwind, it could impose a significant shock to global markets, in particular to the foreign exchange markets. Obstfeld and Rogoff[11] pointed out that the US has become increasingly dependent on Asian central banks and oil producers for financing its deficits. Indeed, in the past year, remarks made by Asian central bankers for the need to diversify their holdings of foreign assets have led to increased volatilities in the global exchange rates. We have increased the risk premium on US assets by imposing an endogenous shock on the US dollar, depreciating against a basket of currencies including the renminbi. Domestic prices in China adjust quickly to offset the loss in export competitiveness stemming from the currency realignment. Hence, the real effective exchange rate of China returns back to base in the third year after the shock. Although the US sees its export competitiveness improve permanently through the currency realignment, its output improves only marginally for less than a year and than falls below base as the rise in the risk premium implies permanently higher real interest rate. The slowdown in the US in combination with its depreciation mean that GDP in China and Europe contracts slightly.

[11] Obstfeld and Rogoff, 2005, Global current account imbalances and exchange rate adjustments, Brooking Papers on Economic Activity, volume 1.

# 6 Hub-and-Spoke or else? Free trade agreements in the 'enlarged' EU

*By Luca De Benedictis (University of Macerata), Roberta De Santis and Claudio Vicarelli (Institute for Studies and Economic Analyses, Rome)* [12]

While the economic analysis of Free Trade Agreements (FTAs) has reached the status of a well established research area in theoretical and empirical international trade, far less is known about the more complex economics when FTAs overlap in a hub-and-spoke system. This paragraph examines the issue from an empirical perspective, focusing on the effects of FTAs in Europe in terms of boosting trade flows between the core Europe (EU15) and the CEECs and among the CEECs themselves. In particular, we look for empirical evidence showing whether and how the Central European Free Trade Agreement (CEFTA) and the Baltic Free Trade Agreement (BFTA) exerted a significant impact on intra-European trade, effectively reducing the influence of the European Association (EA) in shaping the European trade structure has a hub-and-spoke system – with the EU15 being the hub and the CEECs the spokes.

We quantify these effects using a panel of bilateral export flows starting from 1994. The choice of the starting year is not casual. Although the formal beginning of negotiations for eastward EU enlargement is fairly recent, the CEECs accession process somehow began shortly after the free market system got under way. In fact, since the early 1990s, the acceding countries have been signing bilateral agreements with the EU – i.e. the EA agreements – which have represented an advance on the path towards integration, through a progressive liberalisation of intra-European trade. On the other hand, in 1992 Czech and Slovak Republic, Hungary and Poland gave origin to the CEFTA, and in 1996 Slovenia joined CEFTA as a full member. In 1994 the BFTA also entered into force. Since then, the CEECs signed several bilateral trade agreements among themselves. Our research question is about the effectiveness of those agreements in shaping the intra-EU trade system.

*Empirical strategy*. The main findings of the empirical literature above are positive and significant coefficients of the dummies representing FTAs. However, those estimates could be seriously biased especially due to the lack of controls for heterogeneity and dynamics. We adopt a gravity model approach, trying to control for all these factors; in this context, we use a "system GMM" dynamic panel data estimator. The equation have been estimated for the group of the eight CEECs as reporting countries and the EU15 plus the 8 CEECs as trading partners; the time span is 1994-2002.

[12] This section is an abstract of a paper published in the *European Journal of Comparative Economics,* n.2 2005. http://eaces.liuc.it/articles.asp?identifier=ejce:18242979/2005/02/05 For references and details please refer to the article.

We introduce in our gravity equation three sets of variables: i) gravity variables, ii) controls for heterogeneity iii) controls for dynamics. Dummy variables to test the effects of FTAs on bilateral trade flows between CEECs and EU15 and CEECs themselves (the importing countries) are also introduced into the estimates.

i. Standard gravity variables. Bilateral distance, as a proxy of transport costs, and importer and exporter's GDP as proxies respectively of demand and production factors. We add to this standard specification an index of relative country size between trading partners.

ii. Controls for heterogeneity. Following Baltagi et al.[13] we introduce fixed effects for importing and exporting countries. Unlike these authors, we don't control for country-pair effects (i.e. the interaction effect between exporting and importing country picking up unobserved characteristics of country-pairs) because this kind of variables would include the impact of bilateral trade agreements that we want to control by specific dummies. Again, with respect to Baltagi et al., we do not introduce interaction terms between exporting and importing countries and time (it and jt). Following Bun and Klaassen[14] we introduce instead a set of country-pair specific time trend, the reason being that trade flows tend to grow over time. As Bun and Klaassen underline, this approach is more flexible in the cross-sectional dimension (ij) compared to the formulation of Baltagi et al. It allows the trade development over time to be driven by other than national factors (i.e. transportation costs). We impose linearity for trends (at the cost of restricting it and jt dimension) instead of allowing for unrestricted time variation (at the cost of restricting the ij dimension). The estimates are robust also when we generalized the linearity hypothesis by allowing for quadratic trends. Controlling for exporter, importer and bilateral time trend effect, we can proxy the multilateral "trade resistance index" (see Anderson and van Wincoop[15]), obtaining a specification of a gravity equation that can be interpreted as a reduced form of a model of trade with micro foundations.

iii. Controls for dynamics. Given the novelty of the phenomenon, traditional static gravity models, that generally deal with long-run relationships, are not well suited to interpreting the repercussions of accession. For this purpose, we need to make the gravity equation more short-run oriented by explicitly introducing dynamics, controlling for the lagged effects of the dependent variable and detecting the short term influences of the "forthcoming accession" and of all other variables affecting bilateral trade in EU enlarged. The "short run" matters in trade analyses: countries trading with each other tend to have an inertial behaviour due to sunk costs.

[13] Baltagi, B.H., P. Egger and M. Pfaffermayr, 2003, A generalised design for trade flows models, Economic Letters, 80, p. 391-397.

[14] Bun M. and F, Klaassen, (2006, The Euro Effect on Trade is not as Large as Commonly Thought, forthcoming in Oxford Bulletin of Economics and Statistic.

[15] Anderson J. and E. van Wincoop, 2003, Gravity with Gravitas: a Solution to Border Puzzle, American Economic Review, 93, p. 170-192.

*Estimates*. Starting from a "traditional" gravity equation (model 1), we move to an "augmented" version including the two dummy variables of interest, separately and together: firstly, the dummy for FTAs among CEECs (model 2), then the dummy for FTAs among CEECs and EU (model 3) and finally both the dummies together (model 4). In all these estimates we control for heterogeneity and dynamics.

The complete estimated equation form is:

$$\ln\left(Exp_{ijt}\right) = b_1 .\ln\left(Exp_{ij(t-n)}\right) + b_2 .\ln\left(SumGDP_{ijt}\right) + b_3 .\left((Simil_{ijt}\right) + b_4 .\ln\left(Dist_{ij}\right) + \\ + b_5 .FTAP_{ijt} + b_6 .\ FTAEU_{ijt} + b_7 .\ \alpha_i \ + b_8 .\beta_j + b_9 .\tau_{ij}$$

| | |
|---|---|
| Expijt | exports in value from country i to country j |
| SumGDPijt | sum of gross domestic product of the exporting and importing countries. |
| Similijt | similarity index of two's trading partners GDP as measure of relative country size; it is build as: |

$$\ln \quad \left[ 1 - \left( \frac{GDP_{it}}{GDP_{it} + GDP_{jt}} \right)^2 - \left( \frac{GDP_{jt}}{GDP_{it} + GDP_{jt}} \right)^2 \right]$$

| | |
|---|---|
| FTAPijt | Dummy variable that assumes value 0 for the absence of free trade agreements or customs unions among Periphery countries, 1 (year of entry into force) if these agreements are present; |
| FTAEUijt | Dummy variable that assumes value 0 for the absence of free trade agreements or customs unions between Periphery and EU–15 countries, 1 (year of entry into force) if these agreements are present; |
| $\alpha_i$ | Exporting country dummy: assumes value 1 if export flows come from exporter country *i* to each one of importing countries *j,* 0 otherwise; |
| $\beta_j$ | Importing country dummy: value 1 if export flows come from each one of exporter countries *i* to importing country *j*, 0 otherwise; |
| $\tau_{ij}$ | Bilateral trend variables. |

We expect that bilateral export flows are positively influenced by:

i. The lagged endogenous variable. Countries trading heavily with each other are expected to continue to trade, thus reflecting the effects of entrance and exit barriers due to sunk costs.
ii. The sum of importing and exporting countries' GDP. In gravity models trade flows are positively influenced by the "mass" measured by the sum of GDP.
iii. The presence of free trade agreements. These dummies proxy the pure trade effects and are expected to have a positive impact on trade flows.

According to the standard gravity model we also expect that bilateral export flows are negatively influenced by:

i. Distance. It is used as proxy for transport costs and cultural proximity between two countries;

We have no a priori on the signs of:

i. The relative country size index (Simil). Therefore, a negative sign of the index favours the classical Heckscher- Ohlin- Samuelson trade theory view that trade rises with relative factor endowment differences. On the contrary, a positive sign supports Linder's hypothesis, which states that trade volumes are smaller the more dissimilar two countries are in terms of relative factor.

*Estimates results*. Table 1 reports results of the test[16] and the estimates. AR(1) and AR(2) test show the consistency of the GMM estimator and the inconsistency of the OLS procedure. Hence, by introducing dynamics, the proper estimation method is the former one. Sargan test of over-identifying restrictions shows that the hypothesis that all moment restrictions are satisfied for the dynamic specification is not rejected. In detail:

"Gravity standard" variables. A positive exports relationship with the mass and a negative one with distance is confirmed, in line with empirical literature findings. The positive sign of the relative country size index suggests that trade relationships are higher the more similar two countries are in terms of country size. This latter result seems to support Linder's hypothesis, like in Baltagi et al. The lagged dependent variable is statistically significant considering a 1-period lag; the magnitude of the "persistence effect" is a little bit lower with respect to other findings based on more integrated and developed groups of countries (see Bun and Klaassen, Nardis and Vicarelli[17] and De Benedictus and Vicarelli [18]This gap can be explained by the fact that CEECs are less integrated – in the period under examination they were going through a transition process – than EU15 and by the inclusion of bilateral time trend in the regression, capturing part of the "persistence effect". FTA-Periphery. The coefficients show that being part

[16] Arellano and Bond (1991) propose a test of the hypothesis of no second-order serial correlation in the disturbances of the first differenced equation. This is a necessary condition for the valid instrumentation. The Arellano-Bond test performed for our estimate confirms that the GMM estimator is consistent. A test for the hypothesis of no first order–order serial correlation is also reported: the rejection of the null hypothesis (i.e. the presence of first-order serial correlation) indicates the inconsistency of the OLS estimator.

[17] See De Nardis S. and C, Vicarelli, 2003, Currency Unions and Trade: The special Case of EMU, Weltwirtschaftliches Archiv/Review of World Economics, 139, p. 625-649.

[18] De Benedictis L.. and C. Vicarelli, 2005, Trade Potential in Gravity Panel Data Models, Topics in Economic Analysis and Policy, 5.

of a free trade agreement among periphery countries compared to not being part increases bilateral trade by around 16 percent.[19]

These results have important implications also in terms of Peter Mandelson's will to achieve a truly integrated regional trade system for the EU and its partners. According to our empirical findings, South-eastern European Countries as well as the Southern Mediterranean Countries should move towards a regional free-trade area – as exemplified by the CEFTA and the BFTA – to promote intra-regional trade and to prevent contrast the emergence of a hub-and-spoke structure in regional trade flows.

**Table 6.1 Estimate of bilateral exports coming from CEECs-8, (1994-2002)**

| Num.obs= 1712 | Num group=176 | sample period 1994-2002 | | |
|---|---|---|---|---|
| | I | II | III | IV |
| $\ln(Exp_{ij(t-1)})$ | 0.30* | 0.34** | 0.30** | 0.31** |
| | (2.33) | (2.62) | (2.53) | (2.64) |
| $\ln(SumGDP_{it})$ | 0.4* | 0.40 * | 0.51** | 0.51** |
| | (2.37) | (2.34) | (2.72) | (2.73) |
| $Ln(DIST_{ij})$ | – 1.46*** | – 1.34 *** | – 1.46*** | – 1.37*** |
| | (5.4) | (5.24) | (5.93) | (5.78) |
| $SIMIL_{ijt}$ | 0.49 ** | 0.43** | 0.57*** | 0.53** |
| | (2.81) | (2.57) | (3.24) | (3.07) |
| $FTAP_{ijt}$ | | 0.16* | | 0.15* |
| | | (2.27) | | (2.24) |
| $FTAEU_{ijt}$ | | | – 0.12 | – 0.11 |
| | | | (1.66) | (1.49) |
| $\alpha_i$ | Yes | Yes | Yes | Yes |
| $\beta_j$ | Yes | Yes | Yes | Yes |
| $\tau_{ij}$ | Yes | Yes | Yes | Yes |
| Sargan test | $\chi^2(46)$ =38.65 | $\chi^2(46)$ =42.09 | $\chi^2(46)$ =36.55 | $\chi^2(46)$ =39.53 |
| | p> $\chi^2$= 0.77 | p> $\chi^2$= 0.64 | p> $\chi^2$= 0.84 | p> $\chi^2$= 0.74 |
| Arellano Bond test AR (1) | z=-2.93 | z=-3.25 | z=-3.21 | z=-3.35 |
| | P>z=0.003 | P>z=0.001 | P>z=0.001 | P>z=0.001 |
| Arellano Bond test AR (2) | z=0.43 | z=0.41 | z=0.41 | z=0.37 |
| | P>z=0.664 | P>z=0.679 | P>z=0.681 | P>z=0.712 |

t values in parenthesis
*p<0.05; **p<0.01, *** p<0.001

[19] Since the parameter of the dummy *FTAP* is 0.15 (the inclusion of *FTAEU* dummy doesn't change this value significantly), the variation of trade induced by being part of such a trade agreement (FTA=1) with respect to the case of not being part of any agreement (FTA=0), is given, other things being equal, by $[(\exp^{0.15*}1/ \exp^{0.15*}0) -1]*100=16.2\%$

# Annex 1 Procedures of the Working Group

The detailed results presented in annex 3 are no mere copy's of the questionnaires received. Part of our task is to provide a consistent picture of world trade. As the country forecasts start from different assumptions regarding the outside world, they usually are not fully consistent with each other and with the overall picture of world trade. This overall picture depends on all AIECE country forecasts as supplied by the member institutes, but also on the trade forecasts for non-member countries and regions constructed by the Working Group and on the price forecasts by the Working Group on Commodity Prices.

We start with a pre-meeting forecast of international trade. AIECE country forecasts for trade volumes and trade prices in national currencies are taken from the country questionnaires. Euro dollar exchange rates are not taken from the questionnaires but calculated as the average of all country forecasts. Other European dollar rates are assumed to develop in line with the euro, except for the British pound. This is the first step towards greater consistency. Trade variables for other countries and regions are calculated as the average of forecasts provided by Working Group members on so called group questionnaires. They include dollar exchange rates for Japan and Canada, as well as price forecasts for oil and non-oil commodities.

All this information is fed to a calculation scheme producing tables as in annex 3. The scheme uses automatically updated annual world trade matrices to calculate export market growth, prices of competitors, shadow import prices and effective exchange rates. It also contains automatically updated shares of manufactures, energy and other commodities in world trade, enabling it to calculate world trade prices of manufacturing products.

These results are discussed at the meeting of the Working Group, particularly the forecasts for the non-AIECE area. As a result trade forecasts for these countries and regions may move away from a simple average to a forecast consensus. At that time the (preliminary) forecasts of the Working Group on Commodity Prices are usually available. Our estimates for oil and non-oil commodity prices are now brought into line with these forecasts and export prices of non-member countries are adjusted accordingly. Also export prices of AIECE countries that are major exporters of energy are adjusted, if the original oil price (and/or national dollar rate) assumptions of these countries differ significantly from the consensus. At this stage, trade forecasts for AIECE countries represented in the Working Group may also be adjusted if the emerging picture of the world economy and the consensus forecasts for primary commodity prices and dollar exchange rates warrant such changes. Here we concentrate on import volumes and export prices.

These data are again fed to the calculation scheme, producing a new picture of world trade, including new estimates of export market growth, competitor prices and shadow import prices. This leads to a new round of adjustments, particular of export volumes and import prices. Export volume growth of individual countries and regions is adjusted to properly reflect the estimated market growth and development of competitiveness. A marked difference of world trade growth assumed in the original forecast and the preliminary results of the Working Group usually triggers such adjustments. Import prices are brought in line with shadow prices, taking account of short-term price discrimination effects of effective exchange rate developments. If the adjustment of export volume growth for a particular country is relatively large, we tend to adjust the import volumes as well, but only very gradually. The same holds for export prices if import price adjustments are relatively large.

This leads to a second update of the world trade tables. A final check of the internal consistency may lead to some final minor adjustments.

# Annex 2 Import and export shares in world trade 2005

**Import and export shares in world trade 2005**

| | Import | Export |
|---|---|---|
| | % | |
| Total World | 100.00 | 100.00 |
| Advanced economies | 61.06 | 55.89 |
| European Union 15 | 33.82 | 34.33 |
| Euro area | 27.38 | 28.71 |
| Germany | 7.44 | 9.50 |
| France | 4.66 | 4.31 |
| Italy | 3.68 | 3.60 |
| Spain | 2.68 | 1.82 |
| Netherlands | 2.86 | 3.40 |
| Belgium/Luxemburg | 2.47 | 2.59 |
| Austria | 1.22 | 1.22 |
| Finland | 0.57 | 0.64 |
| Greece | 0.52 | 0.17 |
| Portugal | 0.59 | 0.37 |
| Ireland | 0.68 | 1.08 |
| United Kingdom | 4.67 | 3.55 |
| Sweden | 1.08 | 1.27 |
| Denmark | 0.70 | 0.81 |
| Switzerland | 1.16 | 1.23 |
| Norway | 0.54 | 1.01 |
| United States | 16.11 | 8.72 |
| Canada | 3.02 | 3.51 |
| Japan | 4.96 | 5.80 |
| Emerging markets | 38.95 | 44.11 |
| Central + Eastern Europe | 7.35 | 7.47 |
| Czech Republic | 0.74 | 0.76 |
| Hungary | 0.62 | 0.60 |
| Poland | 0.98 | 0.87 |
| Slovak Republic | 0.35 | 0.31 |
| Slovenia | 0.19 | 0.18 |
| Other transition | 4.48 | 4.74 |
| Asia | 20.99 | 22.53 |
| Anies | 9.07 | 9.76 |
| China | 6.34 | 7.43 |
| Other Asia | 5.58 | 5.34 |
| Africa + Middle East | 5.54 | 8.66 |
| Latin America | 5.07 | 5.46 |

# Annex 3 Detailed international trade tables

**Summary of World Trade**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| World trade volume of total goods | 7.6 | 9.4 | 7.4 |
| World trade price in US dollars | | | |
| Total goods | 5.8 | 5.3 | 1.6 |
| Idem national currencies | 4.9 | 4.6 | 0.4 |
| of which | | | |
| Manufactures | 2.2 | 2.3 | 3.3 |
| Idem national currencies (export weighted) | 1.3 | 1.5 | 1.9 |
| Oil (fob) | 42.4 | 21.0 | – 9.0 |
| Non-fuel primary commodities (HWWA) | 10.1 | 24.0 | – 4.0 |
| Effective exchange rate dollar | | | |
| export weighted | 0.9 | 0.7 | 1.2 |
| import weighted | 0.8 | 0.6 | 1.2 |

**Table 1a Spot exchange rates (in US dollar)**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | units of national currency per US dollar | | |
| Germany | 0.805 | 0.794 | 0.769 |
| France | 0.805 | 0.794 | 0.769 |
| Italy | 0.805 | 0.794 | 0.769 |
| Spain | 0.805 | 0.794 | 0.769 |
| Netherlands | 0.805 | 0.794 | 0.769 |
| Belgium/Luxemburg | 0.805 | 0.794 | 0.769 |
| Austria | 0.805 | 0.794 | 0.769 |
| Finland | 0.805 | 0.794 | 0.769 |
| Greece | 0.805 | 0.794 | 0.769 |
| Portugal | 0.805 | 0.794 | 0.769 |
| Ireland | 0.805 | 0.794 | 0.769 |
| United Kingdom | 0.549 | 0.548 | 0.535 |
| Sweden | 7.472 | 7.448 | 7.306 |
| Denmark | 5.996 | 5.923 | 5.833 |
| Switzerland | 1.246 | 1.243 | 1.219 |
| Norway | 6.443 | 6.432 | 6.504 |
| United States | 1.000 | 1.000 | 1.000 |
| Canada | 1.207 | 1.130 | 1.120 |
| Japan | 110.14 | 116.00 | 114.00 |
| Czech Republic | 23.960 | 22.922 | 22.618 |
| Hungary | 199.65 | 214.40 | 211.10 |
| Poland | 3.236 | 3.180 | 3.150 |
| Slovak Republic | 31.057 | 30.318 | 30.064 |
| Slovenia | 0.804 | 0.794 | 0.769 |
| Other transition | 1.000 | 1.000 | 1.000 |
| Anies | 0.985 | 0.957 | 0.952 |
| Other Asia | 1.000 | 1.000 | 1.000 |
| China | 8.194 | 8.024 | 8.015 |
| Africa + Middle East | 1.000 | 1.000 | 1.000 |
| Latin America | 1.000 | 1.000 | 1.000 |

**Table 1b Spot exchange rates (in euro)**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | euros per unit of national currency | | |
| Germany | 1.000 | 1.000 | 1.000 |
| France | 1.000 | 1.000 | 1.000 |
| Italy | 1.000 | 1.000 | 1.000 |
| Spain | 1.000 | 1.000 | 1.000 |
| Netherlands | 1.000 | 1.000 | 1.000 |
| Belgium/Luxemburg | 1.000 | 1.000 | 1.000 |
| Austria | 1.000 | 1.000 | 1.000 |
| Finland | 1.000 | 1.000 | 1.000 |
| Greece | 1.000 | 1.000 | 1.000 |
| Portugal | 1.000 | 1.000 | 1.000 |
| Ireland | 1.000 | 1.000 | 1.000 |
| United Kingdom | 1.465 | 1.449 | 1.438 |
| Sweden | 0.108 | 0.107 | 0.105 |
| Denmark | 0.134 | 0.134 | 0.132 |
| Switzerland | 0.646 | 0.638 | 0.631 |
| Norway | 0.125 | 0.123 | 0.118 |
| United States | 0.805 | 0.794 | 0.769 |
| Canada | 0.667 | 0.702 | 0.687 |
| Japan ( / 100) | 0.731 | 0.684 | 0.675 |
| Czech Republic | 0.034 | 0.035 | 0.034 |
| Hungary | 0.004 | 0.004 | 0.004 |
| Poland | 0.249 | 0.250 | 0.244 |
| Slovak Republic | 0.026 | 0.026 | 0.026 |
| Slovenia | 1.000 | 1.000 | 1.000 |
| Other transition | 0.805 | 0.794 | 0.769 |
| Anies | 0.816 | 0.829 | 0.808 |
| Other Asia | 0.805 | 0.794 | 0.769 |
| China | 0.098 | 0.099 | 0.096 |
| Africa + Middle East | 0.805 | 0.794 | 0.769 |
| Latin America | 0.805 | 0.794 | 0.769 |

## Table 2 Merchandise trade volumes and export market growth

**Table 2a Export volumes**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| Total World | 7.5 | 9.6 | 7.5 |
| Advanced economies | 4.9 | 7.9 | 5.8 |
| European Union 15 | 4.5 | 7.4 | 5.3 |
| Euro area | 4.2 | 7.5 | 5.3 |
| Germany | 6.5 | 9.5 | 6.0 |
| France | 3.3 | 10.0 | 6.0 |
| Italy | – 0.3 | 3.6 | 2.7 |
| Spain | 2.0 | 6.3 | 5.0 |
| Netherlands | 6.3 | 7.2 | 6.0 |
| Belgium/Luxemburg | 0.9 | 4.8 | 4.5 |
| Austria | 6.4 | 4.8 | 5.5 |
| Finland | 6.1 | 12.0 | 7.5 |
| Greece | 7.9 | 4.0 | 4.0 |
| Portugal | 3.8 | 4.3 | 4.0 |
| Ireland | 3.9 | 6.4 | 5.1 |
| United Kingdom | 6.5 | 6.0 | 5.0 |
| Sweden | 3.7 | 6.8 | 5.5 |
| Denmark | 6.6 | 7.5 | 3.5 |
| Switzerland | 3.5 | 6.3 | 5.5 |
| Norway | 0.7 | 1.5 | 4.5 |
| United States | 7.5 | 10.0 | 7.5 |
| Canada | 3.5 | 3.5 | 3.7 |
| Japan | 5.5 | 11.5 | 7.5 |
| Emerging markets | 11.0 | 11.6 | 9.4 |
| Central + Eastern Europe | 7.8 | 9.7 | 7.6 |
| Czech Republic | 10.1 | 12.0 | 12.0 |
| Hungary | 11.5 | 16.0 | 10.0 |
| Poland | 10.6 | 14.1 | 15.0 |
| Slovak Republic | 9.8 | 17.0 | 12.0 |
| Slovenia | 8.1 | 9.8 | 8.5 |
| Other transition | 5.1 | 7.5 | 4.6 |
| Asia | 13.0 | 14.0 | 11.8 |
| Anies | 11.3 | 11.5 | 10.0 |
| China | 22.7 | 20.5 | 18.0 |
| Other Asia | 7.9 | 11.5 | 8.5 |
| Africa + Middle East | 6.5 | 3.0 | 2.0 |
| Latin America | 9.2 | 11.5 | 7.5 |

**Table 2b Import volumes**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| Total World | 7.7 | 9.1 | 7.2 |
| Advanced economies | 5.8 | 7.1 | 5.6 |
| European Union 15 | 4.9 | 7.9 | 6.0 |
| Euro area | 4.7 | 7.7 | 6.2 |
| Germany | 4.4 | 10.0 | 6.0 |
| France | 6.7 | 9.7 | 8.5 |
| Italy | 0.4 | 2.7 | 3.7 |
| Spain | 5.0 | 8.5 | 6.5 |
| Netherlands | 6.0 | 7.7 | 6.0 |
| Belgium/Luxemburg | 3.0 | 6.0 | 5.0 |
| Austria | 6.8 | 5.0 | 6.0 |
| Finland | 9.5 | 8.0 | 9.2 |
| Greece | – 0.1 | 4.8 | 4.0 |
| Portugal | 6.8 | 2.0 | 5.5 |
| Ireland | 6.5 | 7.8 | 7.2 |
| United Kingdom | 5.9 | 9.2 | 4.5 |
| Sweden | 5.6 | 4.8 | 6.2 |
| Denmark | 7.8 | 14.0 | 8.0 |
| Switzerland | 3.9 | 5.8 | 5.4 |
| Norway | 7.4 | 8.2 | 3.7 |
| United States | 6.7 | 6.5 | 5.0 |
| Canada | 9.0 | 6.0 | 6.0 |
| Japan | 6.0 | 3.5 | 4.0 |
| Emerging markets | 10.9 | 12.3 | 9.8 |
| Central + Eastern Europe | 10.6 | 14.9 | 11.4 |
| Czech Republic | 4.3 | 16.0 | 11.0 |
| Hungary | 6.1 | 12.0 | 7.0 |
| Poland | 5.2 | 13.6 | 14.5 |
| Slovak Republic | 10.5 | 20.0 | 11.0 |
| Slovenia | 4.0 | 8.9 | 7.5 |
| Other transition | 14.0 | 17.5 | 12.0 |
| Asia | 10.1 | 11.5 | 9.5 |
| Anies | 6.4 | 10.5 | 8.0 |
| China | 10.8 | 15.0 | 12.5 |
| Other Asia | 14.0 | 10.0 | 9.0 |
| Africa + Middle East | 15.5 | 12.0 | 10.0 |
| Latin America | 10.1 | 12.0 | 8.0 |

## Table 2 Merchandise trade volumes and export market growth (continued)

**Table 2c Export market growth[a]**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| Total World | 7.7 | 9.1 | 7.2 |
| Advanced economies | 7.2 | 8.9 | 7.0 |
| European Union 15 | 6.7 | 8.9 | 7.0 |
| Euro area | 6.6 | 8.9 | 7.0 |
| Germany | 6.8 | 8.7 | 7.2 |
| France | 6.3 | 8.5 | 6.5 |
| Italy | 7.4 | 9.6 | 7.5 |
| Spain | 6.6 | 8.4 | 6.9 |
| Netherlands | 5.8 | 8.7 | 6.6 |
| Belgium/Luxemburg | 6.5 | 9.0 | 6.9 |
| Austria | 5.9 | 9.8 | 7.1 |
| Finland | 7.6 | 9.8 | 7.5 |
| Greece | 7.9 | 9.9 | 7.7 |
| Portugal | 6.1 | 8.8 | 6.6 |
| Ireland | 6.3 | 8.6 | 6.1 |
| United Kingdom | 7.1 | 8.5 | 7.0 |
| Sweden | 7.2 | 9.2 | 6.9 |
| Denmark | 6.6 | 8.7 | 6.8 |
| Switzerland | 6.7 | 8.8 | 6.8 |
| Norway | 6.5 | 8.4 | 6.4 |
| United States | 8.7 | 9.0 | 7.3 |
| Canada | 7.0 | 7.1 | 5.5 |
| Japan | 8.5 | 9.7 | 7.7 |
| Emerging markets | 8.3 | 9.4 | 7.5 |
| Central + Eastern Europe | 8.3 | 11.8 | 8.8 |
| Czech Republic | 7.9 | 12.5 | 8.9 |
| Hungary | 6.9 | 10.4 | 7.9 |
| Poland | 7.0 | 10.8 | 7.6 |
| Slovak Republic | 5.9 | 12.4 | 9.1 |
| Slovenia | 6.6 | 10.2 | 7.7 |
| Other transition | 9.1 | 12.2 | 9.3 |
| Asia | 8.5 | 9.1 | 7.4 |
| Anies | 9.4 | 9.2 | 7.6 |
| China | 7.4 | 8.4 | 6.7 |
| Other Asia | 8.3 | 9.6 | 7.8 |
| Africa + Middle East | 8.2 | 8.5 | 7.1 |
| Latin America | 7.6 | 8.4 | 6.3 |

[a] Export market growth is the weighted average of growth of import volumes in the geographical markets of each exporting country.

**Table 2d Export performance**[a]

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| Total World | – 0.2 | 0.5 | 0.3 |
| Advanced economies | – 2.2 | – 0.9 | – 1.1 |
| European Union 15 | – 2.1 | – 1.4 | – 1.6 |
| Euro area | – 2.3 | – 1.2 | – 1.5 |
| Germany | – 0.3 | 0.7 | – 1.2 |
| France | – 2.8 | 1.4 | – 0.5 |
| Italy | – 7.2 | – 5.5 | – 4.5 |
| Spain | – 4.3 | – 2.0 | – 1.8 |
| Netherlands | 0.5 | – 1.4 | – 0.5 |
| Belgium/Luxemburg | – 5.3 | – 3.9 | – 2.3 |
| Austria | 0.5 | – 4.6 | – 1.5 |
| Finland | – 1.4 | 2.0 | 0.0 |
| Greece | 0.0 | – 5.4 | – 3.4 |
| Portugal | – 2.2 | – 4.2 | – 2.4 |
| Ireland | – 2.2 | – 2.0 | – 0.9 |
| United Kingdom | – 0.5 | – 2.3 | – 1.9 |
| Sweden | – 3.2 | – 2.3 | – 1.3 |
| Denmark | 0.0 | – 1.1 | – 3.1 |
| Switzerland | – 3.0 | – 2.3 | – 1.2 |
| Norway | – 5.4 | – 6.3 | – 1.8 |
| United States | – 1.1 | 0.9 | 0.2 |
| Canada | – 3.2 | – 3.4 | – 1.7 |
| Japan | – 2.7 | 1.7 | – 0.2 |
| Emerging markets | 2.4 | 2.0 | 1.8 |
| Central + Eastern Europe | – 0.4 | – 1.9 | – 1.1 |
| Czech Republic | 2.0 | – 0.5 | 2.9 |
| Hungary | 4.3 | 5.1 | 1.9 |
| Poland | 3.4 | 3.0 | 6.8 |
| Slovak Republic | 3.7 | 4.1 | 2.6 |
| Slovenia | 1.4 | – 0.4 | 0.8 |
| Other transition | – 3.7 | – 4.3 | – 4.3 |
| Asia | 4.2 | 4.5 | 4.1 |
| Anies | 1.8 | 2.1 | 2.2 |
| China | 14.2 | 11.2 | 10.6 |
| Other Asia | – 0.4 | 1.7 | 0.6 |
| Africa + Middle East | – 1.6 | – 5.1 | – 4.8 |
| Latin America | 1.5 | 2.9 | 1.1 |

[a] Export performance is the ratio of export volume to export markets for total goods.

## Table 3 Prices in US dollars, terms of trade and appreciation against the dollar

**Table 3a Export prices in dollars**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| Total World | 5.8 | 5.3 | 1.6 |
| Advanced economies | 3.4 | 3.9 | 3.3 |
| European Union 15 | 2.6 | 4.5 | 4.4 |
| Euro area | 2.7 | 4.6 | 4.6 |
| Germany | 1.3 | 3.9 | 4.7 |
| France | 1.6 | 2.9 | 4.2 |
| Italy | 6.7 | 6.5 | 4.7 |
| Spain | 1.0 | 5.4 | 6.2 |
| Netherlands | 3.5 | 5.5 | 2.7 |
| Belgium/Luxemburg | 6.7 | 5.7 | 5.7 |
| Austria | 0.1 | 4.4 | 5.7 |
| Finland | 1.1 | 4.7 | 2.7 |
| Greece | 4.9 | 5.4 | 6.5 |
| Portugal | 3.4 | 5.4 | 6.2 |
| Ireland | 0.5 | 5.2 | 5.7 |
| United Kingdom | 0.7 | 3.6 | 3.4 |
| Sweden | 2.5 | 4.3 | 5.0 |
| Denmark | 7.7 | 5.3 | 2.6 |
| Switzerland | 3.2 | 4.2 | 4.5 |
| Norway | 22.3 | 13.8 | – 5.1 |
| United States | 3.1 | 3.3 | 2.0 |
| Canada | 10.0 | 5.2 | 0.9 |
| Japan | 0.1 | – 1.3 | 1.8 |
| Emerging markets | 8.7 | 6.8 | – 0.3 |
| Central + Eastern Europe | 12.5 | 9.7 | – 1.5 |
| Czech Republic | 5.8 | 5.5 | 1.5 |
| Hungary | 0.7 | – 1.8 | 2.8 |
| Poland | 8.3 | 1.6 | 2.4 |
| Slovak Republic | 5.3 | 5.5 | 1.5 |
| Slovenia | 4.3 | 5.4 | 5.8 |
| Other transition | 19.2 | 15.5 | – 4.5 |
| Asia | 4.9 | 4.5 | 0.8 |
| Anies | 3.7 | 3.0 | 1.5 |
| China | 5.0 | 4.5 | 1.5 |
| Other Asia | 6.0 | 6.0 | – 0.5 |
| Africa + Middle East | 25.0 | 13.0 | – 4.0 |
| Latin America | 8.5 | 9.0 | – 0.5 |

**Table 3b Import prices in dollars**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| Total World | 5.8 | 5.4 | 1.7 |
| Advanced economies | 5.6 | 5.5 | 2.0 |
| European Union 15 | 4.5 | 5.9 | 2.8 |
| Euro area | 4.7 | 6.3 | 2.9 |
| Germany | 4.4 | 7.0 | 3.2 |
| France | 3.8 | 3.9 | 2.1 |
| Italy | 8.8 | 9.5 | 3.7 |
| Spain | 4.8 | 5.9 | 3.2 |
| Netherlands | 3.4 | 5.4 | 2.1 |
| Belgium/Luxemburg | 7.4 | 7.0 | 3.2 |
| Austria | 0.1 | 5.9 | 3.2 |
| Finland | 5.7 | 8.0 | 2.7 |
| Greece | 3.0 | 5.3 | 2.7 |
| Portugal | 4.8 | 5.9 | 2.7 |
| Ireland | 0.9 | 5.9 | 3.2 |
| United Kingdom | 2.9 | 3.8 | 2.4 |
| Sweden | 5.5 | 4.8 | 1.9 |
| Denmark | 3.8 | 5.1 | 2.4 |
| Switzerland | 5.7 | 4.7 | 3.0 |
| Norway | 6.3 | 1.7 | 0.9 |
| United States | 7.0 | 5.0 | 1.0 |
| Canada | 5.7 | 4.1 | 1.9 |
| Japan | 8.6 | 6.3 | 0.2 |
| Emerging markets | 6.2 | 5.2 | 1.2 |
| Central + Eastern Europe | 7.5 | 6.8 | 1.1 |
| Czech Republic | 7.6 | 6.0 | 1.0 |
| Hungary | 3.0 | 0.6 | 2.6 |
| Poland | 8.2 | 1.3 | 2.1 |
| Slovak Republic | 6.7 | 6.0 | 1.0 |
| Slovenia | 7.6 | 7.8 | 3.2 |
| Other transition | 9.0 | 11.2 | 1.0 |
| Asia | 6.2 | 4.7 | 1.0 |
| Anies | 7.1 | 4.5 | 1.0 |
| China | 5.7 | 4.8 | 1.0 |
| Other Asia | 5.6 | 4.8 | 1.0 |
| Africa + Middle East | 5.0 | 4.0 | 1.0 |
| Latin America | 5.5 | 6.0 | 2.0 |

## Table 3 Prices in US dollars, terms of trade and appreciation against the dollar (continued)

**Table 3c Terms of trade**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| Total World | – 0.1 | – 0.2 | – 0.1 |
| Advanced economies | – 2.2 | – 1.5 | 1.0 |
| European Union 15 | – 1.8 | – 1.3 | 1.6 |
| Euro area | – 1.9 | – 1.6 | 1.7 |
| Germany | – 3.0 | – 2.8 | 1.5 |
| France | – 2.1 | – 1.0 | 2.0 |
| Italy | – 1.9 | – 2.8 | 1.0 |
| Spain | – 3.6 | – 0.5 | 3.0 |
| Netherlands | 0.1 | 0.1 | 0.5 |
| Belgium/Luxemburg | – 0.6 | – 1.2 | 2.5 |
| Austria | 0.0 | – 1.4 | 2.5 |
| Finland | – 4.4 | – 3.0 | 0.0 |
| Greece | 1.8 | 0.1 | 3.7 |
| Portugal | – 1.3 | – 0.5 | 3.5 |
| Ireland | – 0.4 | – 0.7 | 2.5 |
| United Kingdom | – 2.1 | – 0.2 | 1.0 |
| Sweden | – 2.8 | – 0.5 | 3.0 |
| Denmark | 3.8 | 0.2 | 0.2 |
| Switzerland | – 2.3 | – 0.5 | 1.4 |
| Norway | 15.1 | 11.9 | – 5.9 |
| United States | – 3.6 | – 1.6 | 1.0 |
| Canada | 4.1 | 1.1 | – 1.0 |
| Japan | – 7.9 | – 7.1 | 1.5 |
| Emerging markets | 2.5 | 1.4 | – 1.4 |
| Central + Eastern Europe | 5.3 | 2.4 | – 2.7 |
| Czech Republic | – 1.7 | – 0.4 | 0.5 |
| Hungary | – 2.2 | – 2.3 | 0.2 |
| Poland | 0.1 | 0.3 | 0.3 |
| Slovak Republic | – 1.4 | – 0.5 | 0.4 |
| Slovenia | – 3.1 | – 2.3 | 2.5 |
| Other transition | 9.4 | 3.9 | – 5.4 |
| Asia | – 1.2 | – 0.2 | – 0.2 |
| Anies | – 3.2 | – 1.4 | 0.5 |
| China | – 0.7 | – 0.3 | 0.5 |
| Other Asia | 0.4 | 1.1 | – 1.5 |
| Africa + Middle East | 19.0 | 8.7 | – 5.0 |
| Latin America | 2.8 | 2.8 | – 2.5 |

**Table 3d Appreciation against US dollar, with export weighted totals**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| Total World | 0.9 | 0.7 | 1.2 |
| Advanced economies | 0.4 | 0.5 | 2.1 |
| European Union 15 | – 0.1 | 1.2 | 3.0 |
| Euro area | 0.1 | 1.4 | 3.2 |
| Germany | 0.1 | 1.4 | 3.2 |
| France | 0.1 | 1.4 | 3.2 |
| Italy | 0.1 | 1.4 | 3.2 |
| Spain | 0.1 | 1.4 | 3.2 |
| Netherlands | 0.1 | 1.4 | 3.2 |
| Belgium/Luxemburg | 0.1 | 1.4 | 3.2 |
| Austria | 0.1 | 1.4 | 3.2 |
| Finland | 0.1 | 1.4 | 3.2 |
| Greece | 0.1 | 1.4 | 3.2 |
| Portugal | 0.1 | 1.4 | 3.2 |
| Ireland | 0.1 | 1.4 | 3.2 |
| United Kingdom | – 0.6 | 0.3 | 2.4 |
| Sweden | – 1.7 | 0.3 | 1.9 |
| Denmark | – 0.1 | 1.2 | 1.5 |
| Switzerland | – 0.2 | 0.2 | 2.0 |
| Norway | 4.6 | 0.2 | – 1.1 |
| United States | 0.0 | 0.0 | 0.0 |
| Canada | 7.9 | 6.8 | 0.9 |
| Japan | – 1.8 | – 5.1 | 1.8 |
| Emerging markets | 1.5 | 1.0 | 0.2 |
| Central + Eastern Europe | 2.9 | 0.0 | 0.2 |
| Czech Republic | 7.3 | 4.5 | 1.3 |
| Hungary | 1.6 | – 6.9 | 1.6 |
| Poland | 12.9 | 1.7 | 1.0 |
| Slovak Republic | 3.8 | 2.4 | 0.8 |
| Slovenia | – 0.1 | 1.4 | 3.2 |
| Other transition | 0.0 | 0.0 | 0.0 |
| Asia | 1.7 | 1.7 | 0.2 |
| Anies | 4.0 | 3.0 | 0.6 |
| China | 1.0 | 2.1 | 0.1 |
| Other Asia | 0.0 | 0.0 | 0.0 |
| Africa + Middle East | 0.0 | 0.0 | 0.0 |
| Latin America | 0.0 | 0.0 | 0.0 |

## Table 4 Relative import prices in national currencies and effective appreciation against supplying countries

**Table 4a Import prices in national currencies**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| Total World | 5.0 | 4.7 | 0.5 |
| Advanced economies | 5.3 | 5.0 | 0.1 |
| European Union 15 | 4.5 | 4.7 | – 0.2 |
| Euro area | 4.6 | 4.9 | – 0.3 |
| Germany | 4.3 | 5.5 | 0.0 |
| France | 3.7 | 2.5 | – 1.0 |
| Italy | 8.7 | 8.0 | 0.5 |
| Spain | 4.7 | 4.5 | 0.0 |
| Netherlands | 3.3 | 4.0 | – 1.0 |
| Belgium/Luxemburg | 7.3 | 5.5 | 0.0 |
| Austria | 0.0 | 4.5 | 0.0 |
| Finland | 5.6 | 6.5 | – 0.5 |
| Greece | 2.9 | 3.9 | – 0.5 |
| Portugal | 4.7 | 4.5 | – 0.5 |
| Ireland | 0.9 | 4.5 | 0.0 |
| United Kingdom | 3.5 | 3.5 | 0.0 |
| Sweden | 7.3 | 4.5 | 0.0 |
| Denmark | 3.9 | 3.8 | 0.8 |
| Switzerland | 5.9 | 4.5 | 1.0 |
| Norway | 1.6 | 1.5 | 2.0 |
| United States | 7.0 | 5.0 | 1.0 |
| Canada | – 2.0 | – 2.5 | 1.0 |
| Japan | 10.6 | 12.0 | – 1.5 |
| Emerging markets | 4.5 | 4.3 | 1.0 |
| Central + Eastern Europe | 3.7 | 7.1 | 0.9 |
| Czech Republic | 0.3 | 1.4 | – 0.3 |
| Hungary | 1.4 | 8.0 | 1.0 |
| Poland | – 4.2 | – 0.4 | 1.1 |
| Slovak Republic | 2.8 | 3.5 | 0.2 |
| Slovenia | 7.8 | 6.4 | 0.0 |
| Other transition | 9.0 | 11.2 | 1.0 |
| Asia | 4.3 | 2.9 | 0.8 |
| Anies | 3.0 | 1.5 | 0.4 |
| China | 4.6 | 2.6 | 0.9 |
| Other Asia | 5.6 | 4.8 | 1.0 |
| Africa + Middle East | 5.0 | 4.0 | 1.0 |
| Latin America | 5.5 | 6.0 | 2.0 |

**Table 4b Calculated import prices in national currencies**[a]

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| Total World | 4.9 | 4.6 | 0.4 |
| Advanced economies | 5.4 | 4.8 | 0.0 |
| European Union 15 | 5.4 | 4.2 | – 0.5 |
| Euro area | 5.2 | 4.0 | – 0.6 |
| Germany | 5.1 | 3.8 | – 0.7 |
| France | 5.0 | 4.1 | – 0.1 |
| Italy | 5.4 | 4.2 | – 0.7 |
| Spain | 5.9 | 4.2 | – 0.8 |
| Netherlands | 6.0 | 4.3 | – 1.1 |
| Belgium/Luxemburg | 4.1 | 3.5 | – 0.4 |
| Austria | 3.7 | 3.3 | 0.2 |
| Finland | 6.5 | 5.1 | – 1.5 |
| Greece | 5.5 | 4.2 | – 0.6 |
| Portugal | 4.4 | 4.1 | 0.2 |
| Ireland | 5.0 | 4.2 | – 1.6 |
| United Kingdom | 6.1 | 5.1 | – 0.1 |
| Sweden | 7.3 | 5.4 | 0.2 |
| Denmark | 4.8 | 4.0 | 1.1 |
| Switzerland | 5.0 | 5.2 | 0.7 |
| Norway | – 0.4 | 4.7 | 4.2 |
| United States | 6.3 | 5.2 | 1.0 |
| Canada | – 3.5 | – 2.6 | 0.8 |
| Japan | 9.7 | 11.6 | – 1.2 |
| Emerging markets | 4.2 | 4.4 | 0.9 |
| Central + Eastern Europe | 4.0 | 7.5 | 0.8 |
| Czech Republic | – 1.6 | 1.3 | 0.9 |
| Hungary | 4.1 | 14.2 | 0.6 |
| Poland | – 6.6 | 4.1 | 1.3 |
| Slovak Republic | 6.5 | 6.8 | – 1.3 |
| Slovenia | 4.4 | 3.7 | 0.2 |
| Other transition | 9.1 | 7.9 | 0.3 |
| Asia | 3.5 | 2.8 | 0.8 |
| Anies | 0.8 | 1.1 | 0.7 |
| China | 5.1 | 3.2 | 0.4 |
| Other Asia | 5.5 | 4.3 | 1.2 |
| Africa + Middle East | 6.4 | 5.5 | 1.5 |
| Latin America | 5.4 | 5.3 | 1.3 |

[a] Import price change calculated under the assumption that for each individual supplier the export price change to that country is the same as the total export price change of that supplier. This condition is satisfied if the suppliers charge all importers the same price.

## Table 4 Relative import prices in national currencies and effective appreciation against supplying countries (continued)

**Table 4c Relative import prices in a common currency[a]**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| Total World | 0.0 | 0.1 | 0.1 |
| Advanced economies | – 0.1 | 0.2 | 0.2 |
| European Union 15 | – 0.8 | 0.5 | 0.3 |
| Euro area | – 0.5 | 0.9 | 0.4 |
| Germany | – 0.8 | 1.6 | 0.7 |
| France | – 1.3 | – 1.5 | – 0.9 |
| Italy | 3.1 | 3.7 | 1.3 |
| Spain | – 1.1 | 0.2 | 0.8 |
| Netherlands | – 2.5 | – 0.3 | 0.1 |
| Belgium/Luxemburg | 3.2 | 1.9 | 0.4 |
| Austria | – 3.5 | 1.2 | – 0.2 |
| Finland | – 0.9 | 1.3 | 1.0 |
| Greece | – 2.4 | – 0.3 | 0.1 |
| Portugal | 0.3 | 0.4 | – 0.7 |
| Ireland | – 4.0 | 0.3 | 1.6 |
| United Kingdom | – 2.4 | – 1.5 | 0.1 |
| Sweden | – 0.1 | – 0.8 | – 0.2 |
| Denmark | – 0.9 | – 0.2 | – 0.3 |
| Switzerland | 0.8 | – 0.7 | 0.3 |
| Norway | 2.0 | – 3.0 | – 2.1 |
| United States | 0.6 | – 0.2 | 0.0 |
| Canada | 1.6 | 0.1 | 0.2 |
| Japan | 0.8 | 0.4 | – 0.4 |
| Emerging markets | 0.2 | – 0.1 | 0.0 |
| Central + Eastern Europe | – 0.3 | – 0.4 | 0.1 |
| Czech Republic | 1.9 | 0.1 | – 1.2 |
| Hungary | – 2.6 | – 5.5 | 0.4 |
| Poland | 2.5 | – 4.3 | – 0.2 |
| Slovak Republic | – 3.4 | – 3.1 | 1.5 |
| Slovenia | 3.3 | 2.6 | – 0.2 |
| Other transition | – 0.1 | 3.0 | 0.7 |
| Asia | 0.8 | 0.2 | 0.0 |
| Anies | 2.2 | 0.3 | – 0.3 |
| China | – 0.5 | – 0.5 | 0.5 |
| Other Asia | 0.1 | 0.5 | – 0.2 |
| Africa + Middle East | – 1.3 | – 1.4 | – 0.5 |
| Latin America | 0.1 | 0.6 | 0.7 |

[a] The relative import price is the ratio of import price to calculated import price.

**Table 4d Effective appreciation against supplying countries**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| Total World | 0.0 | 0.0 | 0.0 |
| Advanced economies | – 0.5 | – 0.4 | 0.7 |
| European Union 15 | – 0.7 | 0.4 | 1.1 |
| Euro area | – 0.5 | 0.6 | 1.2 |
| Germany | – 1.0 | 0.6 | 1.4 |
| France | – 0.3 | 0.5 | 1.0 |
| Italy | – 0.4 | 0.6 | 1.2 |
| Spain | – 0.2 | 0.5 | 1.2 |
| Netherlands | – 0.5 | 0.7 | 1.6 |
| Belgium/Luxemburg | – 0.2 | 0.5 | 1.0 |
| Austria | – 0.6 | 0.5 | 0.8 |
| Finland | – 0.3 | 0.8 | 1.6 |
| Greece | – 0.5 | 0.5 | 1.2 |
| Portugal | – 0.2 | 0.4 | 0.8 |
| Ireland | – 0.3 | 0.9 | 1.7 |
| United Kingdom | – 1.3 | – 0.5 | 0.7 |
| Sweden | – 2.4 | – 0.5 | 0.1 |
| Denmark | – 0.9 | 0.4 | – 0.4 |
| Switzerland | – 0.5 | – 0.7 | – 0.1 |
| Norway | 4.4 | – 0.7 | – 2.9 |
| United States | – 1.7 | – 1.3 | – 0.8 |
| Canada | 7.6 | 6.7 | 0.6 |
| Japan | – 2.8 | – 6.0 | 1.3 |
| Emerging markets | 0.6 | 0.5 | – 0.7 |
| Central + Eastern Europe | 1.8 | – 0.8 | – 1.1 |
| Czech Republic | 5.8 | 3.4 | – 0.5 |
| Hungary | 0.7 | – 7.9 | – 0.3 |
| Poland | 12.0 | 0.7 | – 0.9 |
| Slovak Republic | 1.6 | 1.2 | – 0.3 |
| Slovenia | – 0.9 | 0.4 | 0.8 |
| Other transition | – 1.4 | – 0.6 | – 1.0 |
| Asia | 0.8 | 1.2 | – 0.5 |
| Anies | 3.2 | 2.5 | – 0.1 |
| China | 0.7 | 2.4 | – 0.6 |
| Other Asia | – 1.6 | – 0.9 | – 0.8 |
| Africa + Middle East | – 0.7 | – 0.6 | – 1.2 |
| Latin America | – 0.4 | – 0.4 | – 0.6 |

## Table 5 Relative export prices in national currencies and effective appreciation against competing countries

**Table 5a Export prices in national currencies**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| Total World | 4.8 | 4.5 | 0.4 |
| Advanced economies | 3.0 | 3.4 | 1.2 |
| European Union 15 | 2.7 | 3.3 | 1.4 |
| Euro area | 2.6 | 3.2 | 1.4 |
| Germany | 1.2 | 2.5 | 1.5 |
| France | 1.5 | 1.5 | 1.0 |
| Italy | 6.6 | 5.0 | 1.5 |
| Spain | 0.9 | 4.0 | 3.0 |
| Netherlands | 3.4 | 4.1 | – 0.5 |
| Belgium/Luxemburg | 6.7 | 4.3 | 2.5 |
| Austria | 0.0 | 3.0 | 2.5 |
| Finland | 1.0 | 3.3 | – 0.5 |
| Greece | 4.8 | 4.0 | 3.2 |
| Portugal | 3.4 | 4.0 | 3.0 |
| Ireland | 0.4 | 3.8 | 2.5 |
| United Kingdom | 1.3 | 3.3 | 1.0 |
| Sweden | 4.2 | 4.0 | 3.0 |
| Denmark | 7.8 | 4.0 | 1.0 |
| Switzerland | 3.4 | 4.0 | 2.5 |
| Norway | 16.9 | 13.6 | – 4.0 |
| United States | 3.1 | 3.3 | 2.0 |
| Canada | 2.0 | – 1.5 | 0.0 |
| Japan | 1.9 | 4.0 | 0.0 |
| Emerging markets | 7.1 | 5.8 | – 0.4 |
| Central + Eastern Europe | 9.2 | 9.7 | – 1.8 |
| Czech Republic | – 1.4 | 1.0 | 0.2 |
| Hungary | – 0.8 | 5.5 | 1.2 |
| Poland | – 4.1 | – 0.1 | 1.4 |
| Slovak Republic | 1.4 | 3.0 | 0.6 |
| Slovenia | 4.5 | 4.0 | 2.5 |
| Other transition | 19.2 | 15.5 | – 4.5 |
| Asia | 3.1 | 2.7 | 0.6 |
| Anies | – 0.2 | 0.0 | 0.9 |
| China | 3.9 | 2.3 | 1.4 |
| Other Asia | 6.0 | 6.0 | – 0.5 |
| Africa + Middle East | 25.0 | 13.0 | – 4.0 |
| Latin America | 8.5 | 9.0 | – 0.5 |

**Table 5b Export prices of competitors**[a]

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| Total World | 4.9 | 4.6 | 0.5 |
| Advanced economies | 5.1 | 4.7 | – 0.2 |
| European Union 15 | 5.3 | 4.2 | – 0.8 |
| Euro area | 5.2 | 4.1 | – 0.9 |
| Germany | 5.3 | 3.9 | – 1.1 |
| France | 5.4 | 4.4 | – 0.8 |
| Italy | 5.0 | 3.9 | – 1.1 |
| Spain | 5.0 | 4.0 | – 0.9 |
| Netherlands | 5.2 | 4.4 | – 0.6 |
| Belgium/Luxemburg | 4.6 | 3.9 | – 0.9 |
| Austria | 5.4 | 4.5 | – 0.7 |
| Finland | 5.6 | 4.3 | – 1.3 |
| Greece | 5.9 | 5.1 | – 1.1 |
| Portugal | 4.7 | 4.0 | – 0.7 |
| Ireland | 4.8 | 3.7 | – 1.0 |
| United Kingdom | 5.9 | 5.1 | – 0.3 |
| Sweden | 7.1 | 4.9 | 0.1 |
| Denmark | 5.4 | 4.1 | 0.6 |
| Switzerland | 5.5 | 5.4 | 0.1 |
| Norway | 0.1 | 5.0 | 3.4 |
| United States | 5.7 | 5.0 | 1.7 |
| Canada | – 1.0 | – 1.7 | 0.2 |
| Japan | 8.0 | 10.5 | – 0.4 |
| Emerging markets | 4.6 | 4.4 | 1.2 |
| Central + Eastern Europe | 3.0 | 6.8 | 1.6 |
| Czech Republic | – 1.2 | 2.1 | 0.7 |
| Hungary | 4.0 | 14.9 | 0.7 |
| Poland | – 6.4 | 5.1 | 1.3 |
| Slovak Republic | 2.2 | 3.4 | 1.0 |
| Slovenia | 6.0 | 5.8 | – 0.8 |
| Other transition | 6.3 | 6.8 | 1.6 |
| Asia | 4.5 | 3.3 | 1.0 |
| Anies | 2.1 | 2.0 | 0.7 |
| China | 5.6 | 3.0 | 1.1 |
| Other Asia | 6.2 | 5.0 | 1.2 |
| Africa + Middle East | 5.9 | 5.3 | 1.6 |
| Latin America | 6.3 | 5.3 | 1.5 |

[a] Export prices of competitors is weighted average of import prices in the geographical export markets of each exporting country, measured in the currency of the exporting country.

## Table 5 Relative export prices in national currencies and effective appreciation against competing countries (continued)

**Table 5c Relative export prices in a common currency[a]**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| Total World | 0.0 | – 0.1 | – 0.1 |
| Advanced economies | – 2.0 | – 1.3 | 1.3 |
| European Union 15 | – 2.5 | – 0.9 | 2.2 |
| Euro area | – 2.4 | – 0.8 | 2.4 |
| Germany | – 3.9 | – 1.3 | 2.6 |
| France | – 3.7 | – 2.8 | 1.8 |
| Italy | 1.5 | 1.1 | 2.6 |
| Spain | – 3.9 | 0.0 | 3.9 |
| Netherlands | – 1.7 | – 0.3 | 0.1 |
| Belgium/Luxemburg | 2.0 | 0.3 | 3.4 |
| Austria | – 5.1 | – 1.5 | 3.2 |
| Finland | – 4.4 | – 1.0 | 0.8 |
| Greece | – 1.0 | – 1.1 | 4.4 |
| Portugal | – 1.3 | 0.0 | 3.7 |
| Ireland | – 4.1 | 0.0 | 3.4 |
| United Kingdom | – 4.3 | – 1.7 | 1.3 |
| Sweden | – 2.7 | – 0.8 | 2.9 |
| Denmark | 2.3 | – 0.1 | 0.4 |
| Switzerland | – 2.0 | – 1.3 | 2.3 |
| Norway | 16.8 | 8.2 | – 7.1 |
| United States | – 2.4 | – 1.7 | 0.3 |
| Canada | 3.1 | 0.2 | – 0.2 |
| Japan | – 5.7 | – 5.9 | 0.4 |
| Emerging markets | 2.3 | 1.3 | – 1.6 |
| Central + Eastern Europe | 6.0 | 2.7 | – 3.3 |
| Czech Republic | – 0.2 | – 1.1 | – 0.5 |
| Hungary | – 4.6 | – 8.2 | 0.5 |
| Poland | 2.5 | – 4.9 | 0.1 |
| Slovak Republic | – 0.8 | – 0.4 | – 0.4 |
| Slovenia | – 1.4 | – 1.7 | 3.3 |
| Other transition | 12.1 | 8.1 | – 6.0 |
| Asia | – 1.3 | – 0.6 | – 0.4 |
| Anies | – 2.3 | – 1.9 | 0.2 |
| China | – 1.6 | – 0.6 | 0.3 |
| Other Asia | – 0.2 | 0.9 | – 1.7 |
| Africa + Middle East | 18.0 | 7.3 | – 5.5 |
| Latin America | 2.1 | 3.5 | – 1.9 |

[a] The relative export price is the ratio of export price to export price of competitors.

**Table 5d Effective appreciation against competing countries**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | annual percentage changes | | |
| Total World | 0.0 | 0.0 | 0.0 |
| Advanced economies | – 0.4 | – 0.2 | 0.8 |
| European Union 15 | – 0.8 | 0.4 | 1.4 |
| Euro area | – 0.7 | 0.6 | 1.5 |
| Germany | – 0.6 | 0.6 | 1.6 |
| France | – 0.6 | 0.6 | 1.6 |
| Italy | – 0.7 | 0.6 | 1.6 |
| Spain | – 0.6 | 0.6 | 1.5 |
| Netherlands | – 0.7 | 0.6 | 1.4 |
| Belgium/Luxemburg | – 0.7 | 0.6 | 1.5 |
| Austria | – 0.8 | 0.6 | 1.5 |
| Finland | – 0.8 | 0.6 | 1.7 |
| Greece | – 0.7 | 0.6 | 1.7 |
| Portugal | – 0.6 | 0.6 | 1.4 |
| Ireland | – 0.7 | 0.5 | 1.6 |
| United Kingdom | – 1.3 | – 0.5 | 0.9 |
| Sweden | – 2.4 | – 0.4 | 0.4 |
| Denmark | – 0.9 | 0.5 | 0.0 |
| Switzerland | – 1.0 | – 0.6 | 0.5 |
| Norway | 3.9 | – 0.6 | – 2.6 |
| United States | – 0.6 | – 0.5 | – 0.8 |
| Canada | 6.2 | 5.6 | 0.0 |
| Japan | – 2.8 | – 5.7 | 0.8 |
| Emerging markets | 0.5 | 0.2 | – 0.8 |
| Central + Eastern Europe | 2.0 | – 0.7 | – 1.2 |
| Czech Republic | 6.0 | 3.7 | – 0.2 |
| Hungary | 0.6 | – 7.6 | – 0.1 |
| Poland | 11.8 | 1.0 | – 0.6 |
| Slovak Republic | 2.7 | 1.5 | – 0.9 |
| Slovenia | – 1.1 | 0.6 | 1.5 |
| Other transition | – 0.9 | – 0.7 | – 1.3 |
| Asia | 0.7 | 0.9 | – 0.7 |
| Anies | 2.8 | 2.2 | – 0.3 |
| China | 0.0 | 1.3 | – 0.8 |
| Other Asia | – 0.9 | – 0.6 | – 0.9 |
| Africa + Middle East | – 0.8 | – 0.8 | – 1.2 |
| Latin America | – 1.1 | – 0.9 | – 0.9 |

## Table 6 Merchandise trade balances (customs basis) in bln US dollars

**Table 6a Merchandise export, fob**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | bln US dollars | | |
| Total World | 10258 | 11819 | 12875 |
| Advanced economies | 5733 | 6428 | 7026 |
| European Union 15 | 3522 | 3952 | 4347 |
| Euro area | 2945 | 3314 | 3653 |
| Germany | 974 | 1108 | 1230 |
| France | 442 | 500 | 553 |
| Italy | 369 | 407 | 438 |
| Spain | 187 | 210 | 234 |
| Netherlands | 349 | 395 | 430 |
| Belgium/Luxemburg | 266 | 294 | 325 |
| Austria | 125 | 137 | 153 |
| Finland | 66 | 77 | 85 |
| Greece | 17 | 19 | 21 |
| Portugal | 38 | 42 | 46 |
| Ireland | 111 | 124 | 137 |
| United Kingdom | 364 | 399 | 434 |
| Sweden | 130 | 145 | 161 |
| Denmark | 83 | 94 | 100 |
| Switzerland | 126 | 140 | 154 |
| Norway | 104 | 120 | 119 |
| United States | 895 | 1017 | 1115 |
| Canada | 360 | 392 | 411 |
| Japan | 595 | 655 | 716 |
| Emerging markets | 4525 | 5391 | 5849 |
| Central + Eastern Europe | 766 | 920 | 977 |
| Czech Republic | 78 | 92 | 105 |
| Hungary | 62 | 70 | 79 |
| Poland | 89 | 104 | 122 |
| Slovak Republic | 32 | 40 | 45 |
| Slovenia | 18 | 21 | 24 |
| Other transition | 486 | 593 | 602 |
| Asia | 2311 | 2757 | 3133 |
| Anies | 1001 | 1150 | 1284 |
| China | 762 | 959 | 1149 |
| Other Asia | 548 | 648 | 699 |
| Africa + Middle East | 888 | 1034 | 1012 |
| Latin America | 560 | 680 | 727 |

**Table 6b Merchandise import, cif**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | bln US dollars | | |
| Total World | 10411 | 11972 | 13057 |
| Advanced economies | 6357 | 7181 | 7735 |
| European Union 15 | 3521 | 4025 | 4385 |
| Euro area | 2851 | 3264 | 3566 |
| Germany | 775 | 912 | 997 |
| France | 485 | 553 | 613 |
| Italy | 383 | 430 | 463 |
| Spain | 279 | 321 | 352 |
| Netherlands | 298 | 339 | 367 |
| Belgium/Luxemburg | 257 | 292 | 316 |
| Austria | 127 | 142 | 155 |
| Finland | 59 | 69 | 77 |
| Greece | 54 | 60 | 64 |
| Portugal | 61 | 66 | 72 |
| Ireland | 71 | 82 | 90 |
| United Kingdom | 486 | 551 | 589 |
| Sweden | 112 | 123 | 133 |
| Denmark | 73 | 88 | 97 |
| Switzerland | 121 | 135 | 146 |
| Norway | 56 | 61 | 64 |
| United States | 1677 | 1876 | 1990 |
| Canada | 314 | 347 | 375 |
| Japan | 516 | 568 | 592 |
| Emerging markets | 4055 | 4791 | 5321 |
| Central + Eastern Europe | 765 | 937 | 1054 |
| Czech Republic | 77 | 94 | 106 |
| Hungary | 65 | 74 | 81 |
| Poland | 102 | 117 | 137 |
| Slovak Republic | 36 | 46 | 52 |
| Slovenia | 20 | 23 | 25 |
| Other transition | 466 | 583 | 654 |
| Asia | 2185 | 2555 | 2830 |
| Anies | 944 | 1090 | 1189 |
| China | 660 | 795 | 904 |
| Other Asia | 581 | 670 | 737 |
| Africa + Middle East | 577 | 672 | 747 |
| Latin America | 528 | 627 | 691 |

## Table 6 Merchandise trade balances (customs basis) in bln US dollars (continued)

**Table 6c Trade balance**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | bln US dollars | | |
| Total World | – 154 | – 153 | – 181 |
| Advanced economies | – 624 | – 753 | – 709 |
| European Union 15 | 1 | – 73 | – 38 |
| Euro area | 94 | 50 | 87 |
| Germany | 199 | 197 | 233 |
| France | – 43 | – 53 | – 60 |
| Italy | – 13 | – 23 | – 25 |
| Spain | – 92 | – 111 | – 118 |
| Netherlands | 51 | 56 | 63 |
| Belgium/Luxemburg | 8 | 2 | 9 |
| Austria | – 2 | – 5 | – 2 |
| Finland | 7 | 9 | 8 |
| Greece | – 37 | – 41 | – 43 |
| Portugal | – 23 | – 24 | – 25 |
| Ireland | 39 | 42 | 47 |
| United Kingdom | – 122 | – 151 | – 155 |
| Sweden | 19 | 23 | 28 |
| Denmark | 9 | 6 | 2 |
| Switzerland | 5 | 5 | 8 |
| Norway | 48 | 59 | 55 |
| United States | – 783 | – 860 | – 875 |
| Canada | 46 | 45 | 36 |
| Japan | 79 | 87 | 124 |
| Emerging markets | 470 | 600 | 528 |
| Central + Eastern Europe | 1 | – 17 | – 77 |
| Czech Republic | 2 | – 2 | 0 |
| Hungary | – 4 | – 3 | – 1 |
| Poland | – 12 | – 13 | – 15 |
| Slovak Republic | – 4 | – 7 | – 7 |
| Slovenia | – 2 | – 2 | – 2 |
| Other transition | 21 | 10 | – 52 |
| Asia | 127 | 202 | 303 |
| Anies | 58 | 60 | 95 |
| China | 102 | 164 | 245 |
| Other Asia | – 33 | – 22 | – 38 |
| Africa + Middle East | 311 | 362 | 266 |
| Latin America | 31 | 53 | 37 |