

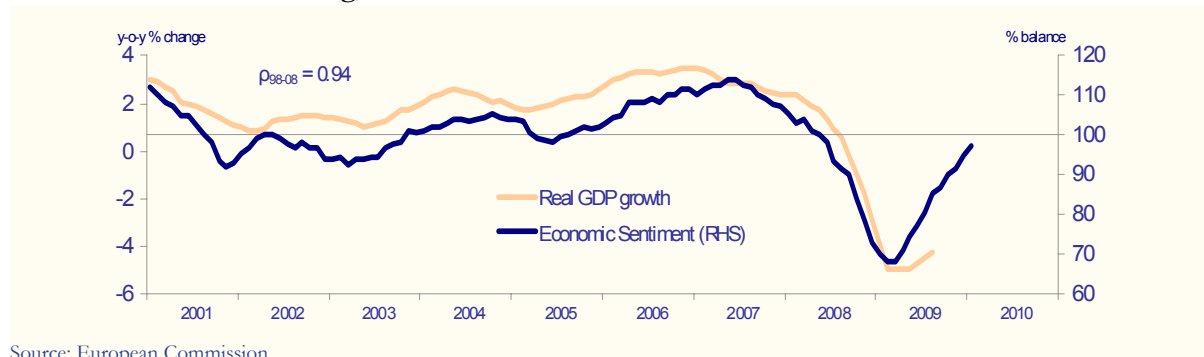
# European Business Cycle Indicators

- Economic sentiment close to the long-term average
- Sentiment in industry remains buoyant: strong improvements in order books and production expectations, destocking under way
- Consumers more cautious
- Special focus: Results of the quarterly manufacturing survey

## Economic sentiment indicators

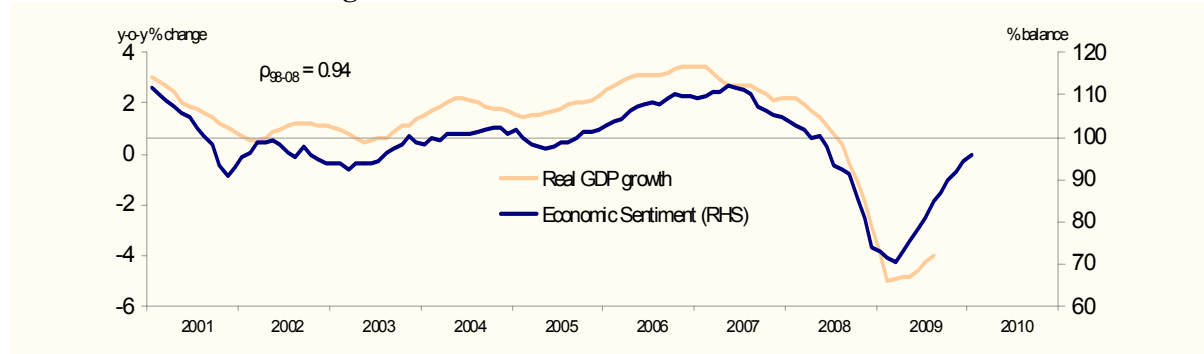
In January, the economic sentiment indicator (ESI) rose for the tenth successive month. It stood at 97.1 (+2.1 points) in the EU and 95.7 (+1.6) in the euro area. Although the rebound appears to be slowing, the indicator is now edging towards the long-run average of 100 in both areas. The steady upward trend in the ESI suggests that the year-on-year GDP growth will have continued to recover in the fourth quarter of 2009 but, because of its low starting level, will still have been negative (see Graphs 1a and 1b).

**GRAPH 1a: ESI and GDP growth for the EU**



Source: European Commission

**GRAPH 1b: ESI and GDP growth for the euro area**



Source: European Commission

Note 1: in RHS 100 = average 90 to 09.

Note 2: both series are plotted at monthly frequency: GDP monthly data are obtained by linear interpolation of quarterly data.

'European Business Cycle Indicators' provides short-term analysis based on business and consumer survey data. It appears monthly, using the latest available data.

European Commission - Directorate-General for Economic and Financial Affairs

Directorate A - Economic studies and research

Unit A3 - Economic studies and business cycle surveys

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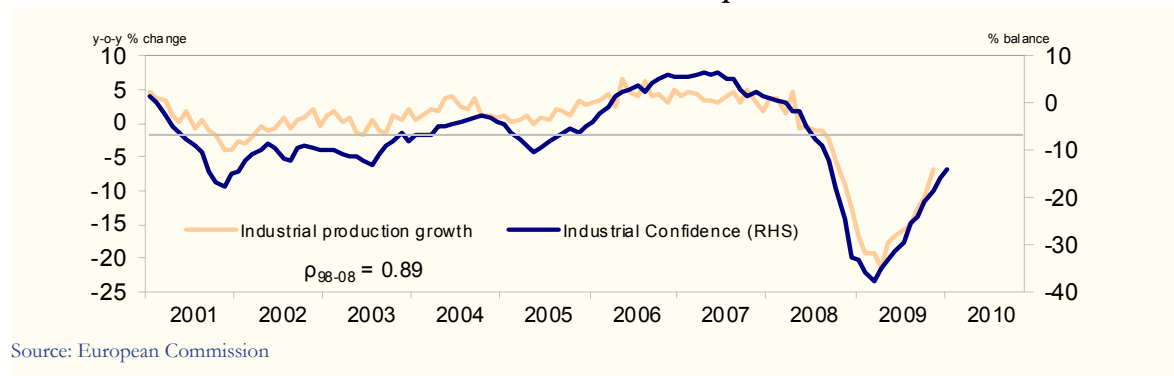
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In the euro area, improving sentiment in industry remained the main contributor to the overall increase in the ESI. The industrial confidence indicator gained 2 points in January (see Graph 2). Most respondents in this sector reported strong improvements in both their order books and their production expectations. The declining level of stocks, across all the main industrial sectors, confirmed further destocking. Alongside this, employment expectations in industry stabilised in January, after three consecutive months of improvement.

The results of the quarterly manufacturing survey show that participants were optimistic about past and future orders. Firms also reported an increase in their capacity utilisation rate which now stands at 72.4% in the euro area, although still far below its long-term average, while order trends are now back at the pre-crisis level.

**GRAPH 2: Industrial confidence indicator and industrial production for the euro area**

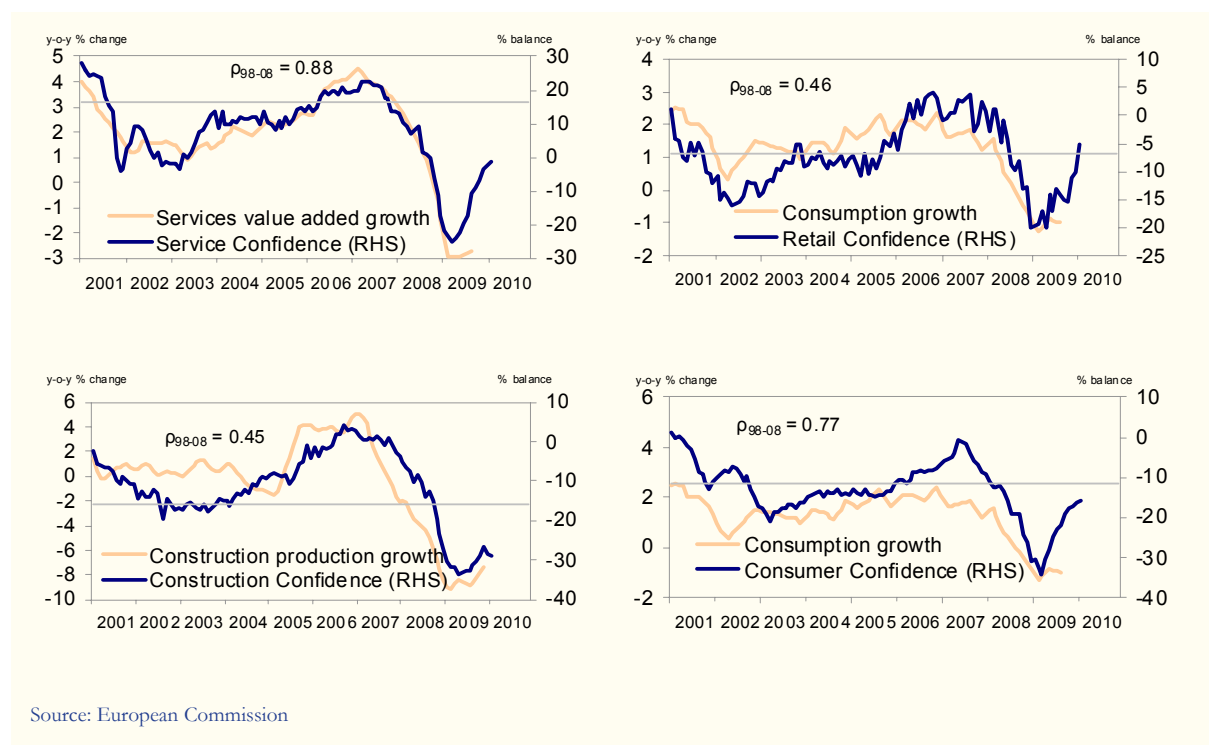


Source: European Commission

Confidence in services increased by 2 points in the euro area. In retail, confidence increased by 5 points. However, these results were mainly driven by a very strong increase in Italy. By contrast, construction confidence continued to decline, dropping by 1 point (see Graph 3).

As indicated in the flash estimate released earlier, confidence among consumers remained unchanged in the euro area. In particular, consumers' unemployment expectations stabilised in January.

**GRAPH 3: Sectoral confidence indicator and reference series for the euro area**



Source: European Commission

## Economic sentiment indicators for the four largest euro area Member States and the UK

The four largest euro area Member States and the UK reported improving sentiment (see Graph 4).

Italy was in the lead, with the indicator rising by 4.1 points driven by very strong increases in retail trade and in services. The other sectors remained broadly unchanged.

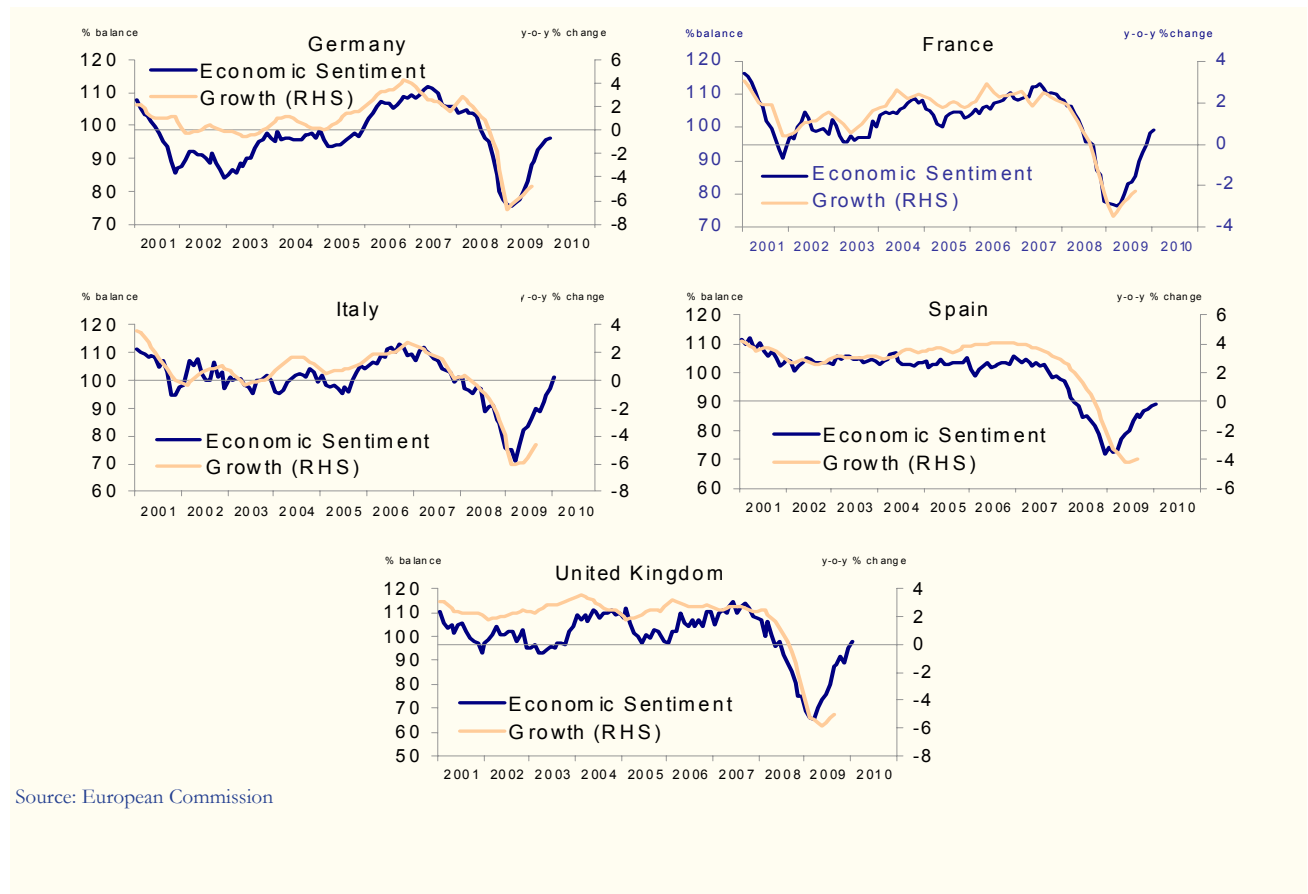
The ESI posted a significant increase in the UK (+3.2) thanks to a substantial improvement in confidence among respondents in industry and consumers. Confidence declined somewhat in services and marginally in retail trade and construction.

The ESI continued to increase in Germany (+0.6), though losing steam as approaching the long-term average. Confidence in industry stayed on its upward trend. Confidence remained unchanged in services, but deteriorated slightly in other sectors.

The rebound in France also appeared to be slowing (+0.6), as the ESI is now approaching its long-term average. Services contributed the most, followed by slight improvements in retail trade, in construction and among consumers. Confidence in industry showed a marginal decrease. Despite the improvement in order books, production expectations were subdued and stocks were still considered very low.

The improvement in Spain was marginal (+0.3). Confidence in industry, in retail trade and among consumers increased slightly, whereas services dropped sharply and construction remained on the downward trend.

**GRAPH 4: ESI and GDP growth (year-on-year) for the four largest euro area Member States and the UK**



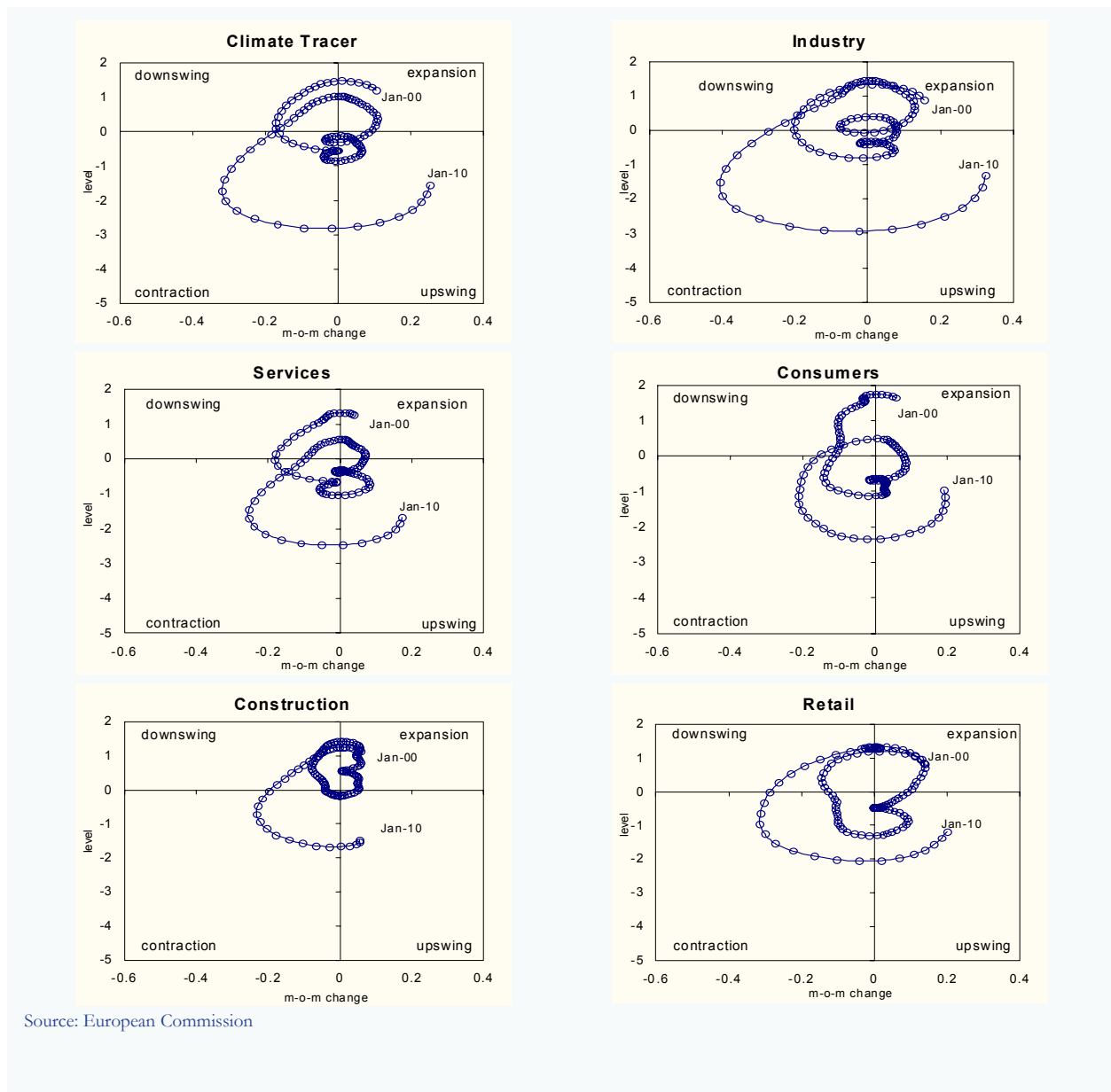
Source: European Commission

## The economic climate tracer

The cyclical movements for the euro area as a whole and at sector level are displayed in Graph 5a, based on the smoothed values indicated by the economic climate tracer. For the euro area, the economic climate tracer is now firmly in the upswing quadrant. All sectors are in the upswing phase as well, with construction still lagging behind.

This section shows the results produced by the economic climate tracer (both cyclical movements and cross-section). The graphs depict the results of a two-step procedure (see Annex 1 for details) involving a larger set of series than in the ESI. As a consequence, the message could differ from the above analysis, especially because the economic climate tracer series are smoothed.

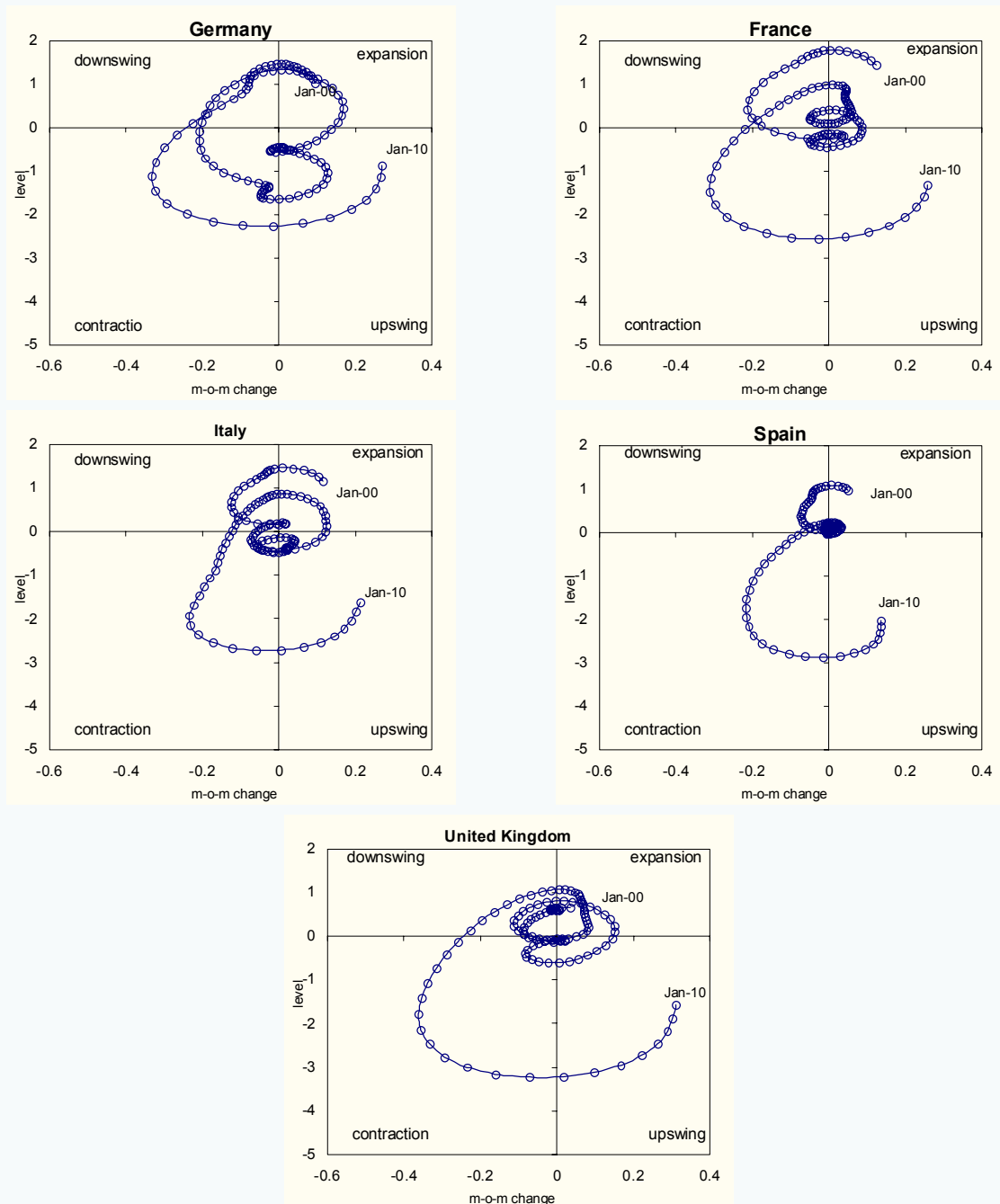
**GRAPH 5a: Economic climate tracer across sectors, euro area**



Source: European Commission

Graph 5b displays the cyclical movements (based on the economic climate tracer) for the four largest euro area Member States and for the UK. All are clustered in the upswing quadrant, with Germany leading and Spain lagging behind.

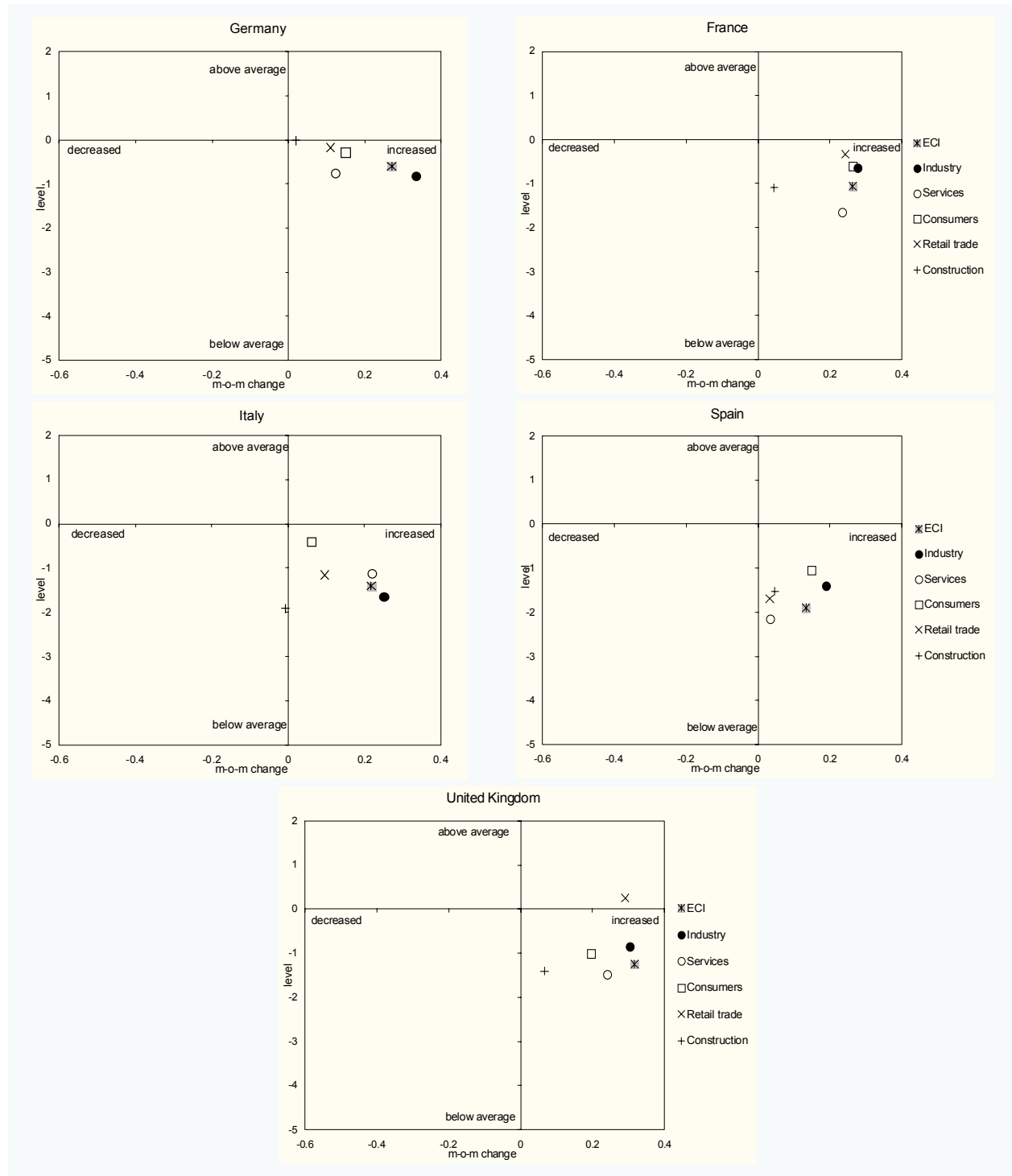
**GRAPH 5b: Economic climate tracer for the four largest euro area Member States and the UK**



Source: European Commission

Graph 6 shows the sectoral breakdown of the climate tracer. Most sectoral climate tracers across all the countries covered are clustered in the upswing quadrant, with the indicator for retail trade in the UK already in the expansion area. By contrast, in Italy construction remains on the border between contraction and upswing.

**GRAPH 6: Sectoral breakdown of the climate tracer for the four largest euro area Member States and the UK**

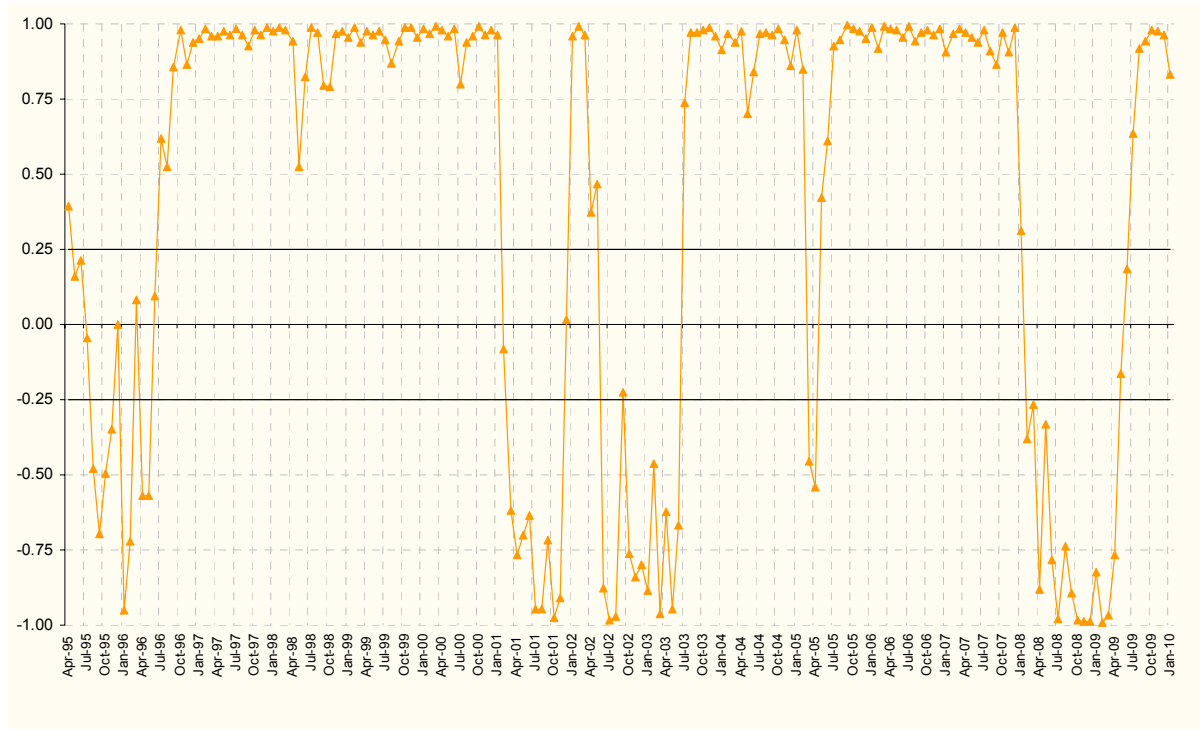


Source: European Commission

## Euro area turning point index

Taking the latest survey data, the turning point index, based on a Markov switching model, estimates the difference between high- and low-regime probabilities at 0.83 in January. The turning point index has remained in the favourable zone for seven consecutive months. This implies continuous signs of a coming recovery (see Annex 1 for details).

**GRAPH 7: Turning point index for the euro area**



Source: European Commission

### Results from quarterly surveys of managers: diverging trends

by Angela D'Elia



This month's special focus presents the January 2010 results from the quarterly surveys carried out among managers in industry and services.

In these surveys managers are requested to indicate the main factors limiting their business and to assess order developments, capacity utilisation and their competitive position on the market.

## Background

Four times a year (in January, April, July and October) a few extra questions are added to the monthly surveys of industry, services, construction and consumers.

This special focus presents the January 2010 quarterly results for industry and services.

The main topics covered by the quarterly questions are *factors limiting production* (industry and services), *order developments*, *production capacity*, *capacity utilisation* and *competitive position on the market* (industry).

## Factors limiting production

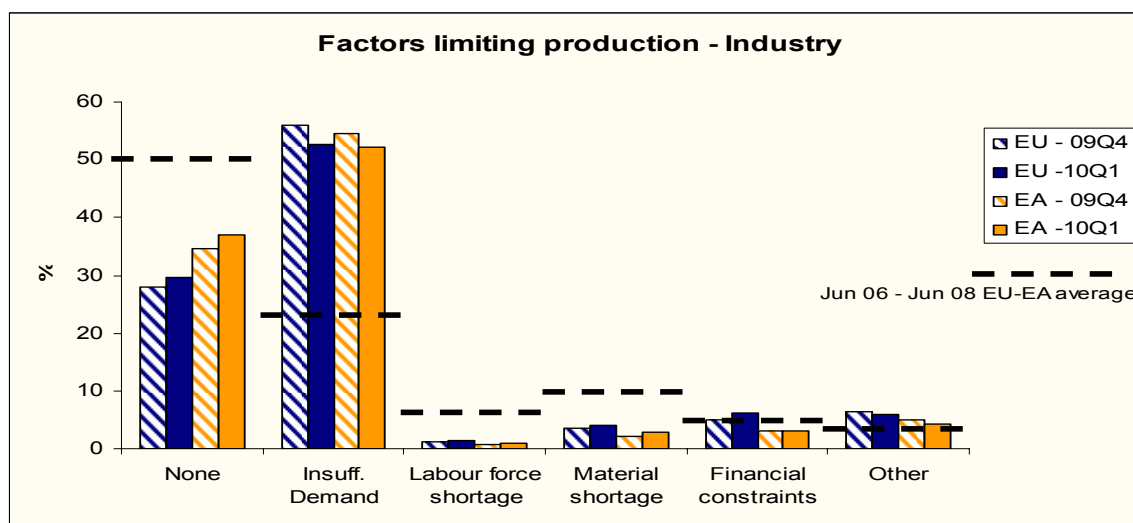
Managers in both industry and services are asked to indicate the main factors, if any, currently limiting their production or business.

Both in the EU and in the euro area (see Chart 1) more than half (52%) of all managers surveyed in industry think that insufficient demand is the main factor limiting their production, unchanged from the last quarter of 2009. Financial constraints are far less important. Nevertheless, the credit crunch seems to worry twice as many managers in the EU (6%) as in the euro area (3%). Unsurprisingly, shortage of labour force is not an issue at all.

While there were no major changes between the October 2009 and January 2010 survey results, there are significant differences from the pre-crisis levels: the percentage of managers viewing insufficient demand as the major problem has doubled, while the number reporting no constraints has dropped markedly. Similarly, material and labour force shortages have declined in importance.



Chart 1: Factors limiting production – Industry

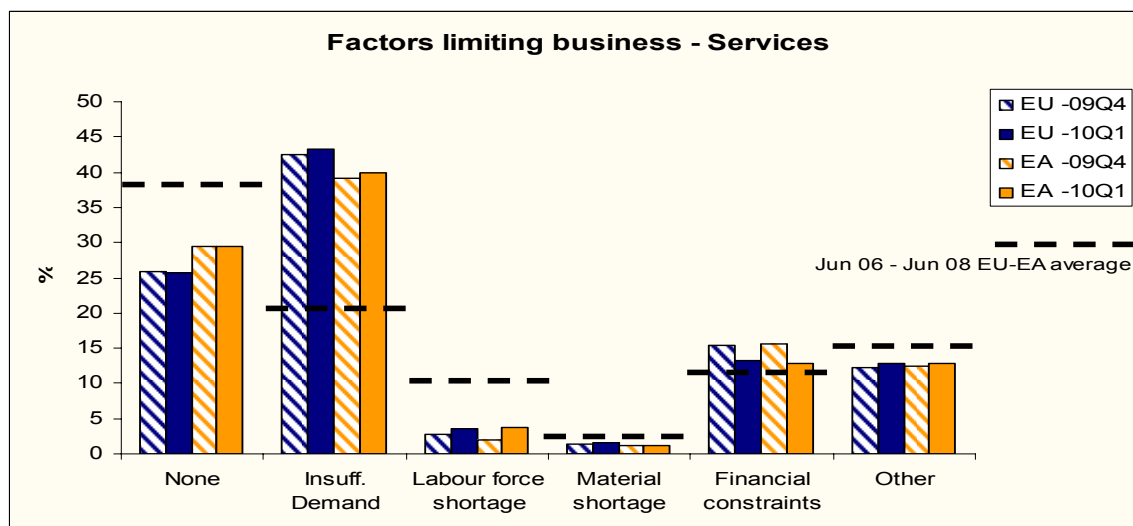


Source: European Commission

In services (see Chart 2), financial constraints seem to play a bigger role, currently worrying 13% of managers in both the EU and the euro area. However, insufficient demand is the main limiting factor (43% in the EU and 40% in the euro area), showing no signs of improvement on the previous quarter.

Compared with pre-crisis levels, the percentage of managers viewing insufficient demand as the major problem doubled, while the number reporting no constraints or labour force shortage dropped markedly.

Chart 2: Factors limiting business – Services



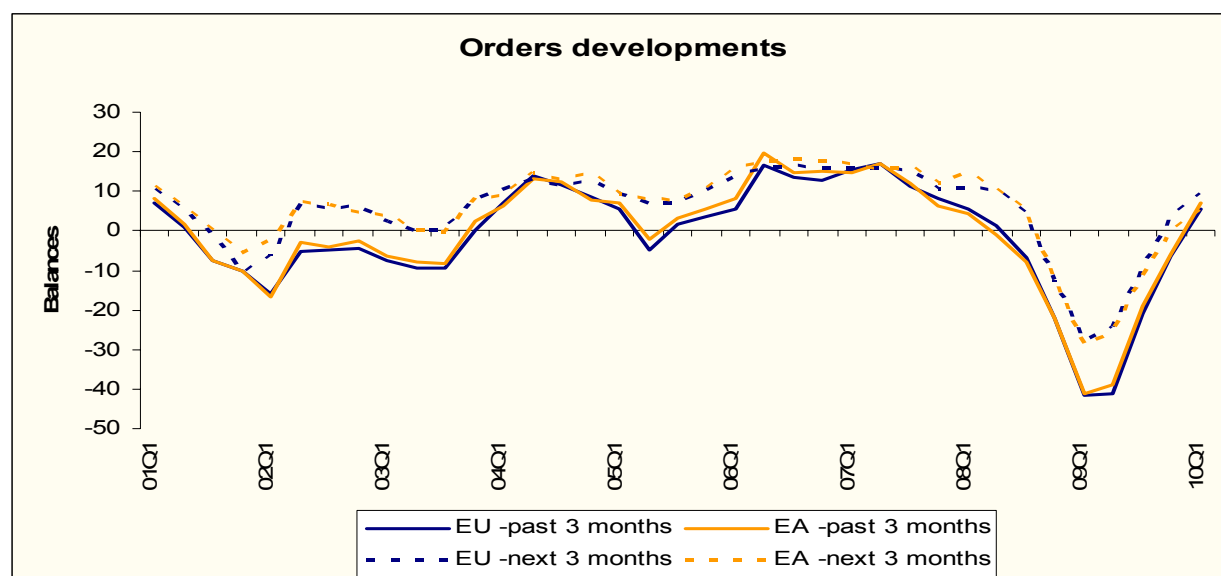
Source: European Commission

The overall picture remains worrying. Managers in both industry and services continue to express concern about the insufficient demand for their products and their labour force assessment precludes any new hiring.

## Orders developments

After the trough observed in the first quarters of 2009, managers in industry reported a steady improvement in their order books. By January 2010, their assessment of past and future order books was back to the pre-crisis levels in both the EU and the euro area (see Chart 3).

Chart 3: Orders developments



Source: European Commission

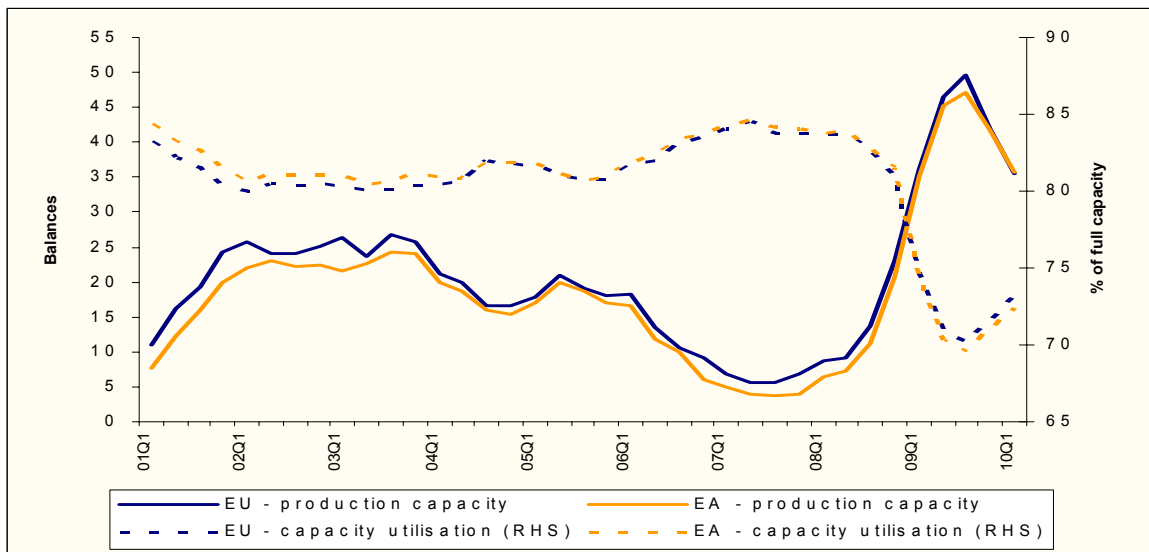
## Production capacity and capacity utilisation

In the quarterly surveys, managers are asked to give their assessment of their current production capacity, considering order books and expected changes in demand over the months ahead. They are also requested to evaluate what percentage of full capacity their company is operating at.

Historically, the two series exhibit a highly negative coincident correlation (- 0.92 for the EU and -0.93 for the euro area). Chart 4 clearly illustrates this pattern: the trough observed in capacity utilisation between the second and third quarters of 2009 was accompanied by a peak in the assessment of (unused) production capacity.

The latest data available show signs that the surplus in production capacity is declining (however, the gap from the long-term average is still very wide). On the other hand, the adjustment in the capacity utilisation rate is less marked and lagging behind, reflecting managers' unease with the present outlook.

Chart 4: Production capacity and capacity utilisation



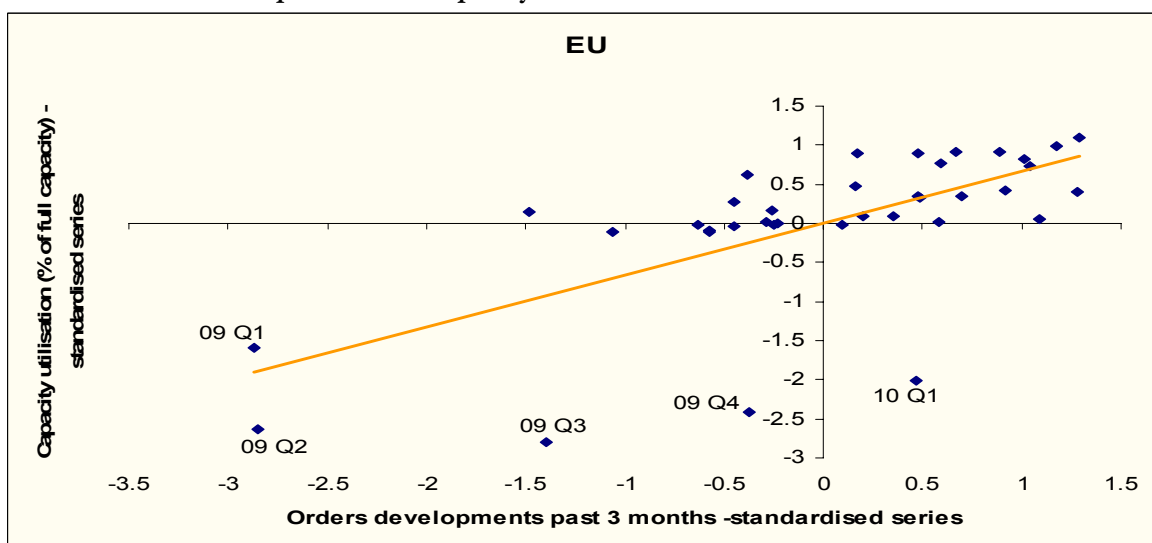
Source: European Commission

### Is there a mismatch between orders developments and capacity utilisation?

While orders have returned to the pre-crisis level, capacity utilisation is still far below the level considered normal. Indeed, looking at the historical relationship between the two series, for both the EU and the euro area (Charts 5 and 6 respectively) managers' assessments of capacity utilisation appear much lower than would be expected from order trends. While the very low level of capacity utilisation could have been consistent with the orders outlook in the first quarters of 2009, the current figures are overly subdued.

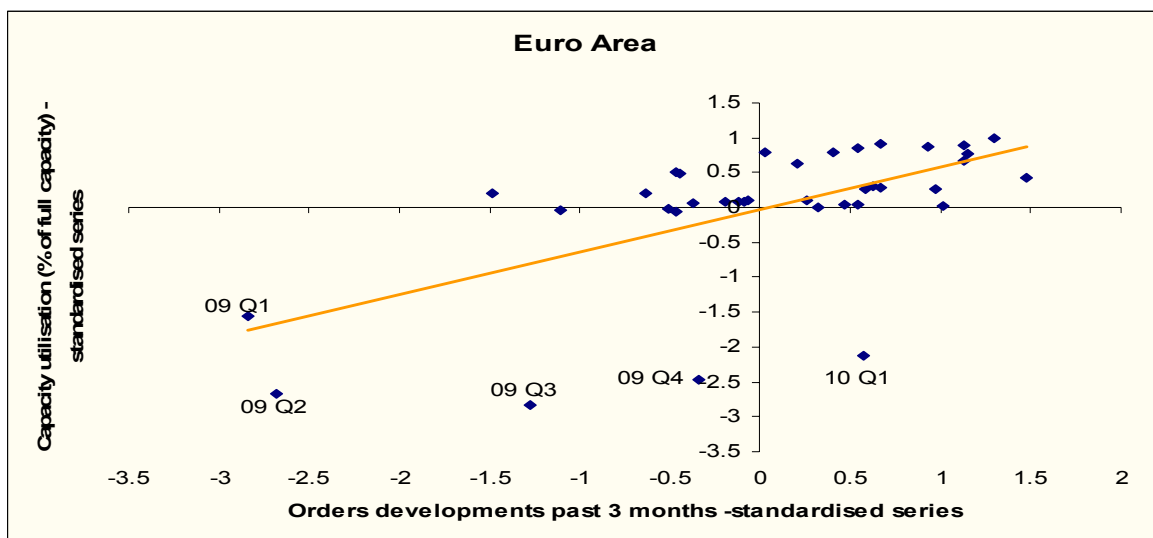
The potential explanation is far from encouraging: the managers are relying on stocks to meet the demand, keeping capacity utilisation very low.

Chart 5: Orders developments and capacity utilisation – EU



Source: European Commission

Chart 6: Orders developments and capacity utilisation – euro area



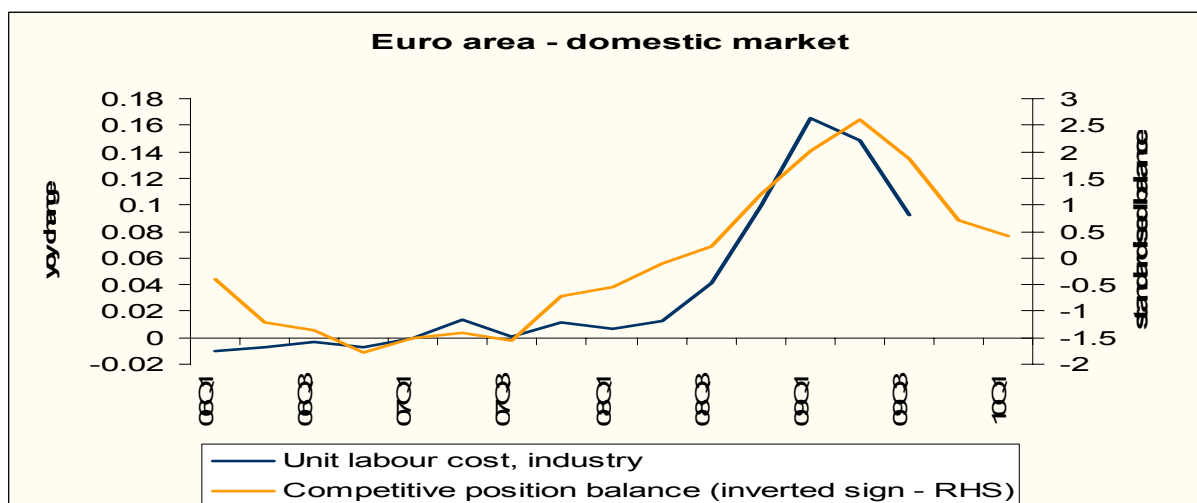
Source: European Commission

### Competitive position on the market

The final quarterly question investigates competitiveness on domestic and foreign markets. Managers are asked to evaluate developments over the last three months.

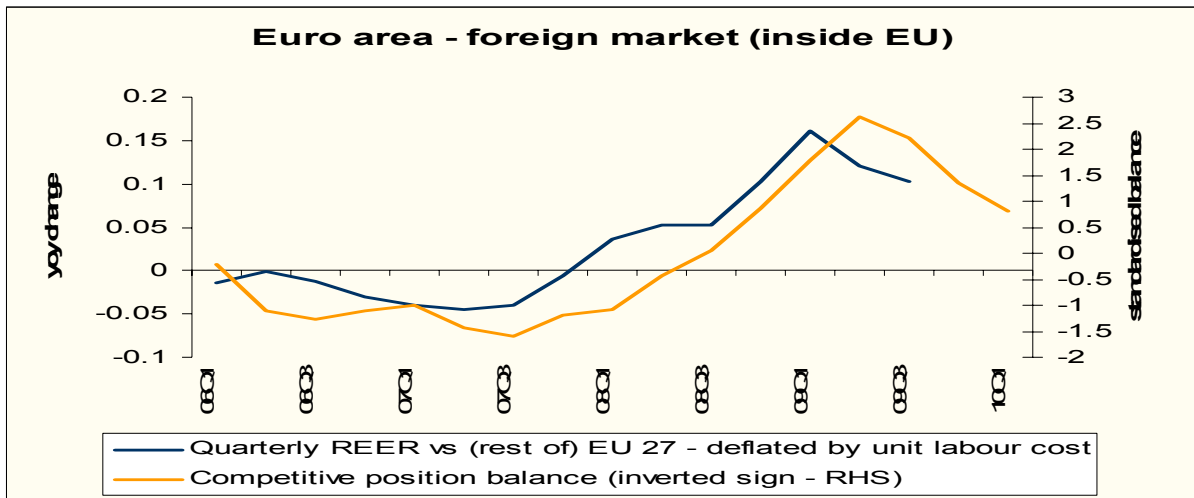
At the euro area level, managers report improvements in their competitive position. The competitiveness questions correlate strongly (see Charts 7 and 8) with the reference series; namely, unit labour costs and real effective exchange rates (REER) with the rest of EU27.

Chart 7: Competitive position on domestic market



Source: European Commission and Ecwin

Chart 8: Competitive position on foreign market (inside EU)



Source: European Commission

But the results for the four largest euro area Member States show a divergence; German and French managers are increasingly optimistic, while others still rate their competitive position weak. Italy's managers see a standstill (or even a drop on the foreign market), and the competitive position of Spanish companies remains gloomy.

## Reference series

The reference series are from Eurostat, via Ecwin:

Confidence indicators	Reference series (volume/year-on-year growth rates)
Total economy (ESI)	GDP, seasonally- and calendar-adjusted
Industry	Industrial production, working-day-adjusted
Services	Gross value added for the private services sector, seasonally- and calendar-adjusted
Consumption	Household and NPISH final consumption expenditure, seasonally- and calendar-adjusted
Retail	Household and NPISH final consumption expenditure, seasonally- and calendar-adjusted
Building	Production index for building and civil engineering, trend-cycle component

Note: Monthly data are obtained by linear interpolation of quarterly data.

## Economic sentiment indicator

The economic sentiment indicator (ESI) is a weighted average of the balances of selected questions addressed to firms and consumers in five sectors covered by the EU Business and Consumer Surveys Programme. The sectors covered are industry (weight 40%), services (30%), consumers (20%), retail (5%) and construction (5%).

Balances are constructed as the difference between the percentages of respondents giving positive and negative replies. The Commission calculates EU and euro area aggregates on the basis of the national results and seasonally adjusts the balance series. The indicator is scaled to have a long-term mean of 100 and a standard deviation of 10. Thus, values greater than 100 indicate above-average economic sentiment and vice-versa. Further details on construction of the ESI can be found at:

[http://ec.europa.eu/economy\\_finance/db\\_indicators/surveys/method\\_guides/index\\_en.htm](http://ec.europa.eu/economy_finance/db_indicators/surveys/method_guides/index_en.htm).

Long time series of the ESI and confidence indicators are available at:

[http://ec.europa.eu/economy\\_finance/db\\_indicators/surveys/time\\_series/index\\_en.htm](http://ec.europa.eu/economy_finance/db_indicators/surveys/time_series/index_en.htm).

## Economic climate tracer

The economic climate tracer is a two-step procedure. The first consists of building economic climate indicators. They are based on principal component (PC) analyses of balance series (s.a.) from the surveys conducted in industry, services, building, retail trade and among consumers. In the case of industry, five of the monthly questions in the industry survey are used as input variables (employment and selling-price expectations are excluded). For the other sectors the number of input series is: services: all five monthly questions; consumers: nine questions (price-related questions and the question about the current financial situation are excluded); retail: all five monthly questions; building: all four monthly questions. In the case of the euro area, the first principal component explains between 65% (retail) and 92% (industry) of the variance of the input balance series in question.

The economic climate indicator (ECI) is a weighted average of the five PC-based sector climate indicators. The sector weights equal those underlying the economic sentiment indicator (ESI), i.e. industry 40%; services 30%; consumers 20%; construction 5%; and retail trade 5%. The weights were allocated broadly on the basis of two criteria: the representativeness of the sector in question and historical tracking performance vis-à-vis GDP growth.

In the second step of the procedure, all climate indicators are smoothed using the HP filter in order to eliminate short-term fluctuations of a period of less than 18 months. The smoothed series are then standardised to a common mean of zero and standard deviation of one. The resulting series are plotted against their first differences. The four quadrants of the graph, corresponding to the four business cycle phases, are crossed in an anti-clockwise movement. The phases can be described as: above average and increasing (top right, 'expansion'), above average but decreasing (top left, 'downswing'), below average and decreasing (bottom left, 'contraction') and below average but increasing (bottom right, 'upswing'). Cyclical peaks are positioned in the top centre of the graph and troughs in the bottom centre.

## Markov switching turning point index

The turning point index model, based on the work of Grégoir and Lengart (2000)<sup>1</sup>, aims at identifying economic growth trends in the euro area, using as input all the confidence indicators derived from the surveys of industry, services, building, retail trade and consumers. This model is symmetric in signalling turning points. TPI values within the  $\pm 0.25$  range imply stabilisation, when the pace of activity is around its potential (the signals received are very varied and indicate no clear-cut upward or downward movement). The economy is performing a soft landing or soft take-off, depending whether the previous period was marked by acceleration or deceleration. By contrast, the signal is very consistent when TPI values draw very close to or reach  $\pm 1$ : the cyclical phase is deemed to be clearly favourable or unfavourable; economic activity is in a period of sharp acceleration (or sharp deceleration or even contraction).

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<sup>1</sup> Grégoir, S. and Lengart, F. (2000), 'Measuring the probability of a business cycle turning point by using a multivariate qualitative hidden Markov model', *Journal of Forecasting*, 19.