European Commission | Directorate-General for Economic and Financial Affairs

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European Business Cycle Indicators

- Economic sentiment broadly unchanged
- Moderate improvement in sentiment in industry
- Services improve, but retail disappoints
- Consumer confidence drops after ten months of uninterrupted improvement
- Special focus: A closer look at the results of the consumer survey

Economic sentiment indicators

In February, the economic sentiment indicator (ESI) remained broadly unchanged at 97.4 (up by 0.2 points) in the EU and at 95.9 (down by 0.1) in the euro area. After 10 months of uninterrupted improvement, the rebound appears to have lost momentum – though the indicator is now not far off its long-term average. This level of sentiment suggests that year-on-year GDP growth could actually turn positive in the first quarter of 2010 compared with the very weak conditions in the same quarter last year (see Graphs 1a and 1b).





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



Source: European Commission

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

'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

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

In the euro area, the moderate improvement in sentiment in industry helped to keep the overall ESI at last month's level. The industrial confidence indicator gained 1 point in February (see Graph 2) reflecting managers' positive feeling about both order books and production expectations. Their assessment of production trends observed in recent months was even more optimistic. By contrast, the increasing stock levels were a cause for concern, as they were above what was considered the optimum level.



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

Confidence increased by another 2 points in services in the euro area, but declined by 4 points in retail, dragged down by sharp drops in Germany and Italy. Construction remained unchanged (see Graph 3).

In line with the flash estimate, confidence among consumers deteriorated. Consumers' perception of the general economic outlook and increasing unemployment fears (especially in Spain and Italy) contributed to the overall deterioration.



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

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

No clear pattern emerged across the four largest euro area Member States and the UK (see Graph 4).

Spain reported the highest relative increase in sentiment, even though this was not particularly significant (+1.1). Overall sentiment benefited from a sizeable rebound in services and retail trade, but was dampened by the growing pessimism among consumers and in the construction sector. Industry remained unchanged.

The marginal improvement in the German ESI (+0.9) masks the sizeable increase in the manufacturing sector, which shows no signs of abating. Confidence waned in the volatile retail sector and services. Sentiment improved somewhat amongst consumers, but stood still in construction.

Sentiment was broadly unchanged in the UK (+0.1). Every sector but industry improved.

In Italy, overall confidence dropped by 1.7 points. The demand side of the economy was the cause of the decline, as sentiment worsened in services, retail and among consumers, who were particularly affected by mounting fears of unemployment. Meanwhile, industry and construction continued to improve.

France suffered the worst decline in sentiment (-1.9). The particularly sharp drop in industrial confidence reflected deterioration across all components. Confidence dropped in every sector, with the exception of services.

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



The economic climate tracer

The cyclical movements for the euro area as a whole and at sector level are illustrated 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. Every sector is in the upswing phase as well, with construction 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 analysis set out above, especially because the economic climate tracer series are smoothed.



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



Graph 5b displays the cyclical movements (based on the economic climate tracer) for the four largest euro area Member States and for the UK. They are all clustered in the upswing quadrant, with Germany now close to the expansion phase and Spain lagging behind.





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. In Germany, the construction climate indicator slipped back into the contraction phase. By contrast, retail trade in France and the UK entered the expansion phase.



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

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 0.89 in February. The turning point index has remained in the favourable zone for eight consecutive months. This implies a continuous recovery (see Annex 1 for details).





Special focus

A closer look at the results of the consumer survey by **Olivier Biau**



This month's special focus takes a closer look at the results of the consumer survey. In February, consumer confidence in the euro area took a dive after 10 months of uninterrupted improvement.

Analysis of the results of the survey revealed that the euro area aggregate was strongly influenced by developments in Italy and Spain. Diverging trends among the four largest euro area countries emerged, but no significant differences across socioeconomic categories were found.

In February 2010, the consumer confidence indicator (CCI) for the euro area dropped by 1.6 points after 10 months of uninterrupted improvement. All components of the indicator declined. Some analysts attributed this reversal of the trend to fears of aggressive fiscal tightening. This article looks at the main reasons behind the growing pessimism among consumers in the euro area, focusing on the micro- and macro-level questions. The analysis reveals that the more pessimistic general economic outlook was the main determinant of the overall drop, especially in Spain and Italy. This could indeed be related to fears of fiscal tightening in the future, but more likely to the recent developments in Greece and possible spillover effects to other countries in the region.

Southern consumers are the most worried

In all, 9 out of the 16 euro area countries reported a drop in consumer sentiment. The most marked decreases were in the south: Spain suffered the worst decline (down by 4.9 points), followed by Italy (-4.8), Portugal (-4.0) and Greece (-3.4). At the other end of the spectrum, Slovakia (up by 6.6) and Luxembourg (+4.9) had the most upbeat consumers.

Italy and Spain were the most negative contributors to the euro area aggregate (-0.82 and -0.54 respectively), followed by the Netherlands (-0.15), France (-0.12) and Greece (-0.10). The cautious optimism of German consumers made the biggest positive contribution (+0.11). Table 1 provides a complete overview of the developments and contributions.

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| | m-o-m | contribution |
|----|-------|--------------|
| ES | -4.9 | -0.54 |
| IT | -4.8 | -0.82 |
| PT | -4.0 | -0.08 |
| IE | -3.4 | -0.06 |
| EL | -3.4 | -0.10 |
| NL | -3.0 | -0.15 |
| BE | -0.9 | -0.03 |
| FR | -0.6 | -0.12 |
| MT | -0.5 | 0.00 |
| DE | 0.4 | 0.11 |
| SI | 0.7 | 0.00 |
| FI | 0.7 | 0.01 |
| CY | 1.1 | 0.00 |
| AT | 2.0 | 0.06 |
| LU | 4.9 | 0.01 |
| SK | 6.6 | 0.03 |
| EA | -1.6 | |

Table 1: CCI m-o-m change and contribution

Source: European Commission

Individual questions reveal across-the-board deterioration

The CCI is an arithmetic average of balances of the answers to the questions on the *financial situation of households* (question 2), the *general economic situation* (question 4), *unemployment expectations* (question 7, with inverted sign) and *savings* (question 11), taking the next 12 months as the reference period. Thus, the questions taken into consideration in the CCI are forward-looking and cover expectations about both the households' own economic situation and the general economic outlook. They are a mixture of what might be called 'micro-oriented' (e.g. questions 2 and 11) and 'macro-oriented' questions (e.g. 4 and 7)¹.

To gain a better understanding of the decline in February, a micro-oriented consumer confidence indicator ('CCI-micro')² was constructed using micro-oriented questions. This indicator tracks private final consumption. As the surveys are representative, the questions on households' financial situation and their intentions to spend (variables that are similar to the households' budget constraints) provide a good proxy indicator of consumption. In the same vein, the macro-indicator ('CCI-macro')³ builds on macro-oriented questions. A question on the general economic situation of the country reflects growth expectations (possibly GDP) and could be influenced by the media⁴. It is safe to assume that respondents have less information on general economic issues than on their own economic situation. As a consequence, the macro-indicator and the CCI appear less informative and more volatile than the micro-indicator (see Graph 1a).

¹ See pp 47-49 in <u>http://ec.europa.eu/economy_finance/db_indicators/surveys/documents/userguide_en.pdf</u>.

² The micro-indicator is the simple average of the balances of five questions in the consumer survey: *current financial situation of the household* (question 1), *expected financial situation of the household* (question 2), *right moment to make major purchases* (question 8), *expected spending on major purchases* (question 9).

³ The macro-indicator is the simple average of the balances of three questions in the consumer survey: *current* general economic situation (question 3), expected general economic situation (question 4) and expected unemployment (question 7).

⁴ For further details on construction of the micro- and macro-indicators, see:

http://ec.europa.eu/economy_finance/db_indicators/surveys/documents/workshops/2008/ec_meeting/jonsson_l_inden_cci_ecfin.pdf.

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Source: European Commission

Graph 1b shows that all three indicators followed a similar trend up until mid-2008. During the crisis, trends diverged. From mid-2008 on, the CCI and the CCI-macro entered a free fall which lasted until April 2009, when both started to recover. This pattern might have been influenced by the media hype about the crisis. Over the same period, the CCI-micro followed a markedly smoother trend. This is consistent with the actual trend in private consumption in the euro area. In fact, private consumption appears to have been a stabilising factor, contracting significantly less than GDP during this recession. Moreover, the CCI-micro began to recover earlier, during summer 2008 already. This improvement could be related to the exceptional monetary and fiscal measures that possibly eased households' budgetary position.



Graph 1b: Euro area - CCI, CCI-micro and CCI-macro since January 2007

Source: European Commission

The significant decrease in consumer confidence in the euro area in February 2010 reflects an across-theboard deterioration, to which the worsening general economic outlook was the largest contributor.

Mixed picture across the four largest euro area Member States

No clear pattern emerges across the four largest euro area Member States (see Graph 2). In February 2010, both Spain and Italy reported sizeable declines in the CCI-micro and the CCI-macro. In Greece and Portugal, the CCI-macro dropped sharply, while the CCI-micro improved somewhat. In these four countries consumers reported a worsening of the *economic outlook* and a very strong increase in *unemployment fears*. At the same time, the CCI-macro improved somewhat in France (in line with the better than expected GDP figures for the fourth quarter of 2009), while the CCI-micro declined slightly. In Germany, the CCI-micro is continuing to rise, whereas the CCI-macro has stabilised below its long-term average.



Graph 2: CCI-micro and CCI-macro for the four largest Member States, Greece and Portugal

Breakdown by income and education detects no difference

The breakdown by income class and education failed to uncover any differences in the scale of the decline in confidence in February (see Graph 3). However, the gap between the CCI of lower and higher income and education categories narrowed in the midst of the crisis, due to more pessimistic views amongst respondents in the higher categories. It could be that the severity of the crisis made the respondents in the higher income and education categories fear the possible consequences more than was justified by their own actual situation. Now that the worst is behind them, these categories seem to be recovering faster and the gap is widening again.

Graph 3: Euro area - CCI by income and education



Reference series

The reference series are from Eurostat, via Ecowin.

| 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_indic ators/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 indic ators/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 Lenglart (2000)5, 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 within the ± 0.25 range imply values 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).

⁵ Grégoir, S. and Lenglart, F. (2000), 'Measuring the probability of a business cycle turning point by using a multivariate qualitative hidden Markov model', Journal of Forecasting, 19.