



European  
Commission

ISSN 2443-8049 (online)

# European Business Cycle Indicators

3<sup>rd</sup> Quarter 2016

TECHNICAL PAPER 011 | OCTOBER 2016

EUROPEAN ECONOMY



Economic and  
Financial Affairs

**European Economy Technical Papers** are reports and data compiled by the staff of the European Commission's Directorate-General for Economic and Financial Affairs.

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Luxembourg: Publications Office of the European Union, 2016

KC-BF-16-011-EN-N (online)  
ISBN 978-92-79-54533-7 (online)  
doi:10.2765/600396 (online)

KC-BF-16-011-EN-C (print)  
ISBN 978-92-79-54532-0 (print)  
doi:10.2765/436222 (print)

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European Commission  
Directorate-General for Economic and Financial Affairs

# European Business Cycle Indicators

## 3<sup>rd</sup> Quarter 2016

### Special topic

'New normal'? – The impact of the financial crisis on business and consumer survey data

This document is written by the staff of the Directorate-General for Economic and Financial Affairs, Directorate A for Policy, strategy, coordination and communication, Unit A3 – Economic situation, forecasts, business and consumer surveys

[http://ec.europa.eu/economy\\_finance/publications/cycle\\_indicators/index\\_en.htm](http://ec.europa.eu/economy_finance/publications/cycle_indicators/index_en.htm).

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## OVERVIEW

### Recent developments in survey indicators

- Both the euro-area and EU Economic Sentiment Indicators (ESI) moved broadly sideways in the third quarter of 2016. Standing at 104.9 (euro area) and 105.6 (EU) points respectively, both indicators remain comfortably above their long-term average of 100.
- From a sectoral perspective, the euro area and the EU witnessed a flat evolution of consumer confidence, as well as three of the four surveyed business sectors (industry, services, retail trade). Only the construction sector reported significantly improved sentiment.
- From a country perspective, changes compared to June were very limited. Sentiment improved mildly in three of the seven largest EU economies, namely in Poland (+1.5), France (+1.2) and Germany (+0.7), while it deteriorated in the UK (-2.4), the Netherlands (-1.9), Spain (-1.5) and Italy (-1.3).
- Capacity utilisation in the manufacturing sector increased by 0.4 percentage points in the EU, while it remained almost unchanged in the euro area (+0.1 percentage points). Currently, both indicators are about half a percentage point above their long-term averages. In the services sector, capacity utilisation showed no (euro area) or slightly positive (EU: +0.2) changes compared to Q2.

### Special topic: 'New normal'? – The impact of the financial crisis on business and consumer survey data

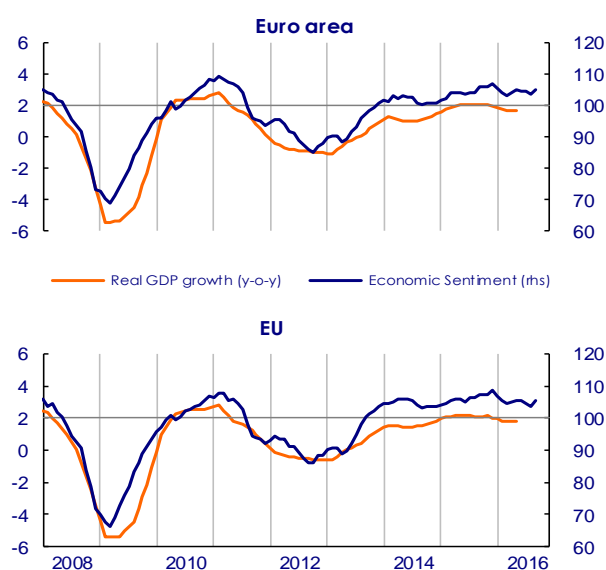
In recent years there has been a discussion among analysts whether the relationship between quantitative ('hard') and qualitative survey data has altered or become weaker in the aftermath of the 2008-12 financial and debt crises. In particular, analysts are enquiring the possibility that economic agents may have adjusted, i.e. lowered, their underlying reference standard, or 'level of aspiration', to a continued lower level of economic performance. In order to check if there is evidence for a possible shift in the level that managers and consumers consider as 'normal' or 'sufficient' when they are asked to assess their situation, selected confidence indicators and questions of DG ECFIN's Business and Consumer Survey programme are compared with their respective reference series in a pre-crisis versus post-crisis set-up. The results suggest that – in some cases – there has been a certain shift in respondents' reference standards when answering the surveys: for the euro area, this shift appears to be strongest among consumers and is also observable in the responses of services managers. In both cases however, the 'positive bias' appears to be diminishing more recently. By contrast, we do not find evidence for a 'new normal' in the case of the manufacturing industry survey. While aggregate potential production is still below pre-crisis levels in many countries, the level of confidence, the assessment of order books etc. relative to output growth appears to be in line with pre-crisis times.

# 1. RECENT DEVELOPMENTS IN SURVEY INDICATORS

## 1.1. EU and euro area

Following the uptick in the second quarter of 2016, which had put an end to the marked downward tendency observed at the beginning of the year, the trajectories of the euro-area and EU Economic Sentiment Indicators (ESI) throughout the third quarter were essentially sideways. In both regions, solid increases in September compensated for temporary losses in August (euro area) or July and August (EU). At the end of the third quarter of 2016, both ESIs stand at almost identical levels compared to the end of the second quarter and comfortably above their long-term average of 100, notably at 104.9 (euro area) and 105.6 (EU) respectively.

Graph 1.1.1: Economic Sentiment Indicator

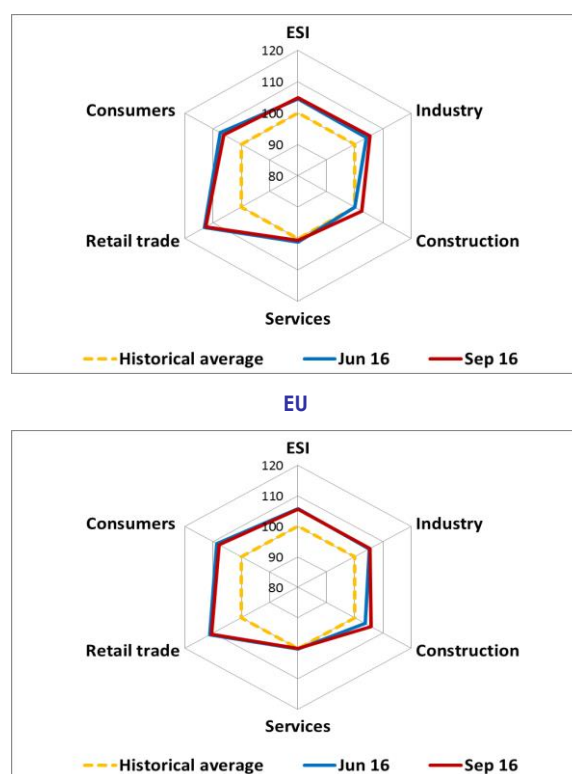


Note: The horizontal line (rhs) marks the long-term average of the survey indicators. Confidence indicators are expressed in balances of opinion and hard data in y-o-y changes. If necessary, monthly frequency is obtained by linear interpolation of quarterly data.

The broadly flat movements registered by the ESI were echoed in Markit Economics' Composite PMI for the euro area, whose September reading is just 0.5 points shy of its value at the close of Q2 with its level (52.6)

suggesting a continuation of sluggish growth over Q3. The same goes for the Ifo Business Climate Index (for Germany), where a marked increase in September compensated for the losses in the preceding two months and lifted the indicator even somewhat above its level at the end of Q2 (to 109.5 points in September).

Graph 1.1.2: Radar Charts Euro area



Note: A development away from the centre reflects an improvement of a given indicator. The ESI is computed with the following sector weights: industry 40%, services 30%, consumers 20%, construction 5% and retail trade 5%. The series are normalised to a mean of 100 and a standard deviation of 10. The historical averages are generally calculated from 1990q1. For more information on the radar charts see the Special Topic in the 2016Q1 EBCI ([http://ec.europa.eu/economy\\_finance/publications/eetp/tp007\\_en.htm](http://ec.europa.eu/economy_finance/publications/eetp/tp007_en.htm)).

From a sectoral perspective, the virtually unchanged level of the ESI at the end of Q3 compared to the close of Q2 is due to flat developments in consumer confidence, as well as three of the four surveyed business sectors (industry, services, retail trade). Only the

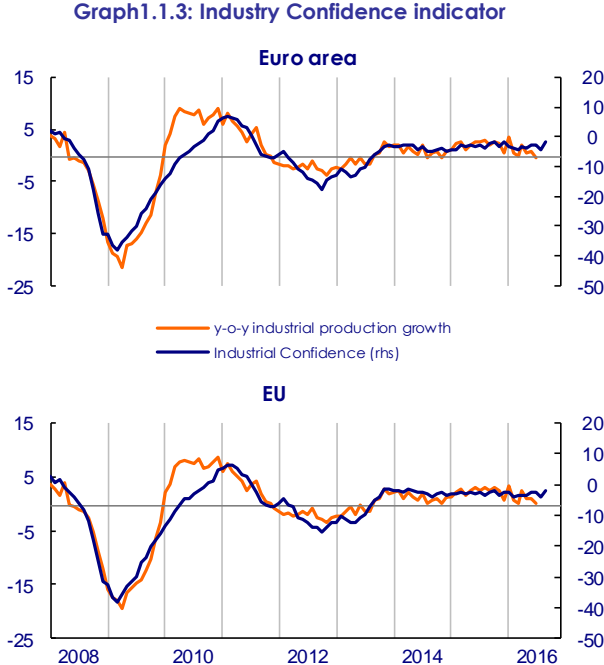
construction sector reported significantly improved sentiment. This pattern holds true for both the euro area and the EU.

In terms of levels, sectoral euro-area and EU indicators are currently at levels significantly above their historical means (industry, retail trade, construction, consumers), with the exception of the services sector, which is just marginally above its long-term average (see Graph 1.1.2).

From a country perspective, changes compared to June were very limited. Sentiment improved mildly in three of the seven largest EU economies, namely in Poland (+1.5), France (+1.2) and Germany (+0.7), while it deteriorated in the UK (-2.4), the Netherlands (-1.9), Spain (-1.5) and Italy (-1.3).

Sector developments

Industrial confidence in both the euro area and the EU is currently at levels rather close to those in June (+1.1 and +0.2, respectively). As Graph 1.1.3. shows, over a longer-term perspective, the sector completes the third year characterised by a broad sideways movement.

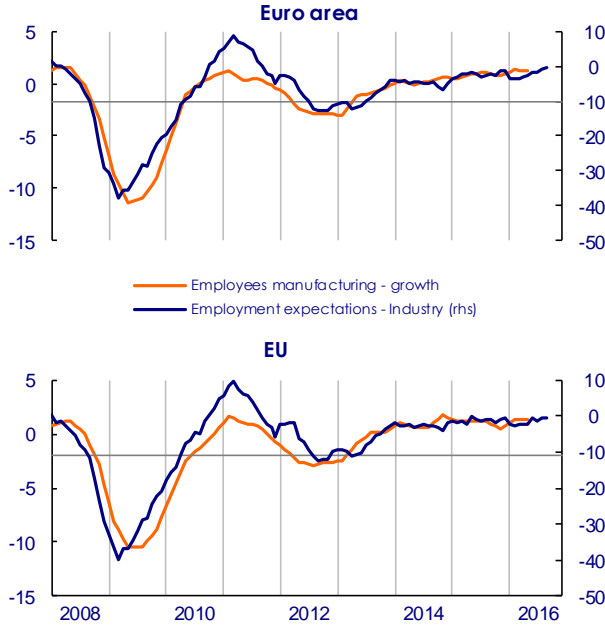


In both European aggregates, the flat developments of the confidence indicator resulted from corresponding evolutions in all its components, i.e. managers' production expectations, as well as their assessments of order books and the stocks of finished products.

Of the components not included in the indicator, past production deviated from the common trend, settling at a level significantly above that of June, while export order books were appraised in much the same way as at the end of Q2.

Throughout Q3, euro-area and EU selling price expectations remained broadly unchanged. The same goes for employment expectations in the EU, while they firmed mildly in the euro area (see Graph 1.1.4.).

Graph 1.1.4: Employment - Industry Confidence indicator



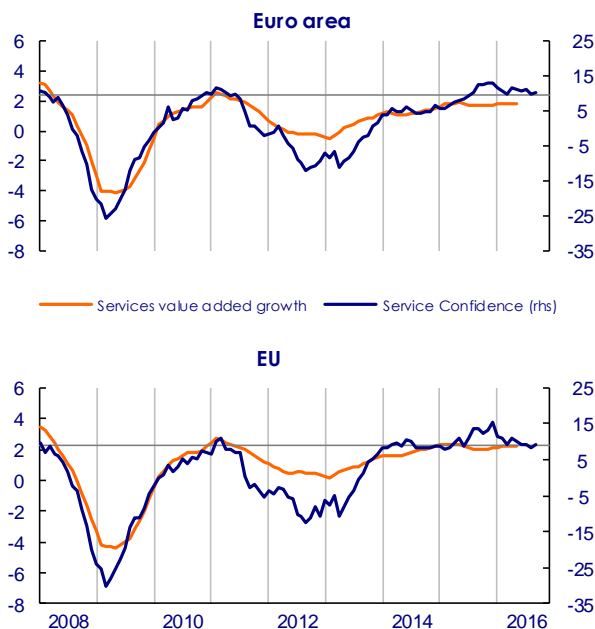
Focussing on the seven largest EU economies, a comparison of June and September readings shows increased industry confidence in Germany (+2.2), as well as weakened levels in the UK (-3.7) and the Netherlands (-2.4). Developments in the other countries were rather flat: Poland (+0.9), France (+0.6), Italy and Spain (both -0.9).

The latest results of the quarterly manufacturing survey showed **capacity utilisation in manufacturing** having increased by 0.4 percentage points in the EU, while having remained almost unchanged in the euro area (+0.1 percentage points). Currently, both indicators are about half a percentage point above their long-term averages (at 81.6% in the euro area and 81.5% in the EU).



In line with the ESI trend, **services confidence** remained largely inert throughout Q3. The losses of 0.9 (euro area) and 0.2 (EU) points compared to June imply that the indicators score just above their respective long-term averages.

Graph 1.1.5: Services Confidence indicator



A look at the individual components making up the confidence indicator reveals that they followed opposing trajectories: While questions referring to past developments (past business situation, past demand) clouded over, demand expectations brightened, in particular in the EU.

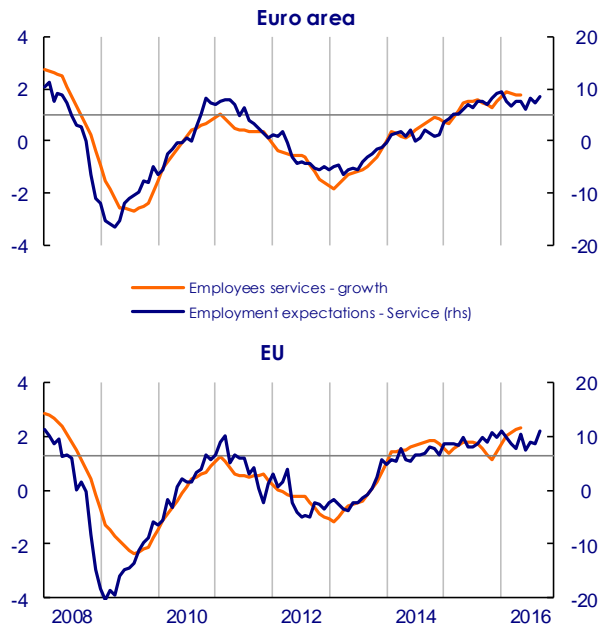
In line with managers' upbeat expectations, their employment plans in September were higher than at the end of Q2 (see Graph 1.1.6.). Selling price expectations only increased noticeably in the EU, while they remained broadly flat in the euro area.

Looking at the largest EU countries, the period following June brought a moderate improvement in UK confidence (+1.8), as well as a deterioration in Italy and Spain (-2.7). All remaining countries witnessed no noteworthy changes (France, +0.4; Poland, -0.1; Germany, -0.3; Netherlands, -0.6).

July's results of the quarterly survey on **capacity utilisation in services** showed no (euro area) or slightly positive (EU: +0.2) changes compared to Q2. The current rates of 89.0% in the euro area and 89.2% in the EU

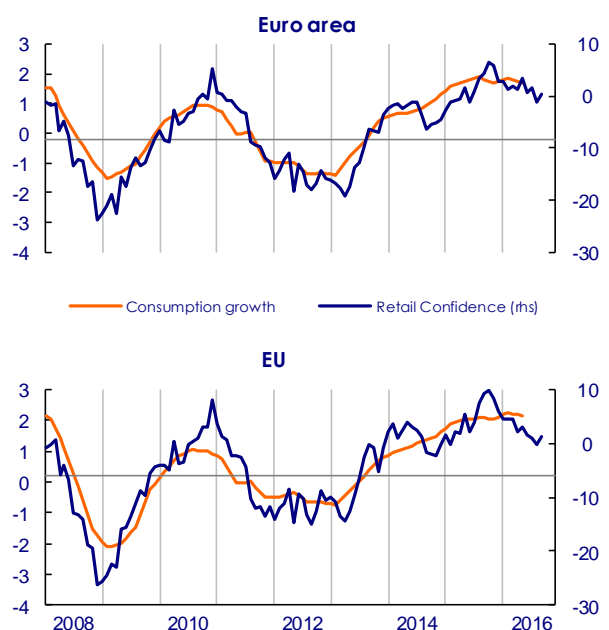
correspond to levels above the respective long-term averages (calculated from 2011 onwards) of 87.6% and 87.9%.

Graph 1.1.6: Employment - Services Confidence indicator



Compared to the end of Q2, **retail trade confidence** in the euro area and the EU remained virtually unchanged and thus, in terms of levels, very positive, when using the long-term average as a benchmark.

Graph 1.1.7: Retail Trade Confidence indicator

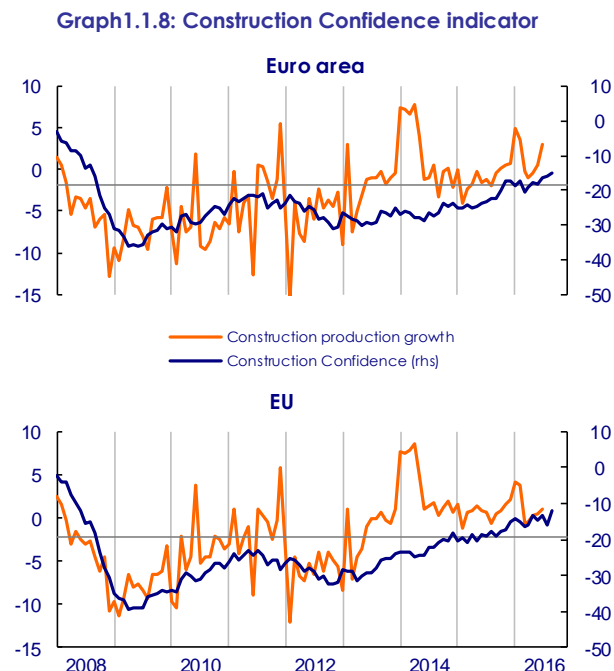


The sideways movement resulted from a corresponding evolution of all components of

the confidence indicator, i.e. managers' appraisals of the past business activity, the adequacy of the volume of stocks and their expected business activity. Deviating from EU developments, the expectations regarding the future business activity in the euro area clouded over a bit.

Turning to a country perspective, the months since June brought a deterioration of retail trade confidence in France (-3.1), as well as improvements in Italy (+2.8) and the UK (+2.4). Changes in the remainder of the largest EU economies were relatively minor (Germany, -0.9; Netherlands, -0.6; Poland, +1.0; Spain, +1.1).

Deviating from all other surveyed parts of the economy, the **construction** sector reported some improvement in confidence. At the end of Q3, the euro-area and EU indicators stand 3.2 (euro area) or 2.6 points (EU) higher than at the end of June. From a longer-term perspective, the latest figures suggest a continuation of the broad upward pattern characterising the development of construction confidence since 2013.



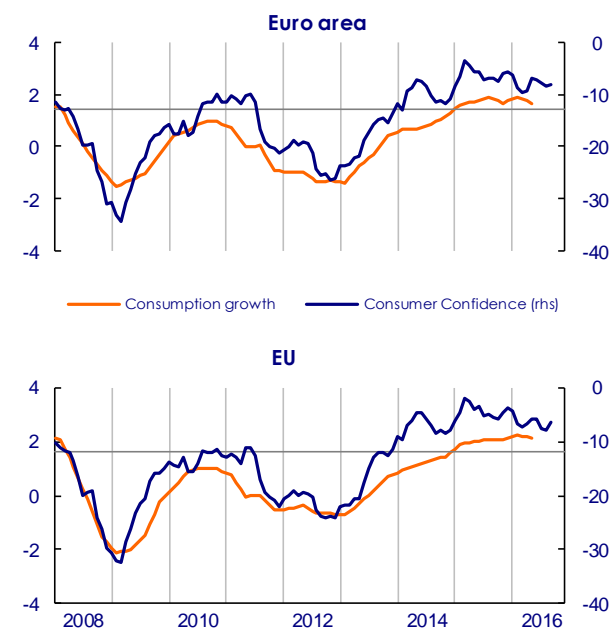
In both euro area and the EU, the upward move was fuelled by improved assessments of the current order books, while upward revisions in employment expectations were more moderate.

Focusing on the seven largest EU economies, construction confidence only clouded over in Spain (-3.2). France reported a sharp 7.5 points increase, bringing the indicator closer to its long-term average which it had last time leapfrogged in 2012. Also the Dutch and German construction sectors sent positive signals (+3.8 and +3.5 respectively), while the remaining countries witnessed no major changes (UK, +0.4; Italy and Poland, +0.3).

As regards **consumer confidence**, the third quarter did not bring any major changes in the euro area and EU (-1.0 and -0.6 points, respectively, when comparing September to June).

While the majority of components making up the sectoral indicator remained more or less inert (consumers' expectations about their personal financial situation, their savings and the general economic situation), respondents' unemployment expectations worsened significantly, in particular in the euro area.

**Graph1.1.9: Consumer Confidence indicator**

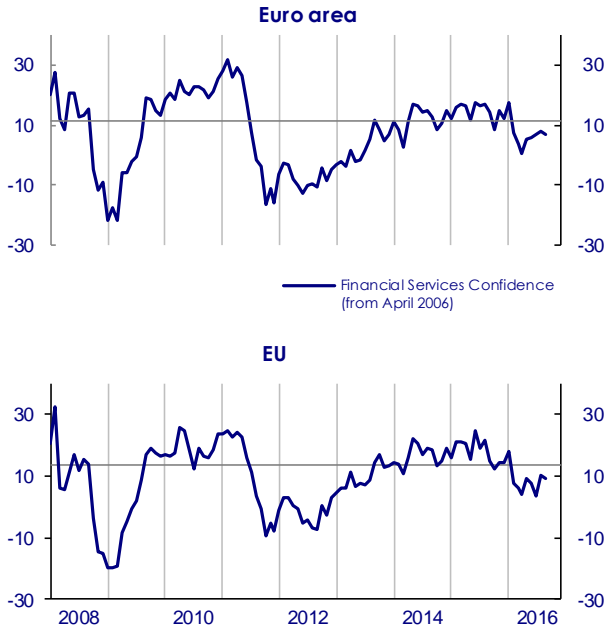


In terms of developments in the seven largest EU economies, the Netherlands (+3.3) and Poland (+2.7) saw confidence firming, while it receded in Spain (-4.9). All other countries witnessed no major changes in the level of confidence (Italy, -0.3; UK, -0.5; France, -0.6; Germany, -1.3).

On balance, EU and euro-area confidence in **financial services** (not included in the ESI) stayed broadly flat over Q3, gaining just 1.3 (euro area) to 1.4 (EU) points compared to June.

In both regions, demand expectations rallied, while the appraisals of past demand and the past business situation remained virtually unchanged (EU) or the former remained flat, while the latter weakened (euro area).

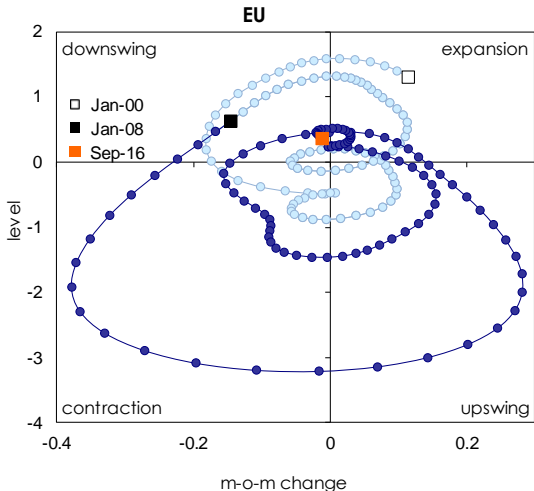
**Graph 1.1.10: Financial Services Confidence indicator**



lower right corner of the downswing quadrant, on the frontier to the expansion area, as had already been the case throughout Q2.

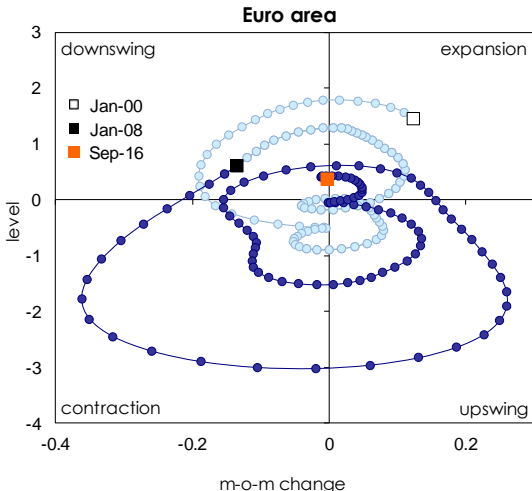
The sectoral climate tracers for the euro area (see Graph 1.1.13.) are broadly in line with the overall tracer: With the exception of industry and construction (which are in expansion mode), all of them are in the downswing quadrant and very close to the intersection with the expansion field. Furthermore, with the exception of industry and construction, which moved from downswing to expansion and from upswing to expansion respectively, none of the sectors switched regime in the course of Q3.

**Graph 1.1.12: EU Climate Tracer**



The sluggish developments in survey data over the third quarter are illustrated by the evolution

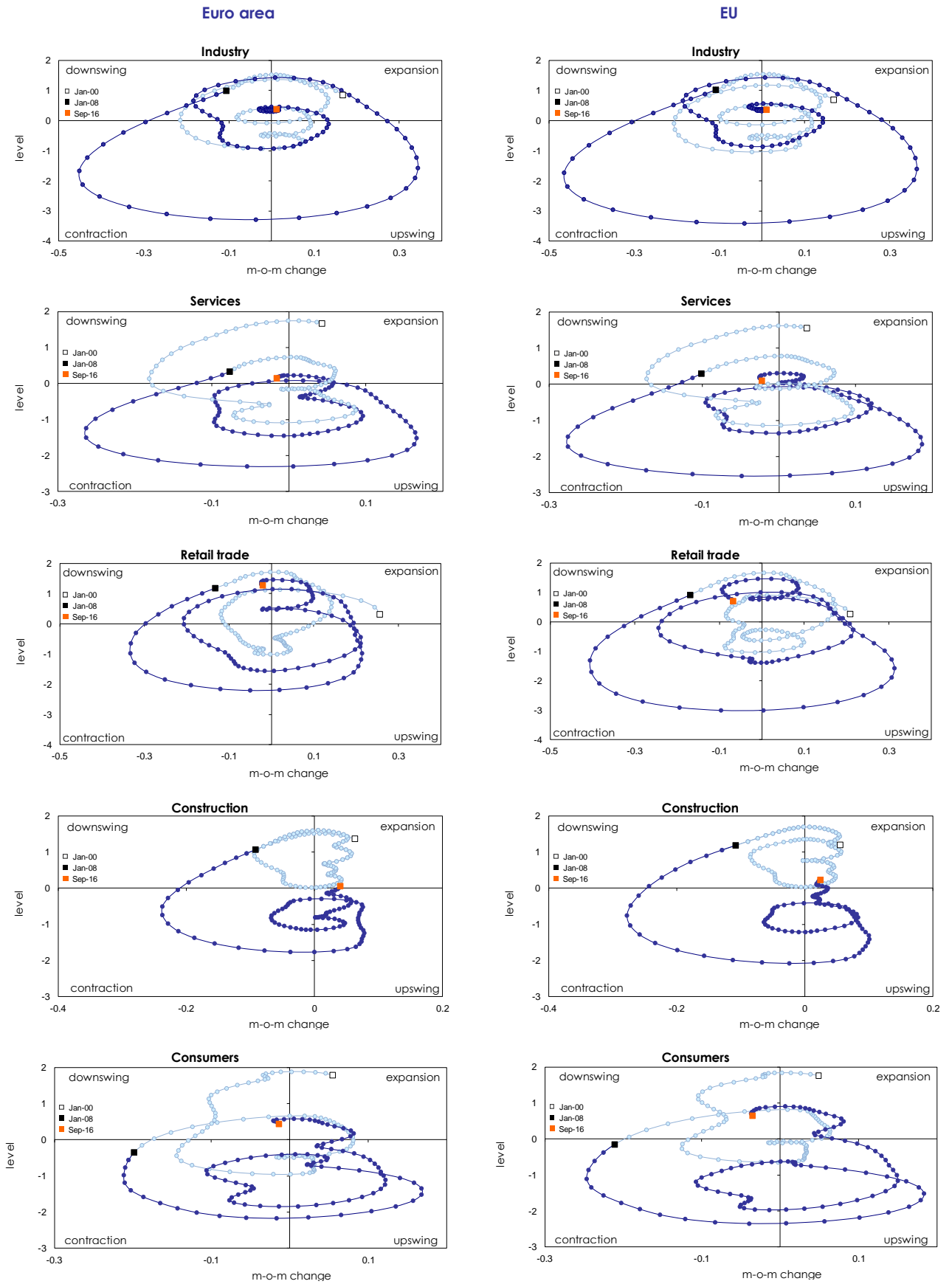
**Graph 1.1.11: Euro area Climate Tracer**



Also the EU climate tracer is in downswing mode, but very close to the expansion quadrant. Compared to the euro area, the main difference is that the retail trade and consumer tracers are deeper in the downswing quadrant (i.e. farer away from a possible expansion).

of the **climate tracers** (see Annex for details). During the third quarter of 2016 the economic climate tracer for the euro area remained in the

Graph 1.1.13: Economic climate tracers across sectors

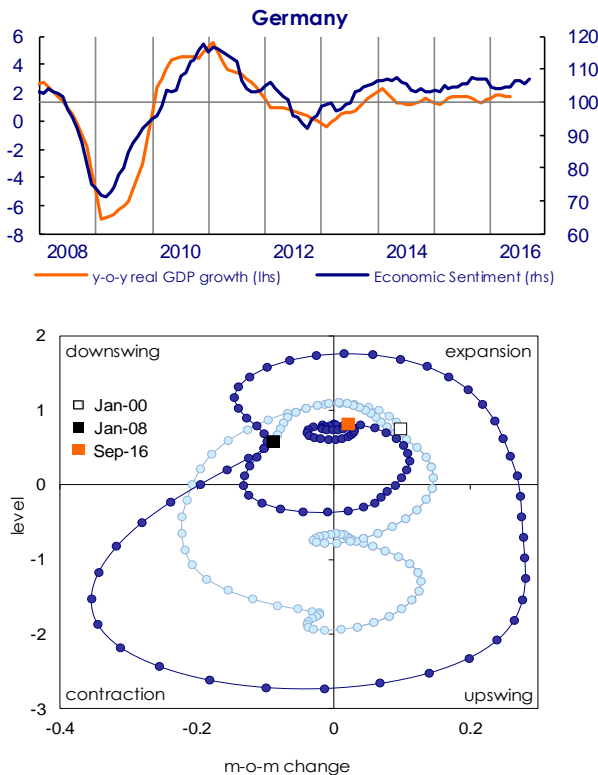


## 1.2. Selected Member States

Over the third quarter of 2016 changes in sentiment were very contained. The differences between the national indicators' readings at the end of Q2 and Q3 were positive in Poland (+1.5), France (+1.2) and Germany (+0.7), while negative in the UK (-2.4), the Netherlands (-1.9), Spain (-1.5) and Italy (-1.3).

Following positive developments in the course of Q2, a deterioration in August's sentiment and a commensurate improvement in September meant that, on balance, the **German** ESI followed a broad sideways pattern in Q3 (+0.7). At 107.1 points, the indicator remained well above its long-term average of 100. In terms of the climate tracer (see Graph 1.2.1.), the mild improvement in sentiment moved the German economy from the downswing to the expansion quadrant.

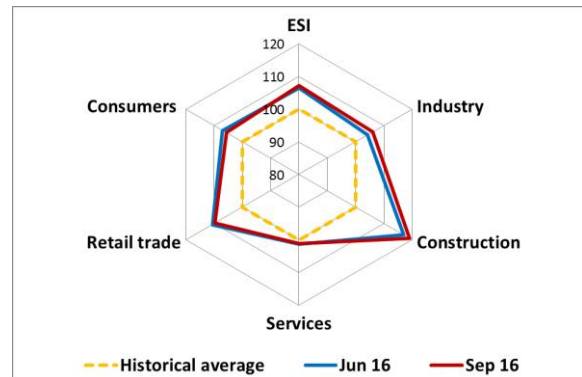
Graph 1.2.1: Economic Sentiment Indicator and Climate Tracer for Germany



From a sectoral perspective, the period from June to September brought only noteworthy changes in industry and construction, where the respective confidence indicators booked improvements. All German confidence indicators are above their respective long-term

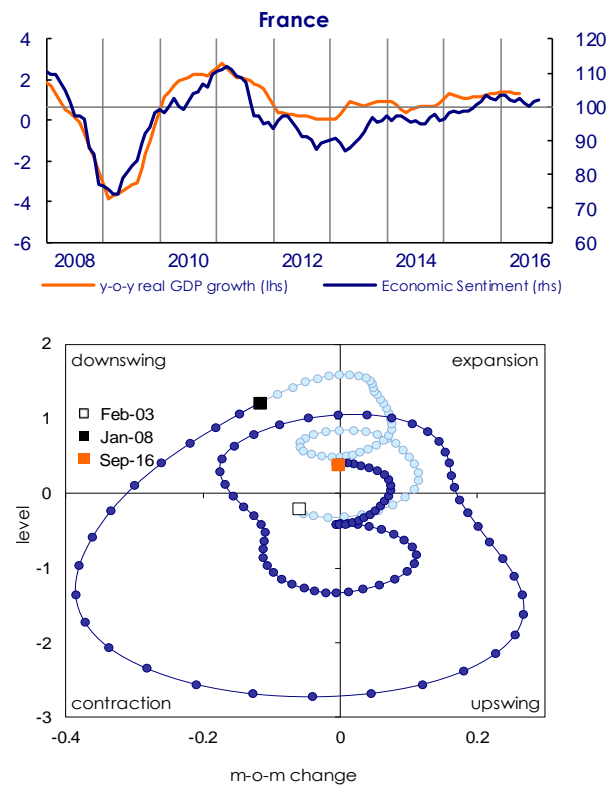
averages, whereby the services indicator remains relatively close to it (Graph 1.2.2).

Graph 1.2.2: Radar Chart for Germany



In **France**, a combination of deteriorating sentiment in July and better readings in August and September resulted in a small net-improvement in Q3 compared the end of Q2. At 102.2 points, the French ESI remained above its long-term average of 100.

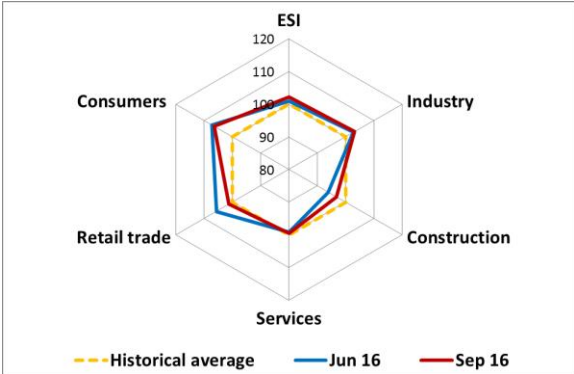
Graph 1.2.3: Economic Sentiment Indicator and Climate Tracer for France



In line with the marginal changes in sentiment, the French climate tracer (see Graph 1.2.3.) remained virtually unchanged compared to June, locating the French economy on the frontier between expansion and downswing.

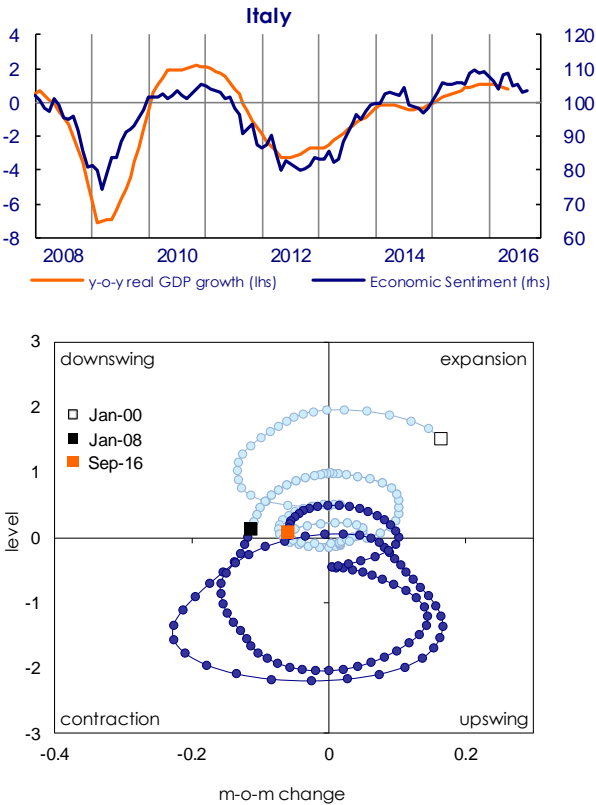
A look at the French radar chart (see Graph 1.2.4.) shows that the only sectors reporting changes worth highlighting are construction, where sentiment rallied, as well as retail trade, which saw sentiment significantly easing. In terms of levels, sentiment appears comparatively good (i.e. firmly above the long-term average) in industry and among consumers. The opposite holds true for the construction sector, while sentiment in retail trade and services is in the range of historical average levels.

Graph 1.2.4: Radar Chart for France



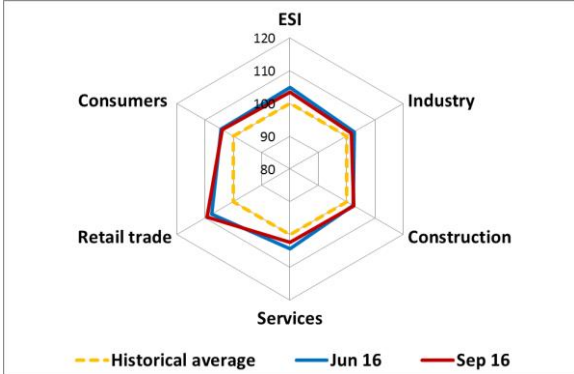
At the end of the third quarter of 2016, sentiment in **Italy** was at a slightly lower level than in June 2016. The net-decrease is entirely attributable to easing sentiment in August, while July and September signalled flat developments. At 103.5 points, the Italian ESI is still comfortably above its long-term average of 100. As the Italian climate tracer shows (see Graph 1.2.5.), the slight weakening of sentiment in Q3 suggests the economy is yet a bit closer to a change from a downswing to a contraction regime.

Graph 1.2.5: Economic Sentiment Indicator and Climate Tracer for Italy

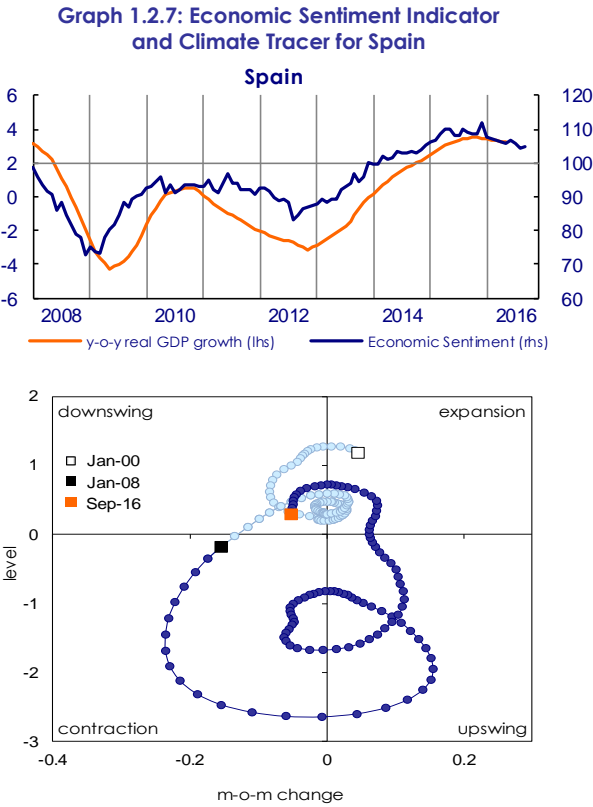


A focus on the evolution of sectoral confidence levels (see Graph 1.2.6.) shows that the only sectors with notable changes are services (where confidence deteriorated) and retail trade (where the opposite happened). Same as in the previous quarter, all sectors reported confidence levels well in excess of their long-term averages.

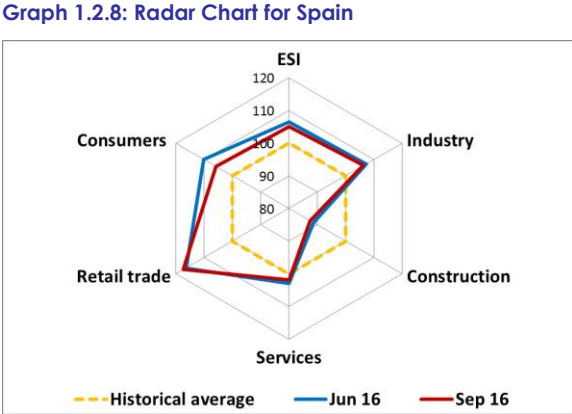
Graph 1.2.6: Radar Chart for Italy



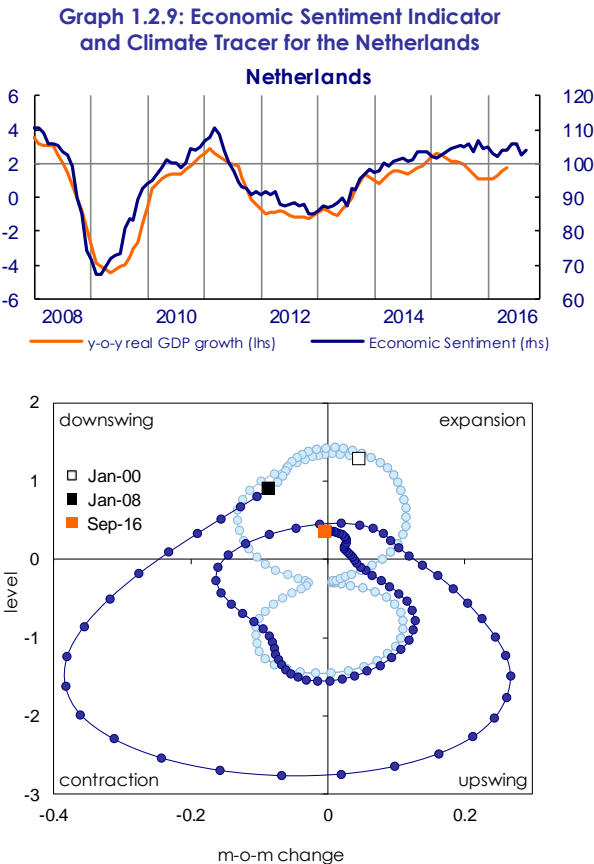
Given two subsequent drops in July and August, the ESI in **Spain** at the end of Q3 was slightly lower than at the end of Q2. At 105.0 points, the indicator thus remained well in excess of its long-term average of 100. The climate tracer for Spain (see Graph 1.2.7.) stayed virtually unchanged, continuing to locate the economy in the downswing quadrant.



As the country's radar chart highlights (see Graph 1.2.8.), only confidence among consumers changed significantly in Q3, notably for worse. Same as in Q2, the construction indicator is scoring markedly below its long-term average, while all other indicators, especially the one for retail trade, are firmly above average.

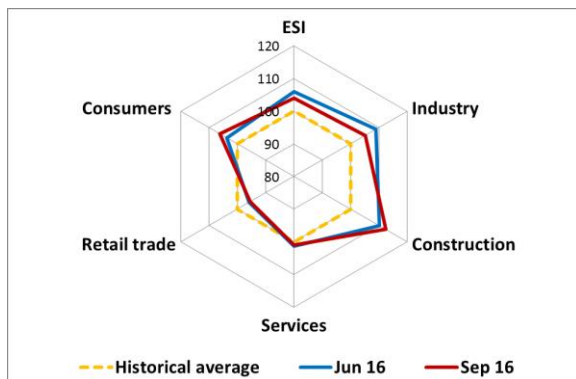


While the deterioration in **Dutch** sentiment was rather mild from a quarterly perspective, it resulted from a hefty blow to confidence in August, which probably expressed mounting concerns about the impact of a Brexit on the Dutch economy which, traditionally, has close trade links with the UK.



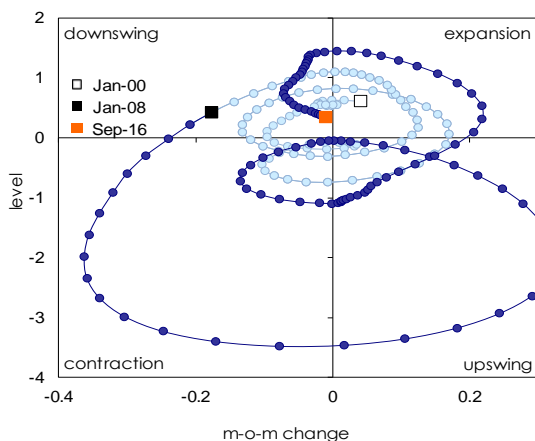
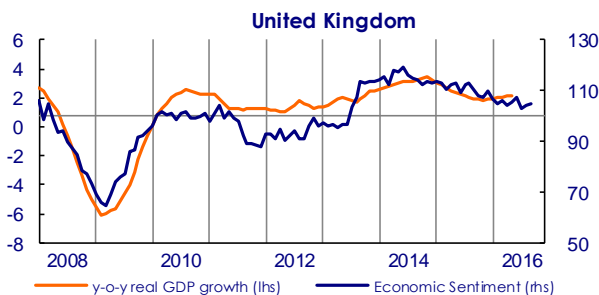
A glance at the Dutch radar chart (see Graph 1.2.10.) clarifies that mounting concerns are a phenomenon which seems to be limited to the industry sector. Retail trade and services showed no particular reaction to the Brexit vote and confidence in the construction sector and among consumers even improved over Q3. From a level perspective all sectoral confidence indicators remained above their respective long-term averages, with the exception of retail trade, where confidence remained rather weak compared to typical levels in the past. Finally, in spite of potential Brexit fears, the overall Dutch ESI (at 104.0 points) continued to be on a level well in excess of the long-term average of 100. The Dutch climate tracer (see Graph 1.2.9.) remained on the frontier separating the downswing from the expansion quadrant.

Graph 1.2.10: Radar Chart for the Netherlands



In the **United Kingdom**, survey results were arguably much influenced by the Brexit vote, whose result was communicated on 24 June. While the UK ESI showed a marked, negative reaction in the immediate aftermath of the vote (July brought the strongest month-on-month loss in more than four years), sentiment in August and September showed some signs of recovery, which compensated for about ½ of the initial losses. The result is that, on balance, the UK ESI booked only a moderate decrease in Q3 (-2.4) and is currently (at 104.6 points) still comfortably above its long-term average of 100.

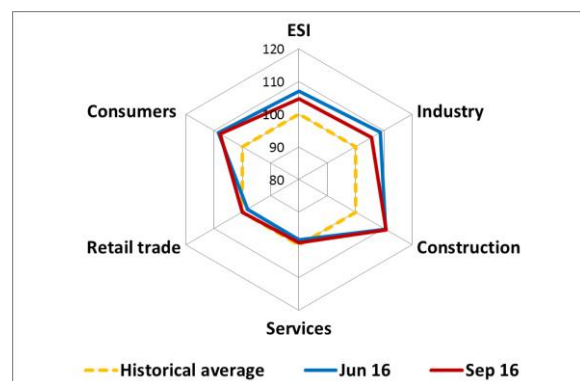
Graph 1.2.11: Economic Sentiment Indicator and Climate Tracer for the United Kingdom



Also the changes in the UK climate tracer (Graph 1.2.11.) were rather contained, the latter continuing to signal a downswing of the British economy.

A look at the British radar chart (see Graph 1.2.12.) shows that the only sector booking a significant net-loss in confidence in the course of Q3 is industry. Confidence in all other parts of the economy (services, construction, among consumers) was either inert or it even improved (retail trade). From a level perspective, confidence remained much above its long-term average in industry, construction and among consumers, while close to historical average levels in services and retail trade.

Graph 1.2.12: Radar Chart for the UK

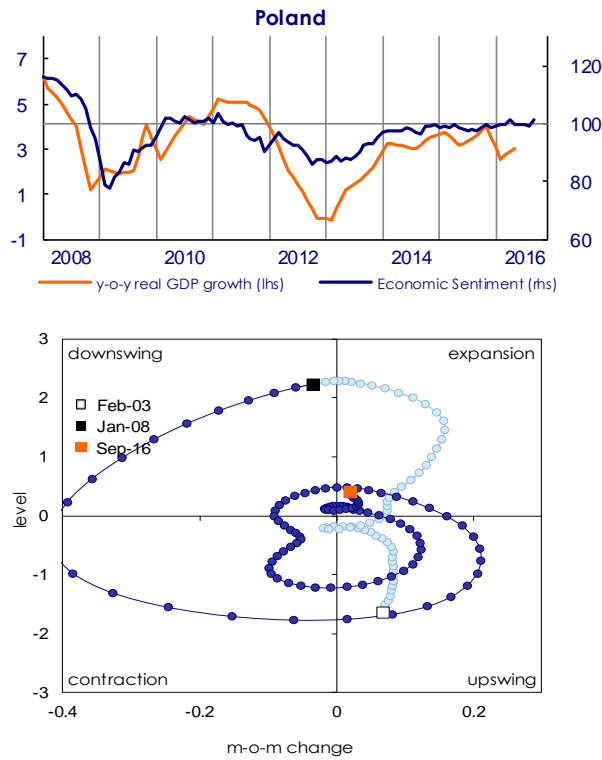


A combination of flat (July) and downward (August) developments, followed by a forceful increase (September) resulted in a small net-gain in the **Polish** ESI between June and September. At 101.2 points, the ESI is just above its long-term average of 100.

The climate tracer for Poland (see Graph 1.2.13.) remained in the bottom left corner of the expansion quadrant.

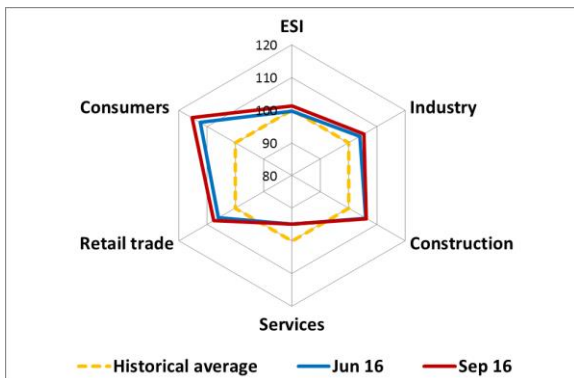


**Graph 1.2.13: Economic Sentiment Indicator and Climate Tracer for Poland**



As the Polish radar chart (see Graph 1.2.14.) shows, notable differences in sectoral confidence were restricted to improvements among retail trade managers and consumers. In line with the previous results from Q2, all sectoral confidence levels remained above their respective long-term averages, with the exception of the services sector which stayed significantly short of it.

**Graph 1.2.14: Radar Chart for Poland**



## 2. SPECIAL TOPIC: 'NEW NORMAL'? – THE IMPACT OF THE FINANCIAL CRISIS ON BUSINESS AND CONSUMER SURVEY DATA

### Introduction

In recent years there has been a discussion among analysts whether the relationship between quantitative ('hard') and qualitative survey ('soft') data has altered or become weaker in the aftermath of the 2008-12 'Great Recession' (financial and sovereign debt crises). Newspaper headlines like 'Italy puzzles over strong confidence, weak growth riddle'<sup>1</sup> are symptomatic for this hypothesis, suggesting that survey, or confidence, indicators have risen back to levels which are not matched by the post-crisis performance of corresponding hard economic data, such as growth rates of GDP, industrial production, private consumption, etc. Analytically, this could point to a pre/post crisis break in the relationship between the two data types, which has traditionally proven remarkably stable and useful for economic now-and forecasting.<sup>2</sup>

The relationship between soft and hard data is usually approximated by a linear function. Despite the fact that the soft indicators are inherently bounded (e.g. between -100 and +100 for individual balances and composite confidence indicators) while the hard target series (usually growth rates) can in principle take any value larger than -100%, linearity is a reasonable working assumption in 'normal times'. A break would then imply a more or less sudden shift in the parameters of the function. Indeed, using Italian manufacturing survey and production data, Bruno et al. (2016) find evidence for a break in the linear relation between soft and hard data in the summer of 2008. However, as the authors rightly point out,

the fact that the break occurs at a point in time when the hard data series were subject to unprecedented dives, the finding could rather point to the inadequacy of a linear as compared to a non-linear relationship. A practical consequence of this conjecture would be to either use a non-linear model or run local linear regressions over shorter samples.

In order to get an understanding whether and in how far such methodological issues are relevant for certain sectors or countries covered by the Joint Harmonised EU Programme of Business and Consumer Surveys, this special topic presents an overview of the outcome of a systematic screening of survey data from the programme. The focus is on whether there is evidence for a level shift in the relation between survey and hard data emerging during or after the financial crisis.

### The 'level shift' hypothesis

The hypothesis of a level shift can be grounded on several arguments: First, there is the technical argument related to the sampling process underlying the survey results.<sup>3</sup> In short, it conjectures that a positive bias in the aggregated survey results can stem from the fact that since the crisis and throughout the still ongoing recovery process, a large part of unsuccessful or under-performing firms have been pushed out of the market, and thus, the sample. Consequently it is the remaining firms with a better economic performance which report their more optimistic views, which, however, are not representative of reality. While in principle plausible, there are different reasons that speak against the practical relevance of the hypothesis. First of all, such a sampling bias should in principle apply to both survey and hard statistical data, which are also based on sampling of firms. This is especially

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<sup>1</sup> G. Jones, 'Italy puzzles over strong confidence, weak growth riddle', 21 January 2016, available on Reuters at <http://uk.reuters.com/article/uk-italy-economy-idUKKCN0UZ0LQ>.

<sup>2</sup> See e.g. Malgarini (2012), Cesaroni and Iezzi (2015), Gayer et al. (2015).

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<sup>3</sup> See e.g. Fantacone et al. (2016)

true when, as is often the case, the qualitative surveys are carried out by statistical institutes based on samples drawn from the same registers that are e.g. used for compiling industrial output figures for the economy.<sup>4</sup> Moreover, also empirically, Bruno et al. (2016) find no significant differences in reported optimism or pessimism between the responses of 'long-lasting' firms (i.e. responding in each round and, thus, apparently thriving) versus 'non-long-lasting' firms (i.e. responding only infrequently or no more) participating in the Italian manufacturing survey over the period 2006-10. The authors conclude that there is no evidence for a 'sample selection' bias in the data.

The second rationalisation of the level-shift hypothesis is of a psychological nature. Many survey questions ask respondents to qualitatively rate the current or an expected situation compared to a 'normal' situation or assess the level of a given economic variable against a 'sufficient' benchmark level. Against the backdrop of the Great Recession, the reasoning is that economic agents may have adjusted, i.e. lowered, their underlying reference standard, or 'level of aspiration', to a continued lower level of economic performance. Unlike the statistical 'sample bias' hypothesis it applies to both business and, maybe even stronger, consumers.<sup>5</sup>

For businesses, the hypothesis in particular implies that they may answer the survey questions with a lower level of long-term (or potential) output in mind, thus reporting qualitative assessments on business activity that appear to be above 'normal' even when actual production levels are still clearly below pre-crisis levels. In this case, the change in the

reference standard is not of an 'unconscious' psychological nature, but rather a cognitive rational adjustment of expectations to a persistently reduced production capacity. An observed over-optimism relative to previous periods concerning the intensity of the recovery from the crisis could then hide a long-term dampening effect on firms' (perception of their) potential output, with repercussions on their production and investment plans.

## Empirical results

The screening for an apparent level shift in the relation between soft and hard data was performed for the Economic Sentiment Indicator (ESI) and the confidence indicators for industry, services and consumers. Together the three components account for 90% of the sector weights underlying the ESI; any level shift in the ESI should thus be traceable to (at least) one of these components.<sup>6</sup> In addition, two individual survey questions were screened for each of the sectoral surveys in order to also cover assessments of past or present situations, which are not always included in the sectoral confidence indicators.

More precisely the following questions were selected: (i) from the industry survey: Q1 (managers' assessment of production trends) and Q2 (adequacy of overall order books); (ii) from the services survey: Q1 (trend in business situation) and Q2 (trend in demand/turnover); (iii) from the consumer survey: Q1 (trend in households' financial situation) and Q3 (trend in general economic situation of the country).

All series were assessed against their corresponding 'hard' reference series, appropriately transformed into year-on-year percentage changes: Industrial Production Index (IPI) for the industry survey, Value Added in Services (VA) for the services survey and Private Consumption (PC) for the consumer

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<sup>4</sup> A related argument goes that statistical institutes' samples used to compile industrial output and GDP figures might fail to include new and more dynamic (and optimistic) start-up businesses that emerged after the crisis, see Jones (2016). Again, this alleged downward bias, this time in the hard data, should in principle apply in the same way to soft survey data.

<sup>5</sup> For the realm of consumer surveys, the argument is linked to the hypothesis of a psychological process called 'homeostatis' which seeks to explain why the long-term level of optimism/pessimism among consumers appears to be constant, while measures of economic performance are trending considerably over longer time horizons, see Curtin and Dechaux (2015).

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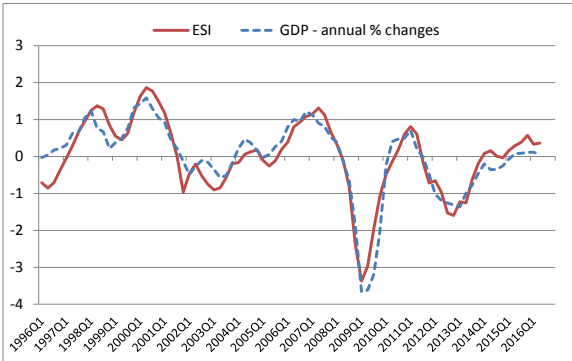
<sup>6</sup> The building and retail trade confidence indicators, each accounting for only 5% of the ESI, are not included in the analysis; for the retail trade indicator this can also be justified by the fact that it may to some extent be seen as a mirror image of the consumer survey results; building confidence is arguably following very idiosyncratic and highly country-specific drivers following the burst of the real estate bubble in a number of countries.

survey. In addition, the ESI and the three confidence indicators were assessed against real GDP growth. The screening was performed for the euro-area, the nine largest EU economies (Germany, France, Italy, Spain, the Netherlands, Belgium, the UK, Poland and Sweden) as well as Portugal.<sup>7</sup>

**Euro area results**

At the most aggregate level, Graph 2.1 displays the results for the ESI and the annual GDP growth rate for the euro area: visually, the level of the ESI corresponding to a certain rate of GDP growth seems to be slightly different after 2013 compared with the previous period.<sup>8</sup> Notably, the standardised ESI has been consistently above the GDP curve for almost three years.

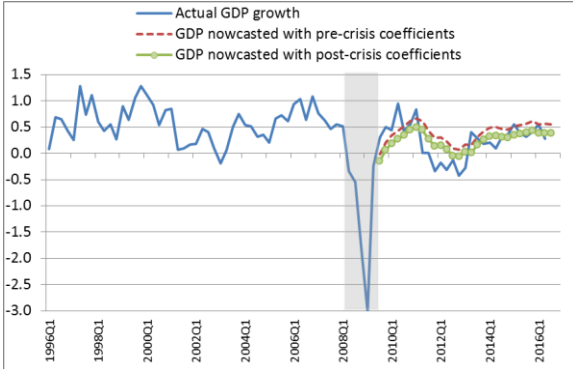
**Graph 2.1: Euro area Economic Sentiment Indicator (ESI) and GDP (year-on-year % changes) - Standardised series**



Somewhat more formally, Graph 2.2 presents the results of a regression-based comparison. In order to check if the divergence observed in the graph effectively corresponds to a different relationship between the soft data and the reference series, bivariate linear regression models (with constant) were run separately for the two sub-periods before and after the crisis.<sup>9</sup>

To exclude the impact of the extreme values in 2008-09 around the trough of the recession on the regression, which might indeed call for a non-linear modelling, the pre-crisis regression is run until 2008Q2, while the post-crisis estimation runs from 2009Q3 up to 2016Q2. Graph 2.2 displays the GDP nowcasts computed on the basis of the two different sets of estimated parameters. Plugging in the ESI data from 2009Q3 onwards, it illustrates the levels of GDP growth that would 'fit' to the level of the ESI in a pre-crisis versus a post-crisis world.

**Graph 2.2: Euro area actual and nowcast GDP growth (year-on-year % changes)**



In line with the simple visual inspection, the GDP nowcasts based on the post-crisis coefficients are slightly, but visibly below the forecasts that the current ESI levels would have suggested in a pre-crisis set-up (pre-crisis coefficients). The difference between the two nowcasts is quite stable at a level around 0.15 percentage points of annual GDP growth. That is to say, a given level of the ESI today corresponds to an annual euro-area GDP growth rate which is on average 0.15 pps. lower than what the same ESI level suggested before the Great Recession.

Under the assumption that this gap cannot (only) be due to a statistical sampling issue (which, as argued before, even if existent, should in principle cancel out in the soft and hard data), the result seems to provide some evidence for a 'psychological (or cognitive) shift' in what survey respondents consider as a ('normal' or 'sufficient') reference situation.

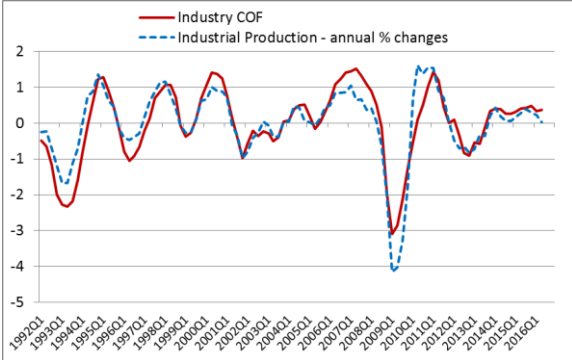
<sup>7</sup> Portugal was included to increase the number of countries hit (hard) by the sovereign debt crisis.  
<sup>8</sup> In order to be able to compare the series in a unique scale, all corresponding pairs of soft and hard data were standardised over common samples, deducting the long-term average and dividing by the standard deviation of the series.  
<sup>9</sup> Alternatively, break point tests could be used. However, referring back to the results by Bruno et al. (2016) reported above, it is likely that the findings are superposed by the non-linearity issue around the peak

of the crisis. Moreover, the two-regression approach has the additional advantage that it delivers a readily interpretable quantification of any level shift.

Given that the ESI is a composite index whose main drivers are the confidence indicators in industry, services and among consumers, this raises the additional question whether the apparent shift in assessments is broad-based or comes from a particular segment of the economy.

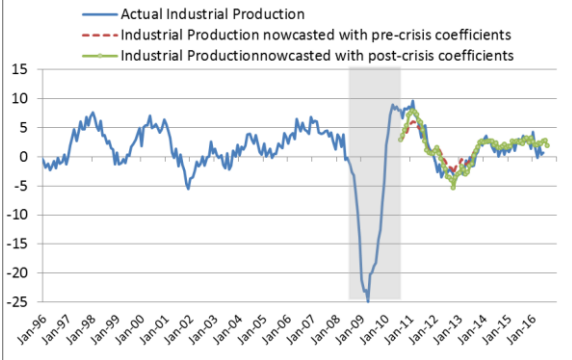
Graph 2.3 displays the relationship between the industrial confidence indicator and industrial production growth. A systematic level shift after the crisis is not apparent from the standardised series.

**Graph 2.3: Euro area industrial confidence indicator and industrial production (year-on-year % changes) – Standardised series**



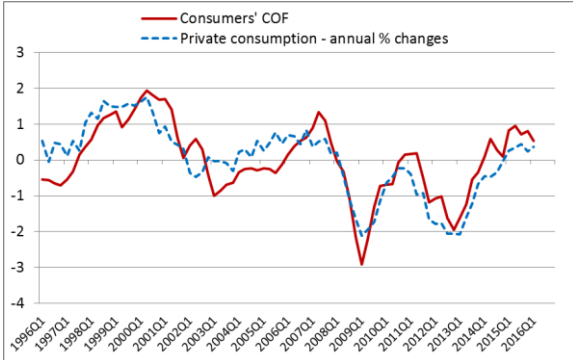
Comparing the regression-based nowcasts using pre- and post-crisis coefficients does not suggest systematically different forecast levels either (Graph 2.4); apart from a period around 2012/13, the IP nowcasts using the pre-crisis coefficients are not higher than those based on the post-crisis structure.

**Graph 2.4: Euro area actual and nowcast Industrial Production (year-on-year % changes)**



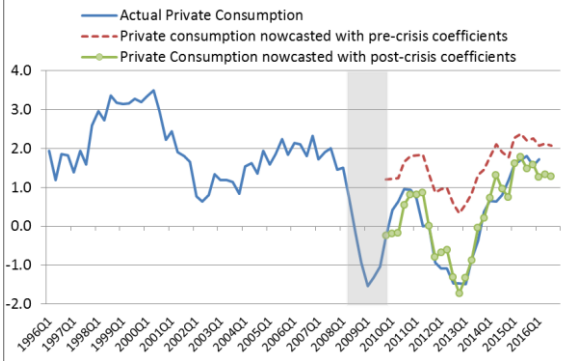
The picture is different when looking at the relationship between consumer confidence and private consumption growth, where Graph 2.5 already hints at a 'too high' level of the confidence indicator with respect to its reference series ever since 2010/11.

**Graph 2.5: Euro area consumer confidence indicator and private consumption (year-on-year % changes) – Standardised series**



This is confirmed by comparing the nowcasts based on the pre- and post-crisis regressions between the variables (Graph 2.6).

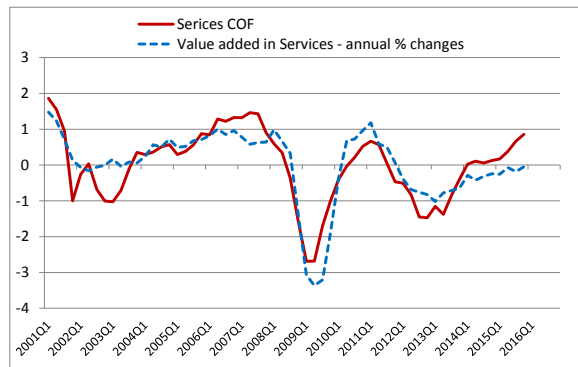
**Graph 2.6: Euro area actual and nowcasted private consumption (year-on-year % changes)**



Using the regression coefficients obtained from the sample 1996Q1 – 2008Q2, euro-area private consumption growth would have been nowcast consistently higher than actually observed and suggested by the post-crisis regression. The difference between the two nowcasts varies between a marked 2 pps. of annual consumption growth around 2012/13 and a somewhat reduced, but still significant gap of 0.7 pps. on average since 2015q1.

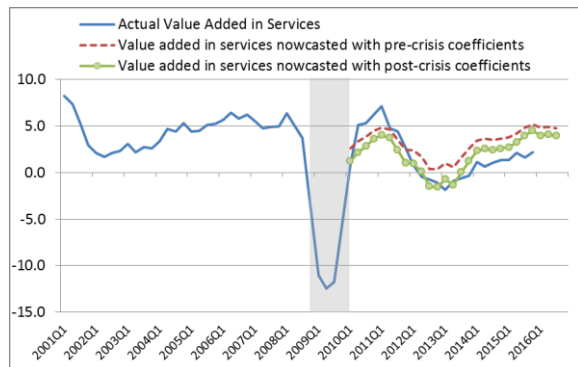
Somewhat in between the above results for industry and consumer confidence is the picture for the services confidence indicator.

**Graph 2.7: Euro area services confidence indicator and value added (year-on-year % changes) – Standardised series**



While Graph 2.7 suggests some 'over-optimism' compared to the past average relationship between the two series only recently (2014-15), the comparison of regression-based nowcasts for value added in services provides clearer evidence. The difference between the two nowcasts is again most pronounced around 2012/13 at a level around 1.8 percentage points of annual VA growth and narrows to around 0.8 pps. since 2015. Again, this means a given level of services confidence today corresponds to an annual euro-area growth rate in services VA which is about 0.8 pps. lower than what the same confidence level suggested before the crisis.

**Graph 2.8: Euro area actual and nowcast value added in services (year-on-year % changes)**



Altogether, the results for the euro area suggest that there has been a certain shift in respondents' reference standards or aspiration levels when answering the surveys: measured by historical, i.e. pre-crisis, standards, the level of their confidence is high compared to the level of growth observed in the economic target series in the aftermath of the crisis. For the euro area, this shift appears to be strongest among consumers and is also observable in the responses of services managers. In both cases, the extent of the 'positive bias' appears to have

been diminishing more recently. By contrast, there is no evidence that respondents to the manufacturing industry survey have altered their level of aspiration when answering the questions that enter into the industry confidence indicator.

## Overview of full results

In total, 143 series were checked by a visual pre-screening of appropriately standardised soft and hard data for a level shift during or after the crisis. Of the 143 series, around 50% do not show any apparent difference between pre- and post-crisis relations between the survey indicators and hard data, while for around 40% a change in the relation seems plausible. For the remaining 10% the visual inspection did not give clear results, in most cases due to idiosyncratic or volatile developments pre- or post-crisis.

Looking across the results for the sample of ten countries (Germany, France, Italy, Spain, the Netherlands, Belgium, Portugal, the UK, Poland and Sweden), a possible shift in the level of the 'soft' indicators is visible (i) when comparing the ESI with year-on-year GDP growth in Germany, France, Italy, Spain and Portugal; (ii) when comparing the consumer confidence indicator (and in particular question Q3, which asks for an assessment of the general economic situation) with consumption growth in Germany, the UK and Poland (even if in the latter the series is too short to derive strong conclusions); (iii) when comparing the services confidence indicator with value added in services in Germany, Belgium, Portugal, the UK and Poland. Only for Q1 of the services survey (which asks for an assessment of the past business situation) there also appears to be a level shift in Italy. By contrast, and in line with the results for the euro area, with the exception of Poland, there is no clear evidence for level shifts in the industry survey.

## Impact on manufacturers' perceived potential output

While the analysis has not provided evidence for a shift in the assessment standards of respondents to the monthly industry survey, the

results from the quarterly question on capacity utilisation can be used to investigate whether the crisis has led industry managers to reduce their perception of the level of potential output to a lower post-crisis 'normality'.<sup>10</sup> Following Malgarini (2012), combining the average capacity utilisation rate reported by managers and actual industrial production data, we calculate a measure of (perceived) potential manufacturing output for the euro area and the ten selected EU Member States.

Capacity utilisation (CU) derived from the Harmonised EU-wide surveys can be interpreted as the ratio between the current level of industrial output (IP) and its (perceived) potential manufacturing output (PMO):

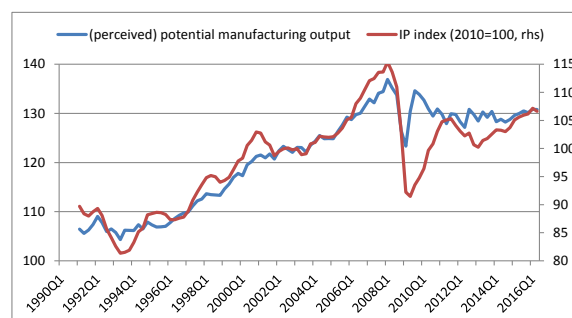
$$CU_t = IP_t / PMO_t \times 100$$

Therefore, the (perceived) potential manufacturing output (PMO) can be derived as the ratio of industrial production (IP) and capacity utilisation (CU).

As visible in Graph 2.9 for the euro-area, this measure of (perceived) potential manufacturing output fell markedly during the crisis, but largely recovered already in the second half of 2009Q2. Since then, it remained broadly stable at a level around 4% below pre-crisis. This lower level of perceived production potential could have induced manufacturing managers to lower their aspiration levels, e.g. when assessing their order books against the reduced production capacity. However, the previously reported results suggest that this is not the case, i.e. the level of confidence, assessment of order books etc. relative to 'hard' manufacturing growth appears to be in line with pre-crisis times.<sup>11</sup>

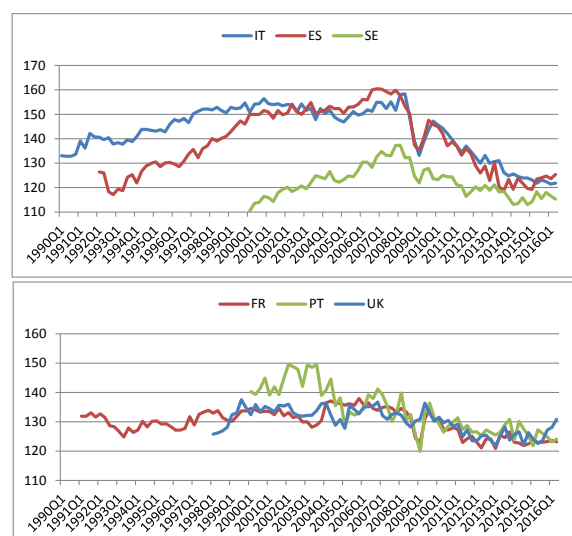
The comparison of the PMO index with the actual IP index shows that, following the significant gaps between actual and perceived potential output in 2009/10 and 2012/13, perceived potential output is broadly in lockstep again with observed production by historical (pre-crisis) standards more recently.

**Graph 2.9: Euro area industrial production index and (perceived) potential manufacturing output (PMO)**



The picture is quite different for Italy, Spain and Sweden, and to some extent also France, the UK and Portugal (see Graph 2.10).

**Graph 2.10: (perceived) potential manufacturing output (PMO) in Italy, Spain, Sweden, France, Portugal and the UK**



In these countries there is evidence of a persistent negative shift in the level of

<sup>10</sup> Bruno et al. (2016), using Italian micro-data on capacity utilisation, provide some evidence that the recession has modified the way agents form their expectations, leading to a change of their production plans and a setting of a 'new normal' situation. They show that the level of capacity utilisation that managers consider as 'sufficient' has decreased after 2009. While this would suggest a 'new modesty', the 'sufficient' level of capacity utilisation seems to have recovered to close to pre-crisis levels recently, suggesting that firms could have finally adjusted their capital stock.

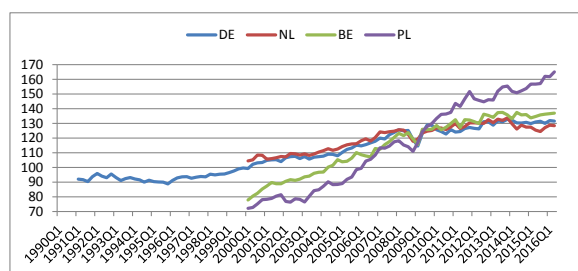
<sup>11</sup> These apparently conflicting results may be reconciled when assuming that managers assess the sufficiency

of their orders not in terms of volumes but in terms of months of production. Under this assumption, the results may point to an (implicit) adjustment of aspiration levels also in the manufacturing survey, in the sense that managers make their assessment of the sufficiency of order books in view of the reduced production capacity.

perceived potential manufacturing output.<sup>12</sup> The loss of perceived potential has been particularly strong in Italy and Spain, amounting to around 20% relative to early 2008. Moreover, in Italy, potential manufacturing output appears to continue to decrease. Despite this significant loss of production potential, the previously reported screening results suggest that industry managers have not (explicitly) adjusted their general aspiration level to this lower reality.<sup>13</sup>

By contrast, in Germany, Belgium, the Netherlands and Poland the crisis has affected the level of (perceived) potential manufacturing output only temporarily. Hence, in line with the results of the screening of manufacturing confidence before and after the crisis, any significant adjustment of long-term aspirations is not to be expected.

**Graph 2.11: (perceived) potential manufacturing output (PMO) in Germany, Belgium, the Netherlands and Poland**



## Summary and conclusions

In order to check if there is evidence for a possible shift in the level that managers and consumers consider as 'normal' or 'sufficient' when they are asked to assess their situation, selected confidence indicators and questions of DG ECFIN's Business and Consumer Survey programme have been compared with their respective reference series in a pre-crisis versus post-crisis set-up. The results for the euro area suggest that there has been a certain shift in respondents' reference standards when answering the surveys: measured by historical,

i.e. pre-crisis, standards, the level of their confidence is high compared to the level of growth observed in the economic target series in the aftermath of the crisis. For the euro area, this shift appears to be strongest among consumers and is also observable in the responses of services managers. In both cases however, the 'positive bias' appears to be diminishing more recently. By contrast, there is no evidence that respondents to the manufacturing industry survey have altered their level of aspiration when answering the questions that enter into the industry confidence indicator.

With some nuances, the results are broadly reflected at the country level. Overall, a change in the level seems plausible for around 40% of the screened 143 survey series after the Great Recession. Based on indications that the gaps appear to become less important over time, time will show whether this 'new, lower normal' is indeed a persistent feature.

For the time being, some caution seems warranted when gauging current survey levels against historical standards; in relation to observable economic output indicators, a 'good' situation today was arguably a merely mediocre situation in the eyes of some survey participants before the crisis. This needs to be addressed in regression-based inference about economic activity using survey data over longer time periods.

Importantly, we do not find evidence for a 'new normal' in the case of the manufacturing industry survey. While manufacturers' (aggregate) ideas of their potential production are still somewhat below pre-crisis levels in the euro area, this does not seem to have impacted on their aspiration level or general confidence in their business. This appears to be the case even in countries where potential output in industry is still markedly below pre-crisis levels.

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<sup>12</sup> The results are broadly in line with Malgarini (2012) who finds evidence of a negative shift in the level of perceived potential output in Italy, France and the UK.

<sup>13</sup> As discussed above, it is possible that an implicit adjustment is taking place, where managers tie their assessment e.g. of the sufficiency of order books to the reduced production capacity.



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## ANNEX

### Reference series

Confidence indicators	Reference series from Eurostat, via Ecwin (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. EU and euro-area aggregates are calculated on the basis of the national results and seasonally adjusted. The ESI is scaled to a long-term mean of 100 and a standard deviation of 10. Thus, values above 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 (ESI and confidence indices) 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, based on principal component analyses of balance series (s.a.) from five surveys. The input series are as follows: industry: five of the monthly survey questions (employment and selling-price expectations are excluded); 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 sector climate indicators. The sector weights are equal to those underlying the Economic Sentiment Indicator (ESI, see above).

In the second stage, 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 normalised (zero mean and unit standard deviation). 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 and 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. In order to make the graphs more readable, two colours have been used for the tracer. The darker line shows developments in the current cycle, which in the EU and euro area roughly started in January 2008.





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