European Commission

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European *Business Cycle* indicator

SHORT-TERM ANALYSIS FROM EUROPEAN COMMISSION'S DIRECTORATE GENERAL FOR ECONOMIC AND FINANCIAL AFFAIRS

Developments in business and consumer survey data in 2012Q2

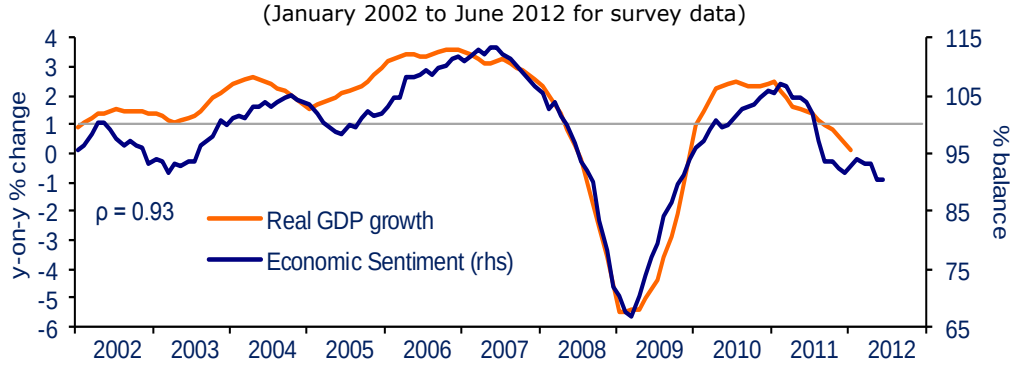
- *In the second quarter of 2012, economic sentiment deteriorated in both the EU and the euro area.*
- *The renewed downward trend which began in March/April was broad-based among EU Member States and was mainly due to worsened confidence in industry and services.*
- *Confidence among consumers moved broadly sidewards, remaining well below its long-term average.*
- *Overall, developments in survey data suggest a deterioration of economic activity in 2012Q2.*
- *Managers in the EU manufacturing industry revised upward their investment estimations for 2011 and their investment plans for 2012.*

Highlight: preliminary results from the new question on capacity utilisation in services

The highlight presents a preliminary analysis of the first four quarterly results for the new question on capacity utilisation in services. The difference in level between capacity utilisation in services and industry at the aggregate EU/euro area level appears to adequately reflect the specific features of the two sectors in terms of input factors. Differences across countries also appear reasonable. Moreover, the results for capacity utilisation in services do not seem to be more volatile than those in the manufacturing sector. Despite these encouraging results, more data points are needed to firmly establish that the question in its current formulation delivers reliable and useful results for the analysis of developments in capacity utilisation in the services sector.

ESI and GDP growth for the EU

(January 2002 to June 2012 for survey data)



Note 1: The horizontal line (rhs) marks the long-term average (=100) of the sentiment indicator.
Note 2: Both ESI and GDP series are plotted at monthly frequency. Monthly GDP 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 quarterly.

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Economic and Financial Affairs Directorate-General
Directorate A – Policy strategy, coordination and communication
Unit A4 – Economic situation, forecasts, business and consumer surveys
http://ec.europa.eu/economy_finance/db_indicators/index_en.htm

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1. Recent developments in survey indicators for the EU and the euro area

After the slight rebound in confidence observed at the beginning of the year, the Economic Sentiment Indicator (ESI) decreased over the second quarter of 2012 in both the EU and the euro area. In June, the ESI remained flat in the EU and decreased for a third month in a row by 0.6 points in the euro area. At 90.4 in the EU and 89.9 in the euro area, the ESI has been below its long term average since August 2011. The renewed downward trend which began in March/April was broad-based among EU Member States and mainly due to worsened confidence in industry and services. Consumer confidence moved broadly sidewards. Confidence in retail trade and construction showed no clear trend over the quarter.

Sentiment in *industry* deteriorated constantly since March 2012 offsetting the recovery registered at the end of 2011 and beginning of 2012. The indicator is now again below its long-term average. The sharp drop in industrial confidence in 2012Q2 was broadly based, with all seven largest Member States registering losses in confidence (especially Italy and the UK). While the monthly profile of 2012Q2 reveals continuous monthly decreases in Germany and France, the industrial confidence indicator improved in June in Italy, the Netherlands, Poland and the UK.

In the euro area, the decline in the industrial confidence indicator in the second quarter results from a deterioration in all three components (production expectations, assessment of order books and stocks), while in the EU managers' assessment of the level of stocks remained broadly unchanged. In both areas, managers' assessment of production trends observed during recent months and export order books (two variables which are not included in the industrial confidence indicator) deteriorated sharply in the second quarter. Also managers' employment prospects deteriorated. Selling price expectations have been decreasing since April. In June 2012, the number of managers expecting a decrease in selling prices outweighed the number of those expecting an increase for the first time since February 2010 in the EU and March 2010 in the euro area.

Quarterly survey data published in April 2012 shows that capacity utilisation decreased marginally in both regions. At 79.8% in the EU and 79.6% in the euro area, capacity utilisation remains below its long-term average of 81.0% and 81.4%, respectively.

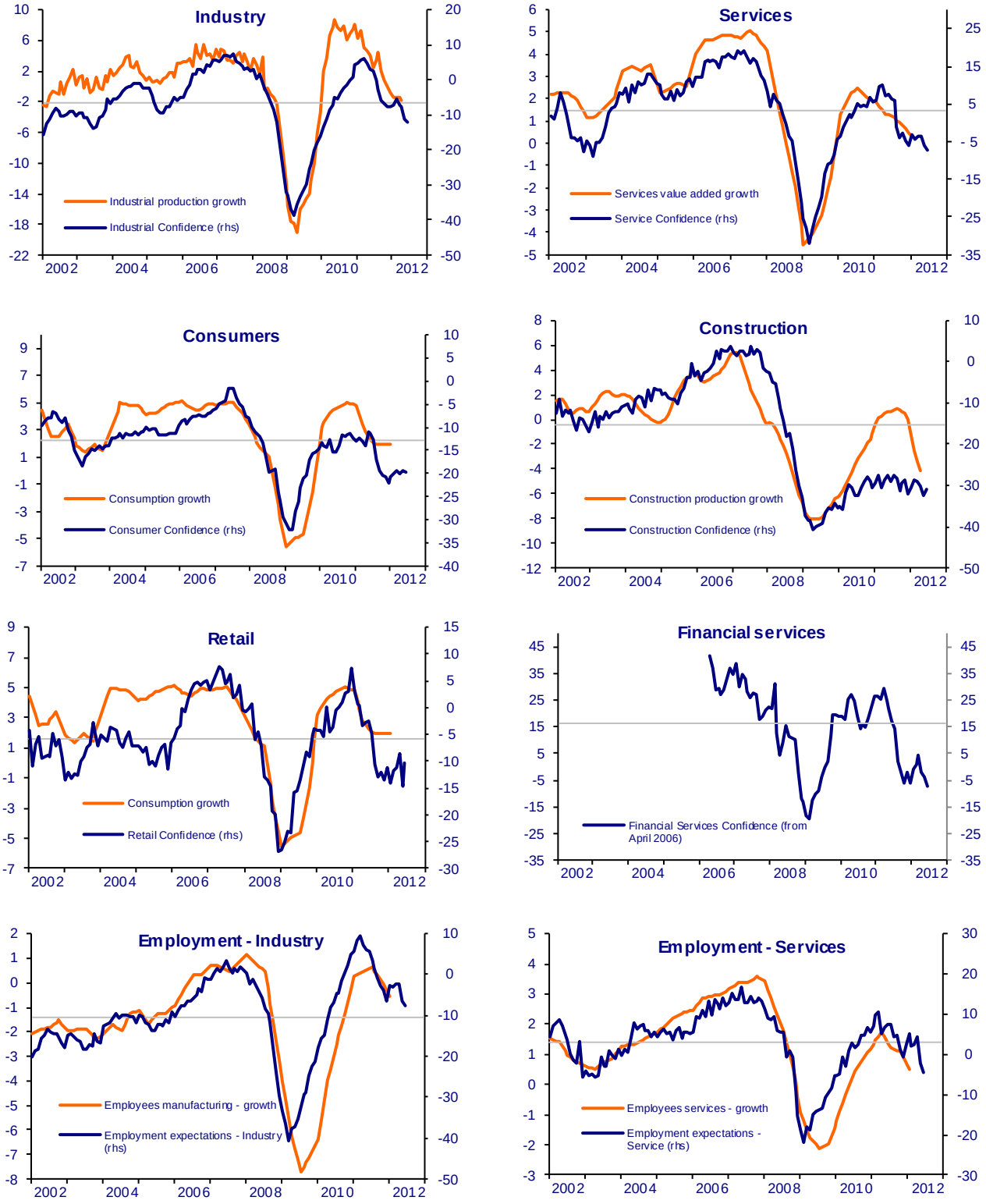
During 2012Q2, sentiment in *services* worsened in the EU and, more sharply, in the euro area. In both regions, the indicator dropped further below its long-term average throughout the second quarter. The quarterly losses in confidence resulted from a sharp deterioration in all the components (past and expected demand and past business situation). Developments in the confidence indicator were somewhat mixed across countries. Among the seven largest Member States, Germany has seen the sharpest fall in sentiment in services during the second quarter of the year compared with the first, followed by Spain, France, Italy and the Netherlands while sentiment increased marginally in Poland. Only the UK saw a significant increase in service sentiment.

On average across April-June, the *retail* confidence indicator increased in the EU and declined in the euro area compared to the first quarter. In both regions it followed a rather volatile monthly path, with deteriorations in May and gains in April and June. The increase in the EU over the second quarter is due to a rebound in business expectations and a more positive assessment of the current level of stocks. At the same time, managers' appraisal of past sales deteriorated. In the euro area, managers' assessment of past sales drove down sector confidence despite broadly stable business expectations and an improvement in the assessment of the current level of stocks.

Sentiment in *construction* deteriorated over the second quarter but rebounded in June thanks to a pick-up in employment expectations. Having deteriorated over the first two months of the quarter too, managers' appraisal of current order books remained broadly unchanged in June. Among the largest Member States, construction confidence deteriorated sharply in the second quarter 2012 in the Netherlands and Poland. It decreased also in France, Spain and Germany and remained broadly the same in Italy and the UK.

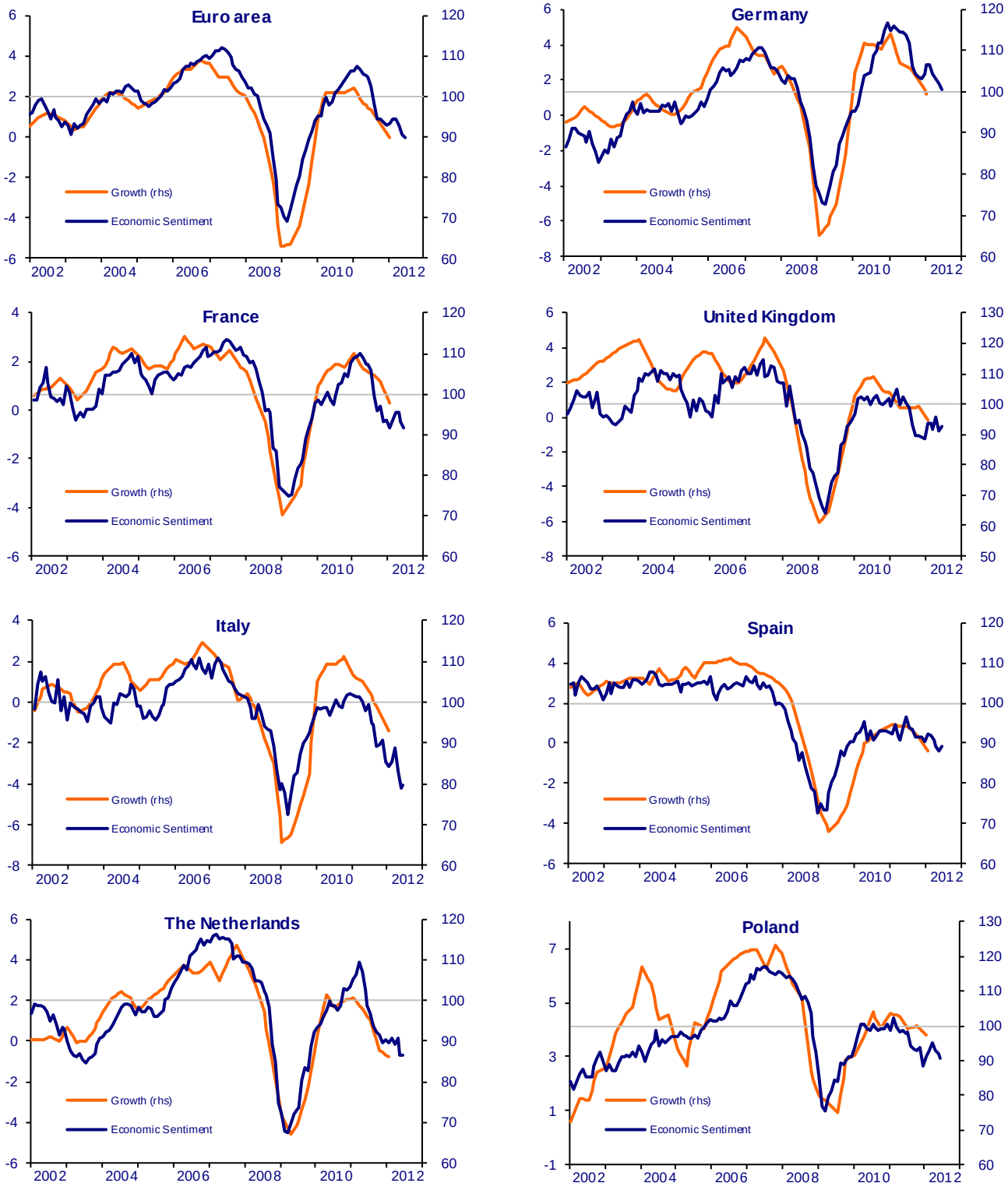
Confidence among *consumers* remained broadly flat in the second quarter, after having improved over the first quarter in both the EU and the euro area.. The indicator remains well below its long-term average. In both regions, households' unemployment fears eased considerably in April and May but picked up again in June. Consumer expectations about their financial situation and their savings improved over the quarter, while expectations about the general economic situation worsened. Although not included in the consumer confidence indicator, consumers' assessment of their past financial situation and their intentions to spend more money on big-item purchases improved, while their assessment of the past general economic situation remained broadly unchanged.

Graph 1.1: **Sectoral confidence indicators and reference series for the EU (January 2002 to June 2012 for survey data)**



Note 1: The horizontal line (rhs) marks the long-term average of the survey indicators.
Note 2: Confidence indicators are expressed in balances of opinion and hard data in y-o-y changes. If necessary, monthly frequency is obtained by linear interpolation of quarterly data.

Graph 1.2: **Economic Sentiment Indicator — Selected EU Member States (January 2002 to June 2012 for survey data)**



Note 1: The horizontal line marks the long-term average (=100) of the sentiment indicator.
Note 2: Confidence indicators are expressed in balances of opinion and GDP in y-o-y changes. Both variables are plotted at monthly frequency. Monthly GDP data are obtained by linear interpolation of quarterly data.

Confidence in *financial services* – which is not included in the ESI – decreased in the second quarter of 2012 in both regions, and more sharply so in the euro area. The causes differ somewhat across the two regions. While in the euro area the fall in confidence was broad-based at the component level with expected demand declining most, in the EU the other components of the confidence indicator (past business situation and past demand) remained broadly unchanged.

The developments over the second quarter are confirmed by the evolution of the turning point indicator and the climate tracers. The economic climate tracers for both the EU and the euro area remained in the contraction quadrant in June 2012 (see Annex 1 for further details). Moreover, the turning point indicator for the euro area — which extracts the (positive or negative) surprises from new available survey data — moved progressively in negative territory in April and May, signalling a negative change and a less favourable cyclical phase for the euro-area economy (see Annex 2 for further details). In June, the turning point indicator improved marginally compared to May but it still remains clearly in negative territory and close to -1.

2. Recent developments in selected Member States

Among the seven largest Member States, the ESI decreased most significantly in Italy, followed by Poland, Germany, France, the Netherlands and Spain, while it remained rather flat in the UK during 2012Q2. Among these Member States, the ESI remained above its long-term average only in Germany.

Economic sentiment in **Germany** has seen a sharp downward trend since March 2012 following a mild recovery around the turn of the year and a broadly stable evolution in February. Currently, the ESI is still 0.5 points above its long-term average. The negative evolution resulted mainly from continuously worsening confidence in industry. Managers' assessment of order books and future production deteriorated markedly over the last months. Moreover, the assessment of the adequacy of the level of stocks of finished products deteriorated in May and June. In the services sector, after a rather strong rebound during November 2011 – January 2012, the confidence indicator has declined continuously. However, in June developments were somewhat mixed. While managers' appraisal of their past business situation and demand worsened, demand expectations improved. Sentiment in retail trade ameliorated in June after sharp falls in April and May. Sentiment in construction improved slightly in May and June based mainly on managers' improved employment expectations. However these favourable developments failed to offset the worsening of April. Confidence among consumers declined in the second quarter. The rebound in May could not level out the sharp deteriorations of April and June. While consumers' unemployment fears and expectations about the general economic situation worsened markedly in June, envisaged savings rose sharply.

In **France,** the ESI deteriorated steadily over the second quarter, reversing the improvement seen in the first quarter. At the sector level the picture is mixed with confidence declining sharply in services, construction and industry, showing no clear direction in retail trade and improving among consumers. In industry, the level of order books was assessed more negatively throughout the quarter while production expectations saw a temporary improvement in May. The assessment of the level of stocks deteriorated sharply in May and stayed broadly unchanged in June. The services confidence indicator deteriorated mainly due to plummeting assessments of the past business situation and demand. In June, demand expectations contributed most significantly to the decline. In the construction sector, lower confidence results from a deterioration in employment expectations throughout the quarter and worsened assessments of order books in May and June. Based on quarterly averages, confidence in the retail sector rose as a result of improving business expectations and assessments of stocks in April and June. Consumer confidence continued to improve until May, based on more positive readings of all its components. In June, more pessimistic views on envisaged savings and unemployment expectations dragged down the confidence indicator.

Based on quarterly averages, the ESI remained flat in **the United Kingdom** in the second quarter, in the context of a rather volatile monthly profile. Increasing sentiment in April and June alternated with the fall in May. Confidence rebounded in retail trade and services in the second quarter. May and June readings were also positive for construction and consumers. At the same time, confidence fell sharply in industry in May, recovering only slightly in June. The strong rebound in retail trade is mainly due to a recovery in business expectations in June. Managers also assessed much more positively past developments in business activity. The strong recovery in services sector confidence was based on a sharp increase in demand expectations in April and an important change in managers' perception of past demand in June. At the same time, the assessment of the past business situation in services improved constantly throughout the quarter.

In **Italy,** the ESI registered the largest drop among the biggest Member States, with all the sectors witnessing losses in confidence. The large drop that occurred in April was followed by another, smaller drop in May, while in June economic sentiment improved somewhat. In industry, the significant deterioration in confidence in April and May was

curbed by some signs of recovery in June, based on improvements in production expectations and more positive assessments of order books and the current level of stocks. For services, the sharp deterioration that occurred in April was followed by further declines in confidence in May and June. As for consumers, particularly large losses in confidence were recorded in April, followed by further worsened readings in May and June. Households' expectations about the general economic situation deteriorated most severely, followed by the expected financial situation and envisaged savings. Unemployment fears increased as well.

In **Spain,** economic sentiment deteriorated in the first two months of the second quarter with all sectors but retail witnessing losses in confidence. The June readings showed some signs of stabilisation when the decrease in confidence in industry was offset by a rebound in the other sectors. The decrease in confidence in industry was mainly driven by a drastic worsening in production expectations. The increase in confidence in services in June was mainly due to higher demand expectations and a more positive assessment of the past business situation. Confidence among consumers increased mainly as a result of an increase in expectations about the general economic situation and a sizeable easing of unemployment fears.

In **the Netherlands,** economic sentiment fell markedly over May-June. While the sharpest drops in sentiment were observed in construction and services, confidence among consumers saw a temporary improvement in April, due to improved expectations about the general economic situation and an ease in unemployment fears. The fall in industrial confidence observed since March 2012 came to a preliminary halt in June.

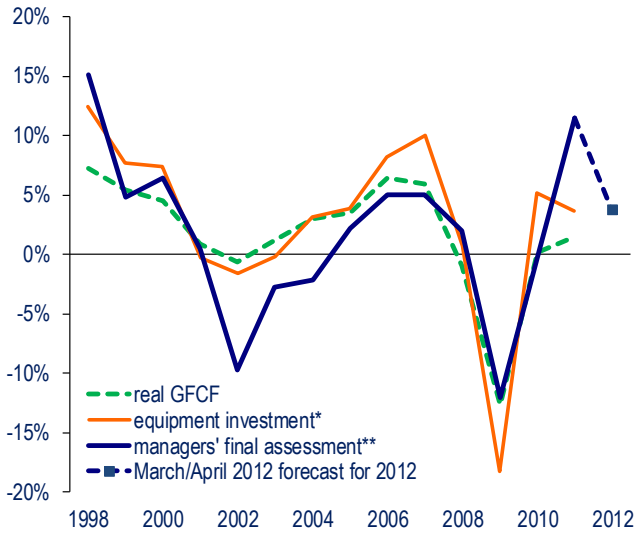
In **Poland** economic sentiment deteriorated constantly over the second quarter. While confidence fell sharply across all sectors, there were some signs of improvement in June in industry and retail trade. The slight recovery in confidence in industry was mainly based on a more positive assessment of order books. At the same time the assessment of the adequacy of the level of stocks improved slightly while production expectations remained unchanged.

3. Results of the spring 2012 EU Investment Survey in the manufacturing sector

Developments in overall investment

According to the latest Investment Survey conducted in March/April 2012, investment in the EU manufacturing sector increased by 11.5% in volume in 2011. In 2010, according to the Investment Survey conducted one year ago (March/April 2011) manufacturing investment was broadly flat (-0.3%). Concerning 2012, manufacturers expect a further increase in investment of around 4.0%. Compared with the previous survey conducted in October/November 2011, managers revised upwards both their assessment for 2011 (by around 1.9 pps) and their expectations for 2012 (by about 3.4 pps). Results for the euro area are somewhat lower with managers reporting an increase of 9.6% for manufacturing investment in 2011 and expecting an increase of 1.7% for 2012.

Graph 3.1: Growth in real gross fixed capital formation (GFCF) and surveyed change of investments in the EU (annual changes in %)



*Real GFCF in transport equipment and other machinery and equipment.
**Mar/Apr year t surveys, managers' assessment of investment in year t-1.
Source: Commission services.

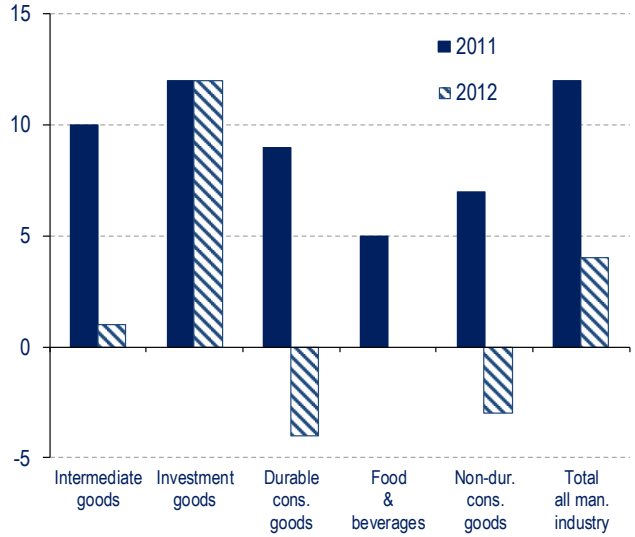
The estimated sharp rebound in investment volume in 2011 appears to be on the high side against the background of the current economic environment. However, it is important to note that the Investment Survey covers only investment by manufacturing companies and therefore only about 40% of total gross fixed capital formation (GFCF) in the economy. There is no official (Eurostat) data on GFCF in manufacturing (or any other branch-specific breakdown). However, there is a breakdown by 6 asset types. One option is to use equipment investment (transport equipment and other machinery and equipment) in an attempt to

approximate investment activity in the manufacturing sector. Compared to total GFCF, equipment investment typically reacts stronger to the business cycle, a feature that is likely also for manufacturing investment. However, neither of the two reference series (growth in total GFCF or in equipment investment) can adequately inform on investment growth in the manufacturing sector. Graph 3.1 presents manufacturing managers' estimate of investment growth over the years 1998-2011 (surveyed in March/April of each subsequent year) along with Eurostat figures for the two (imperfect) benchmark series. For 2011, the results from the Investment Survey are significantly above the Eurostat figures of 1.4% growth in total gross fixed capital formation and 3.6% growth in equipment investment.

Investment dynamics by sectors

Looking at the sector breakdown of the survey (see Graph 2), all the sectors registered an increase in investment in real terms in 2011. Investment in the investment goods had the higher increase (+12%); it was followed by the intermediate goods and the durable consumer goods sectors, which increased respectively by 10% and 9%. Investment increased markedly also in the non-durable consumers' goods sector and the food and beverage sector by, respectively, 7% and 5%.
The outlook for 2012 is mixed across sectors. Managers in the investment goods sector are particularly optimistic, as they foresee a further increase of 12%. Investment should rise also in the intermediate sector, by 1%, while managers in the consumer goods sector foreseen a contraction of 4% in the durable consumer goods and 3% in the non-durable consumer goods.

Graph 3.2: Surveyed change of investments in the EU by sectors (annual changes in %)

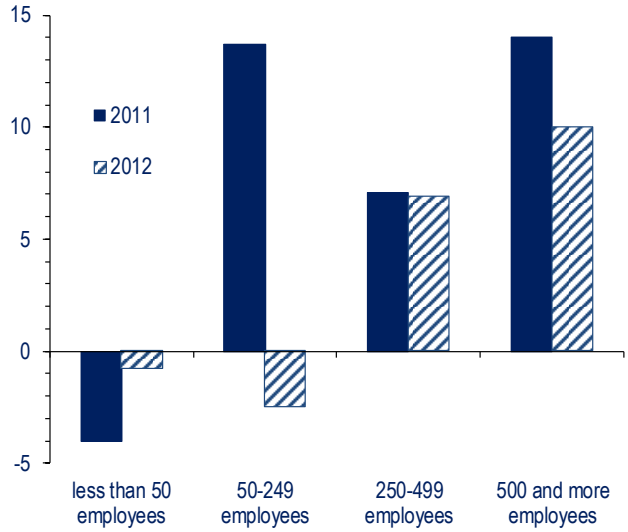


Source: Commission services.

Investment by size of enterprises

According to the survey, only small enterprises (employing less than 50 people) experienced contractions in investment in 2011 (of around 4% in real terms, see Graph 3). Among the medium-sized and very large enterprises (respectively, those employing between 50 and 249 people and more than 500 people), real investment increased by around 14%. Managers' of large enterprises (between 250 and 499 employees), estimated an increase of around 7%. A slightly different picture holds true for 2012. Small and medium enterprises expect a decrease of their investments that year by, respectively, 1% and 3%, while large and very-large enterprises project to continue to lift their investments by 7% and 10%, respectively.

Graph 3.3: Surveyed change of investments in the EU by company size (annual changes in %)



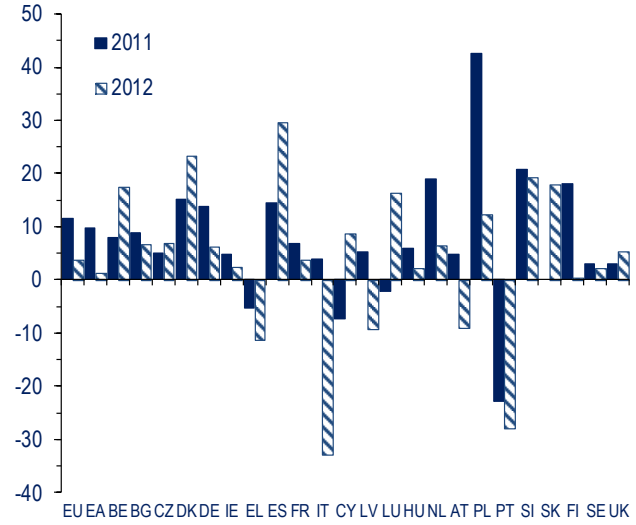
Source: Commission services.

Developments by country

The increase in investment for the EU as a whole in 2011 also took place in most of the Member States. For 2012 the increase anticipated at the EU level will also be broad based with increases in most of the Member States (see Graph 3.4).

In all the largest Member States, managers' assessed their investment in 2011 to have increased. The increase has been particularly strong in Poland (+43%), the Netherlands (19%), Germany (+14%), Spain (+14%) and France (+7%). Albeit to a lower growth rate, investment rose also in Italy (+4%) and in the UK (+3%). For 2012, managers expect their investments to increase by 30% in Spain, 12% in Poland, by 6% in Germany and the Netherlands, by 5% in the UK and by 4% in France. Only the Italian managers expect a remarkable decrease in 2012, of 33%.

Graph 3.4: Surveyed change of investments in the EU Member States (annual changes in %) [(1)]

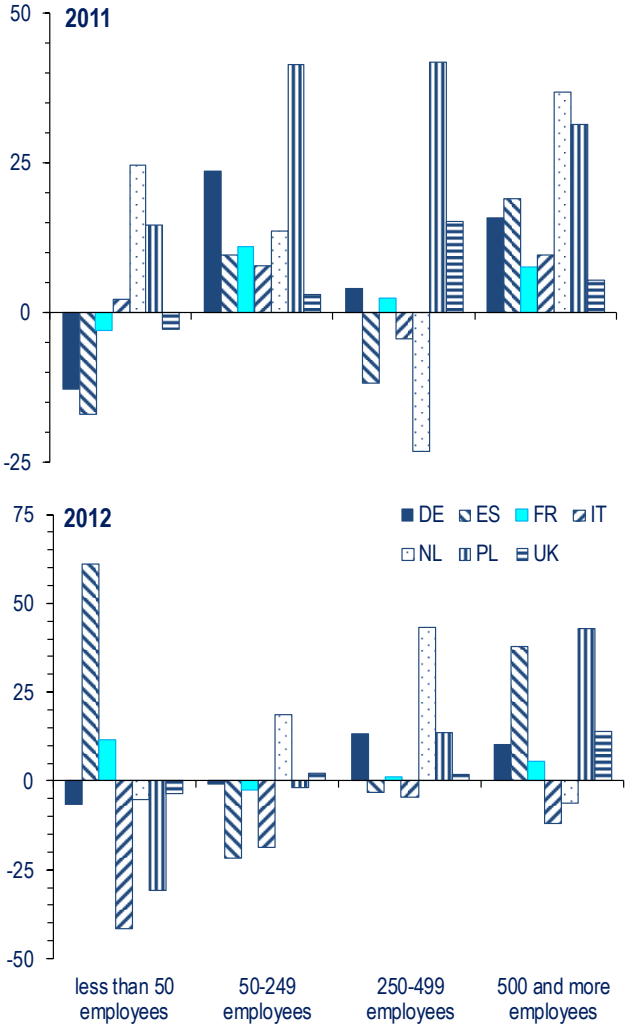


(1) Figures for Estonia, Latvia and Romania are missing, as the corresponding data are still under verification.
Source: Commission services.

In 2011, looking at the breakdown by size of enterprises across countries, medium and very large enterprises experienced an increase in investment in all large Member States, while the picture across small and large size firms was mixed (see Graph 3.5). Small German, Spanish, French and UK firms and large-sized Spanish, Italian and Dutch enterprises reported negative developments in investment. In 2012, the situation is expected to be somewhat more negative across all size firms. Only German and Polish large and very large enterprise, Dutch medium and large firms, Spanish small and very large firms, and UK medium, large and very large enterprises foresee an increase in investments.

All in all, results from the spring Investment Survey in the manufacturing sector indicate that, after having remained flat in 2010, manufacturing investment increased strongly in 2011. In 2012, investment is expected to increase further, albeit less dynamically. The positive results for 2012 are driven by managers in the large and very large enterprises, while in the small and medium enterprises managers' expect investment to contract sharply in 2012. The autumn survey (which covers a broader range of questions than the spring survey) will provide more information on the possible drivers of these differences, including the role of demand, access to credit and technological factors.

Graph 3.5: Surveyed change of investments in large EU Member States by size (annual changes in %)



Source: Commission services.

4. Highlight: the new question on capacity utilisation in services – preliminary results

Capacity utilisation is a key indicator of slack in the economy, allowing statisticians and economists to quantify the extent to which the available resources are used. As part of its BCS Programme, DG ECFIN is publishing a quarterly data series for capacity utilisation in the manufacturing industry dating back to 1985. Given the important share of services activity in the economy[1], a quarterly question on capacity utilisation has been added to the survey in the services sector on an experimental basis as from July 2011.

The concept of capacity utilisation has a strong connotation with a production process involving mainly equipment and material and necessitates a rather clear notion of a company's full capacity. To make the question understandable and relevant for enterprises in the services sector, where know-how and human resources are typically more important than capital endowments, capacity utilisation is surveyed indirectly. The formulation of the question is in terms of additional output that can be generated with the currently available resources[2]:

"If the demand addressed to your firm expanded, could you increase your volume of activity with your present resources? Yes – No[3]

If so, by how much? …%"

The capacity utilisation rate (CU) is then easily inferred with the formula:

CU = 100/(1+percentage of increase/100)

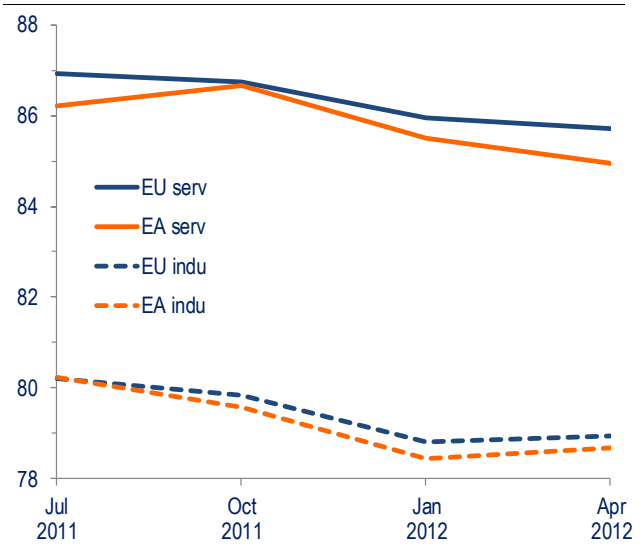
This formulation assumes that the expansion of demand is enough to lead the firms to operate at full capacity. Indeed, it aims to know the maximum increase in demand the firms could satisfy with their present resources. Currently, the data series comprises four observations (corresponding to the vintages of July, October 2011 and January, April 2012). This highlight has a first preliminary look at the results collected so far, with a view to the level, trend and volatility of the data. The long-established series of capacity utilisation in industry and other questions from the services survey will be used as benchmarks.

Differences in levels between capacity utilisation in services and industry

A priori, the capacity utilisation in services can be expected to be above that in industry in a long-term perspective. This is due to the fact that the higher need for physical capital endowments, which are difficult to adjust in the short-term, requires some capacity buffer in industry compared to services.

This a priori assumption is also mirrored in the survey results. In July 2011 (the first survey wave including the new question), the capacity utilisation in services was 86.9% in the EU and 86.2% in the euro area.[4] By April 2012, it came down to 85.7% in the EU and 84.9% in the euro area. In industry, capacity utilisation has declined from slightly above 80% in July 2011 to around 79% in April 2012 in both regions[5] (Graph 4.1).

Graph 4.1: **Capacity utilisation in services and industry in the EU and the euro-area**



Note: The data are non-seasonally adjusted
Source: Commission services.

Thus, in both the EU and the euro area, significant differences in level between capacity utilisation in

1 The Gross Value Added (GVA) in services accounts for over 70% of total GVA in both the EU and the euro area.

2 Previous testing of a direct question for capacity utilisation in the services sector resulted in relatively low response rates. Given the large spectrum of service subsectors that are surveyed (services rendered to both companies and households, from transportation to research and development), asking the question in terms of demand and *present resources* and applying the formula leads to the closest estimation of the capacity utilisation measure. However, the question is still in a testing phase within the ECFIN BCS programme

3 If a firm answers "No" its capacity utilisation is 100%.

4 There are missing data for LU (no services survey), PL (all vintages), NL (for the first three vintages), FR (for July 2011) and SE (for October 2011). For FR and SE the missing values were imputed, while the other missing countries were not included in the EU and euro area aggregates.

5 In order to ensure the comparability with the services sector, LU, NL and PL were not included in the European aggregates for capacity utilisation in industry. Moreover, the series are not seasonally adjusted. Thus, the aggregates used here differ slightly from the published aggregates for capacity utilisation in industry.

industry and services of between 6 and 7 pps were observed over the four vintages.

At the country level, there are only two Member States (LT and, to a lesser extent, DE) where the capacity utilisation in services has not been systematically higher than in industry. In the case of Lithuania, significantly lower capacity utilisation rates in services were observed in the first two survey waves. Since January 2012, however, capacity utilisation in services moved up markedly and the usual pattern of a positive gap with respect to the rate in industry materialised. In the case of Germany, the capacity uilisation rate in services was slightly below that in industry except for January 2012. It has to be noted, though, that the rate of capacity utilisation in the German manufacturing industry has been the highest (together with Austria) across Member States over the considered sample, roughly 6 pp above the EU average. Moreover, the rate has been above its long-term average consistently, reflecting the healthy state of the German manufacturing industry in 2011 and into 2012.

Concerning the other large Member States, capacity utilisation in services has been higher than that in industry by amounts ranging from 3.7pp to 11.4pp. The smallest difference was observed for the UK in January 2012 while the largest discrepancy occurred in Italy in October 2011.

Satisfactory correlation between services and industry series

Given the strong linkages between the industry and services sectors in B2B transactions, one would expect a certain degree of co-movement in the capacity utilisation rates of the two sectors. Given the low number of four observations, it is however too early to assess the temporal correlation between the two series. In a cross-country perspective, the correlation between the capacity utilisation series for services and manufacturing improved over time, reaching 0.6 in April 2012.

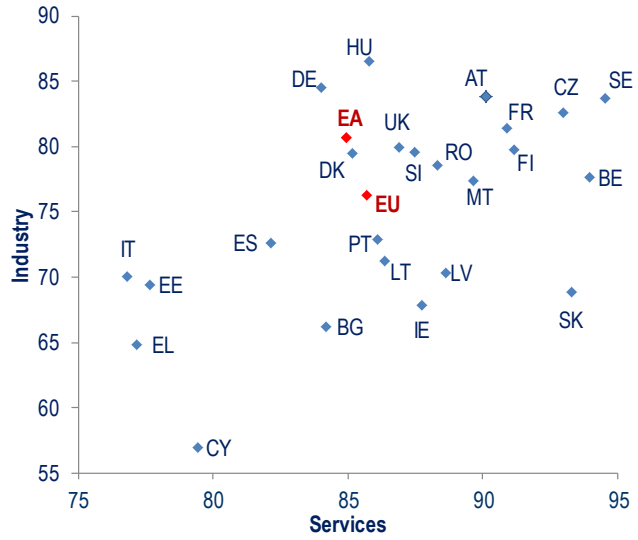
As shown in Graph 4.2, most of the individual values are distributed homogenously around the EU aggregate, i.e. either both rates are below the respective EU values or both are above. The noticeable exceptions from this pattern are Germany and Denmark with "a-typically" low utilisation rates in services compared to industry, and Ireland, Latvia and Slovakia with a-typically high rates. Among the large Member States, France and Italy are extreme typical cases in the sense that capacity utilisation in both industry and services is low in Italy and high in France.

Volatility similar to manufacturing capacity utilisation

In order to assess the reliability of the new data series on capacity utilisation in services, a volatility indicator can be computed.[6] While there is no reference value for such a volatility indicator (by construction it is a positive figure) it makes sense to compare its value for the two sectors, given the long track record of the widely established and used capacity utilisation rate in industry (Graph 4.3).

For the majority of the member states the volatility of the capacity utilisation in services is comparable to or even lower than that in manufacturing.It has to be noted, of course, that this first assessment is based on the three available quarterly changes only. On average, for the period July 2011 – April 2012 the two series have the same average volatility of 0.02, i.e the typical q-o-q change in the series in absolute terms is 2% of their mean value.

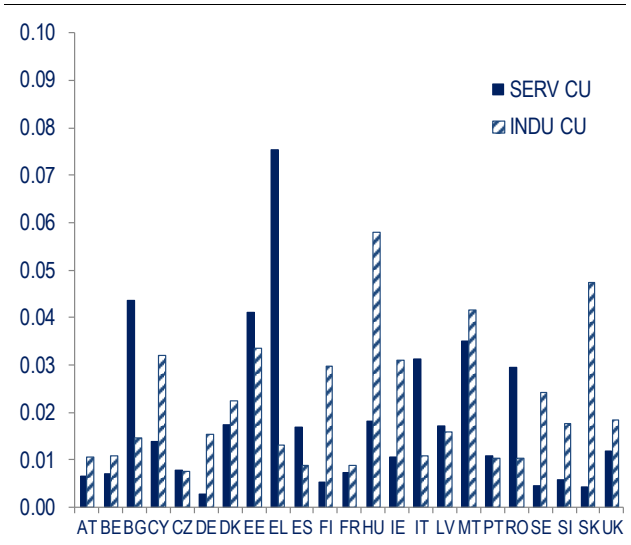
Graph 4.2: **Capacity utilisation in services and industry in April 2012**



Note: The data are non-seasonally adjusted
Source: Commission services.

[6] The volatility represents the average absolute q-o-q change in capacity utilisation divided by the average level of capacity utilisation in a given country and for a specific sector (i.e. manufacturing or services).

Graph 4.3: **Volatility in capacity utilisation in services and industry**



Note: The data are non-seasonally adjusted
Source: Commission services.

Capacity utilisation in the light of other survey results

The evolution of capacity utilisation at the EU and euro area levels is broadly consistent with other results from the services survey. Graph 4.4 shows the evolution of the monthly assessments of demand and employment over the past 3 months along with the quarterly observations for the capacity utilisation. With unchanged employment, capacity utilisation should go down with declining demand, as managers will see wider scope for increasing their volume of activity.

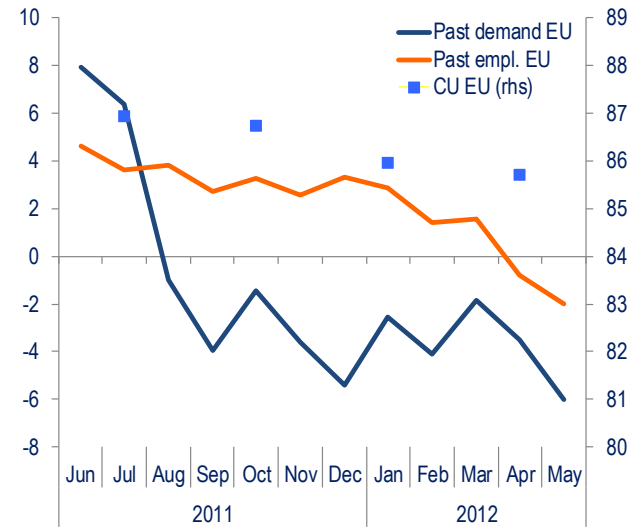
The impact of the markedly deteriorating assessment of demand on capacity utilisation was however mitigated by the parallel deterioration in the assessment of the employment situation.

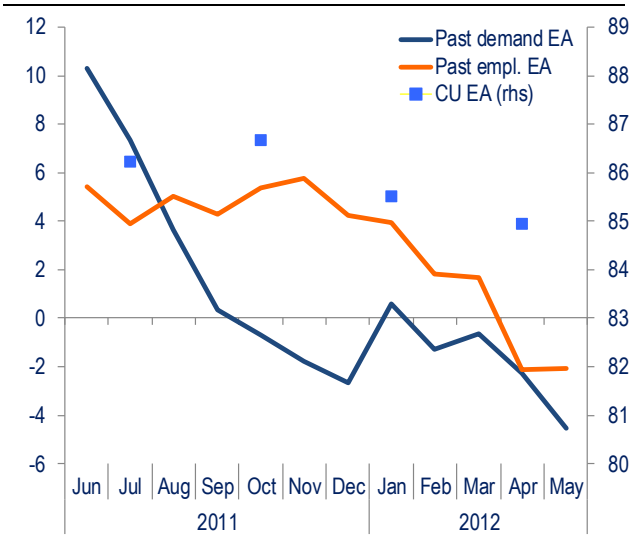
Conclusion

Overall, this tentative and preliminary analysis of the first four quarterly results for the new question on capacity utilisation in services delivers encouraging results. The difference in level between capacity utilisation in services and industry at the aggregate EU/euro area level appears to adequately reflect the specific features of the two sectors in terms of input factors, while also cross-country differences appear reasonable. Somewhat surprisingly (on the positive side) for a newly introduced question, the results for capacity utilisation in services do not seem to be more volatile than those in the manufacturing sector.

Clearly, more data points are needed to firmly establish that the question in its current formulation delivers reliable and useful results for the analysis of developments in capacity utilisation in the services sector. An important caveat is that the presented preliminary analysis is based on non-seasonally adjusted series for both services and industry. Before publishing any results for the services sector, the data need to be seasonally adjusted, which requires a time series of at least three years.

Graph 4.4: **Capacity utilisation in services and demand/employment assessments in the EU and the euro-area**





Source: Commission services.

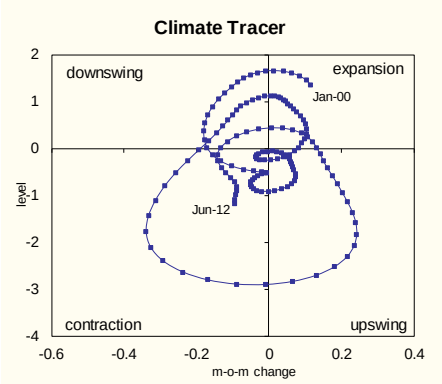
Annex 1: The Economic Climate Tracer

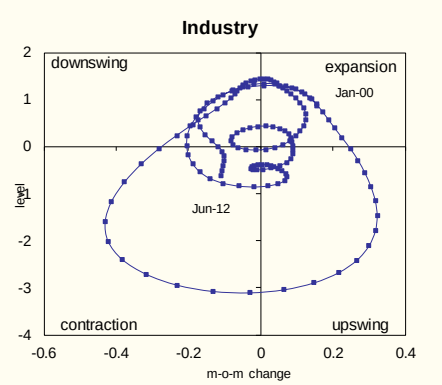
The graphs below show the economic climate tracer for the EU (including sectoral components), the euro area and the seven largest EU Member States.
The series levels are plotted against their first differences (m-o-m changes), so that each chart depicts — at the same time — the current stance of the sector/country and its most recent dynamics. Series are smoothed to eliminate short-term fluctuations.
The four quadrants of the graphs enable four phases of the business cycle to be distinguished:

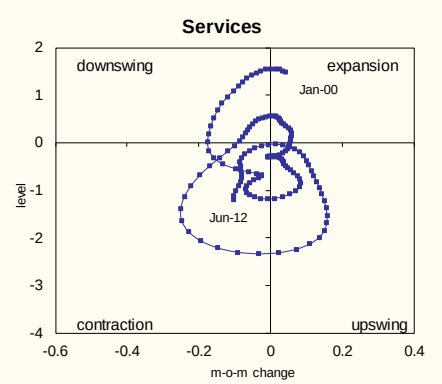
- "expansion" (top right quadrant),
- "downswing" (top left),
- "contraction" (bottom left), and
- "upswing" (bottom right).

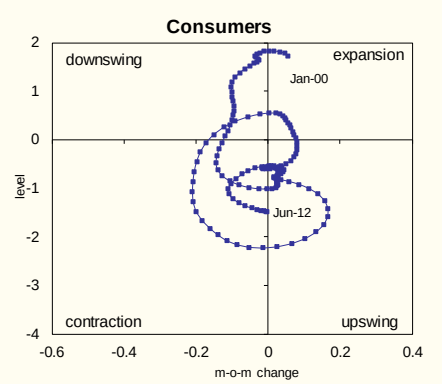
Cyclical peaks are positioned in the top centre of the graph, and troughs in the bottom centre.

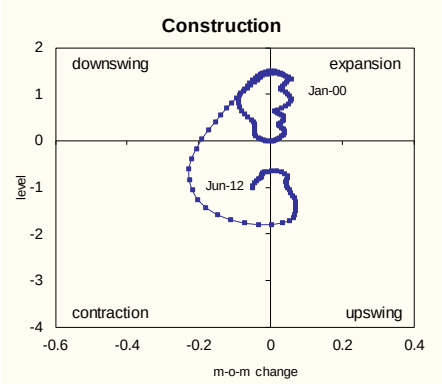
Economic climate tracer across sectors, EU

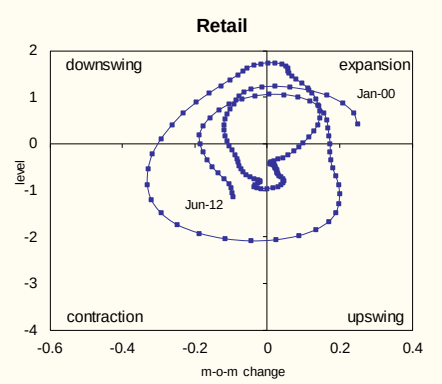




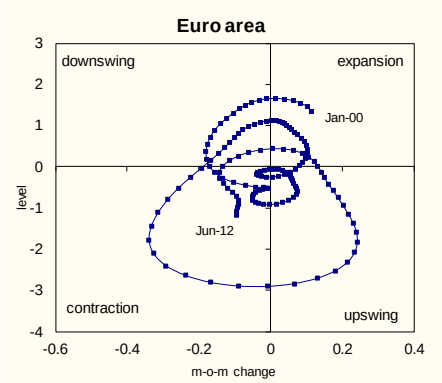


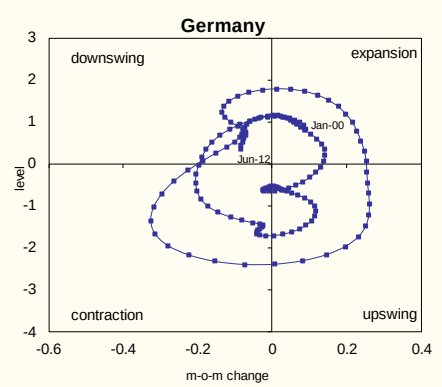


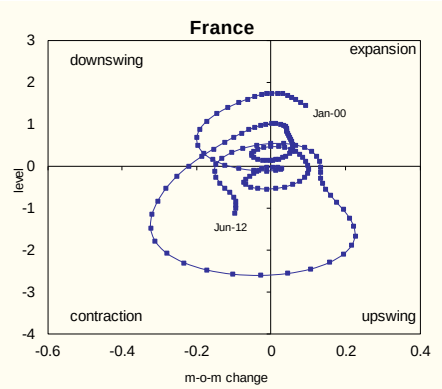


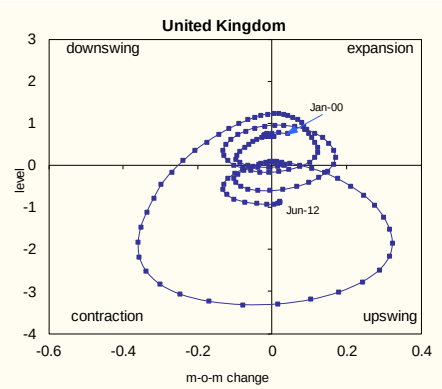


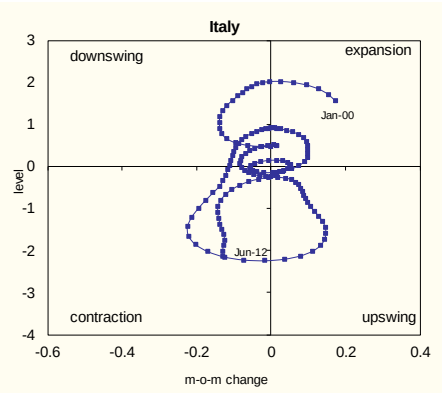
Economic climate, largest EU Member States

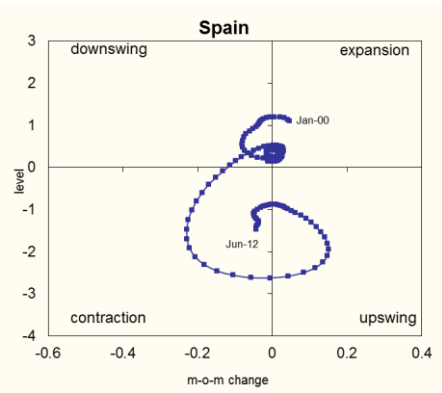


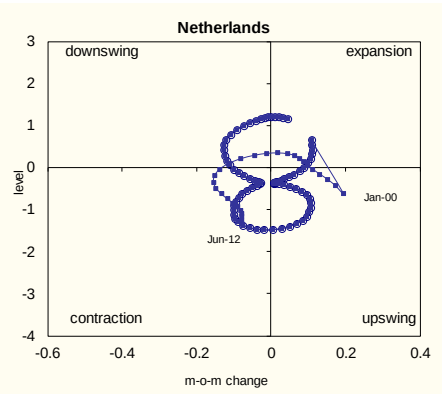


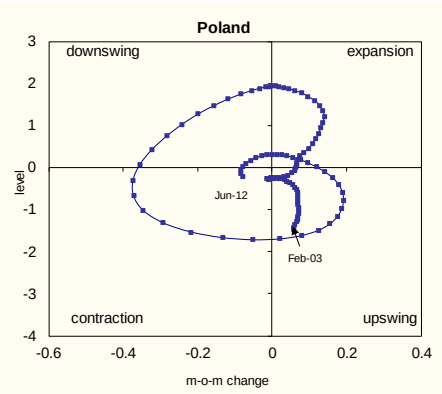








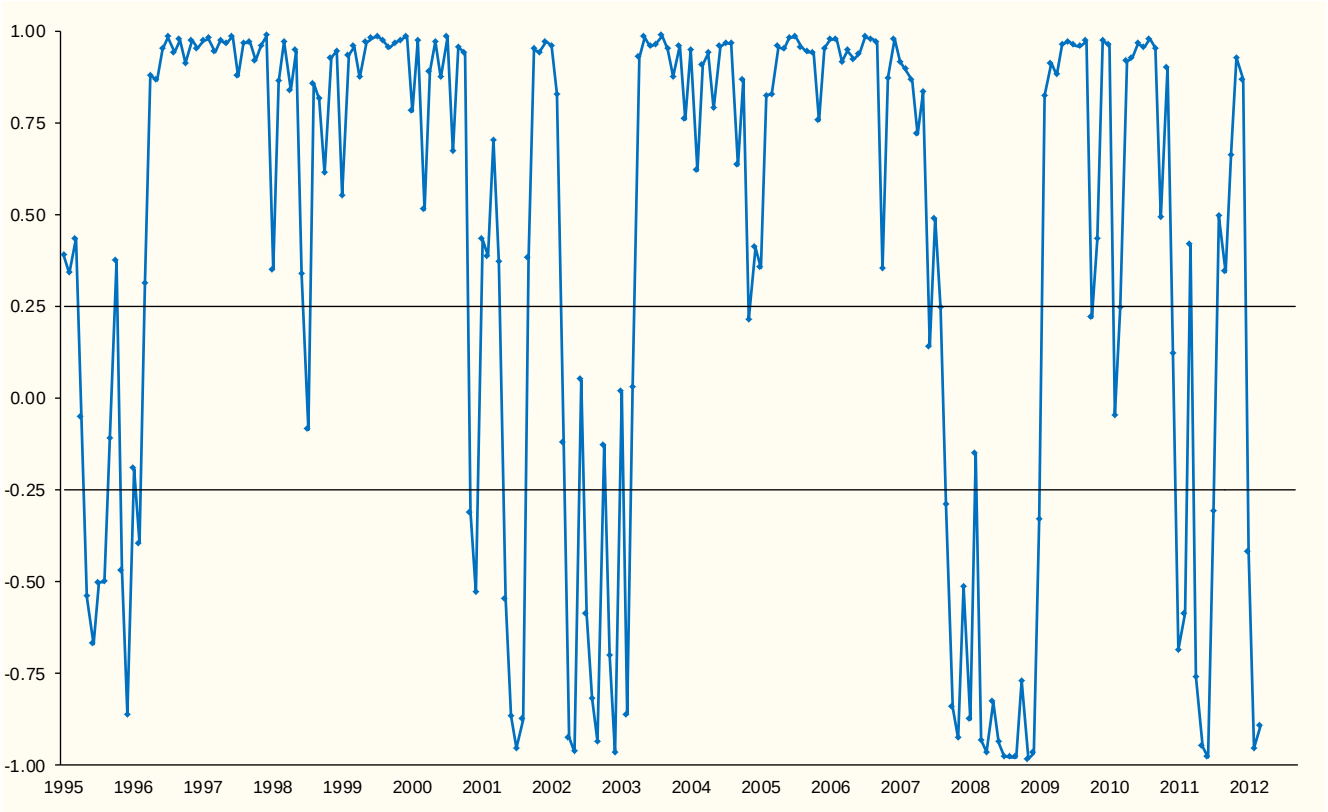




Annex 2: Euro-area turning point index

The turning point index — based on a Markov switching model — estimates the difference between high- and low-regime probabilities.
On the basis of the latest survey data for the euro area, the turning point index (TPI) was at -0.89 in June 2012 after -0.95 in May.
By design, the computation of the turning point aims to extract the surprises — positive or negative — from new information in the surveys. In the second quarter of 2012, confidence deteriorated significantly compared with the previous quarter. Despite the marginal improvement in June following the worsening signals of April and May, the innovations within the framework of the AR modelling method are interpreted as negative. The TPI currently stands very close to -1, pointing to a further unfavourable cyclical phase in 2012Q2.

Turning point index for the euro area



Annex 3: 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

Economic Sentiment Indicator

The economic sentiment indicator (ESI) is a weighted average of the balances of replies to 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 it 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 the construction of the ESI can be found at:

Methodological guides - Surveys – DG ECFIN website

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

Survey database – DG ECFIN website

Economic Climate Tracer

The economic climate tracer is a two-stage procedure. The first stage consists of building economic climate indicators. These are based on principal component (PC) analyses of balance series (s.a.) from the surveys conducted in industry, services, building, the 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 as follows: 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. The economic climate indicator (ECI) is a weighted average of the five PC-based sector climate indicators. The sector weights are equal to 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 on the basis of two broad criteria: the representativeness of the sector in question and historical tracking performance in relation to GDP growth.
In the second stage 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 a 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 purpose of the turning point index model, based on the work of Grégoir and Lenglart (2000)[7], is to identify economic growth trends in the euro area, using all the confidence indicators derived from the surveys of industry, services, building, and consumers as input. This model is symmetric in signalling turning points. TPI values within the ± 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 on whether the previous period was marked by acceleration or deceleration. By contrast, the signal is very consistent when TPI values are very close to or reach ± 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).

[7] 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.