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European *Business Cycle* indicators

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

Developments in business and consumer survey data in 2014Q1

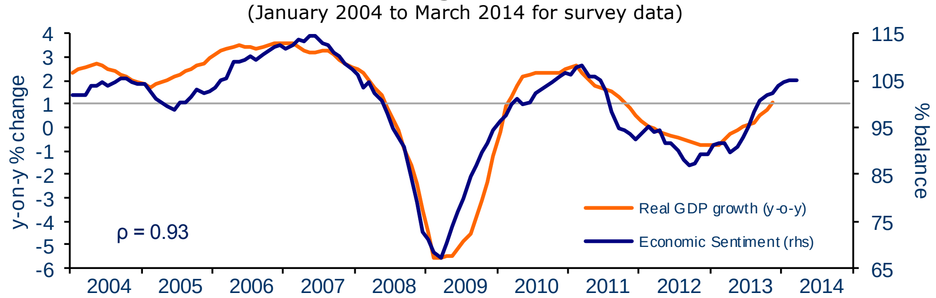
- *While EU-wide sentiment has improved over the first quarter of 2014, the pace of the improvement has noticeably slowed down compared to the second half of 2013. February saw the ESI broadly flat in both the EU and the euro area. While March saw it gaining momentum in the euro area, the EU indicator booked a marginal increase.*
- *Improved sentiment was mostly driven by more optimistic consumers, while business sentiment was generally less buoyant.*
- *Over the quarter, the ESI increased in five of the seven largest EU economies (Germany, Italy, Spain, the Netherlands and Poland), while it remained broadly unchanged in France. In the UK, the ESI reached its historical high in February. However, a significant correction in March sent the indicator back below its end-2013 level.*
- *In Italy and the Netherlands the ESI has surpassed its long-term average for the first time since July 2011. Among the largest EU Member States, only France and Poland continue to score below the long-term average.*
- *Capacity utilisation in the manufacturing sector continued to improve and currently stands only slightly below its long-term average in both the EU and the euro area.*

Highlight: What do survey data tell us about future price developments?

The highlight section investigates the usefulness of qualitative survey data for monitoring price developments along the supply chain to final consumer prices. Managers' selling price expectations collected through the Commission's EU-wide BCS Program and input and output prices surveyed from purchasing managers are analysed with respect to developments in producer price indices. Consumers' inflation expectations and the ECB survey of professional forecasters are used to gauge if the recent decline in consumer-price inflation is paralleled by developments in inflation expectations. All in all, though business survey data have kept fluctuating around rather stable levels, the latest developments in managers' selling price expectations suggest that further decreases in producer prices cannot be excluded. A closer analysis of consumers' views on future price developments suggests that consumers do not actually expect inflation to fall further but rather to stay broadly stable at current low levels.

ESI and GDP growth for the EU

(January 2004 to March 2014 for survey data)



Note 1: The horizontal line (rhs) marks the long-term average (=100) of the sentiment indicator.
Note 2: Both ESI and y-o-y GDP growth 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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Economic and Financial Affairs

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

In the first quarter of 2014, the EU- and the euro area-wide Economic Sentiment Indicators (ESI) continued increasing in January but remained broadly flat in February. For the EU, this halt of the upward trend that started in May 2013 prevailed in March. By contrast, the latest reading for the euro area pointed to some renewed momentum. However, the increase was largely due to a sharp increase of confidence among consumers, while monthly changes in the business surveys were relatively more modest (positive for services and retail trade; negligible for industry; negative for construction). Compared to December 2013, the ESI has booked increases of 2.0 (euro area) and 1.5 points (EU) over the quarter. The ESI's development in the first quarter of 2014 points to some stabilisation of economic growth in the short-term, following its steep recovery in mid- and into late 2013.

For both European aggregates, latest readings of the headline sentiment index were well above their respective long-term averages. With levels of 105.3 (EU) and 102.4 (euro area), March's ESI also stands above its (1990-2007) pre-crisis average (corresponding to 102 for both areas), and at its maximum since mid-2011. While the quarterly profile of the ESI is in line with the results of the Ifo's Business Climate Index for Germany, Markit Economic's Eurozone Composite PMI rebounded in the first quarter after a broadly flat development during the fourth quarter of last year.

At the sector level, the improvement of the sentiment index was backed by markedly more confident consumers, with gains in January and March only partially absorbed by a setback in February. Services and retail trade managers' confidence marked relatively less robust improvements, with some signs of deterioration in March for the EU indices. As for industry, broadly flat developments throughout the quarter prevailed in both European aggregates. Also confidence in construction stayed on a horizontal path during the first three months of the year for the EU, while it deteriorated in the euro area, due to a sharp decrease in January.

All of the five largest euro area economies saw the ESI following the quarterly profile for the European aggregates, except for Italy where sentiment rose more than in the previous quarter. Italy also scored the largest gains (+3.5), followed by Spain (+2.0), the Netherlands (+1.9) and Germany (+1.5), while France (+0.6) marked only marginal improvements. Regarding the largest EU economies outside the euro area, the upward trend in Poland has continued further (+2.2), while in the UK sentiment edged down (-2.1) quarter-on-quarter, due to March's drop in all surveyed business sectors except for construction. The headline indicator scored below its long-term average only in France and Poland, while March's readings for Italy and the Netherlands indicated levels slightly above 100 for the first time since July 2011.

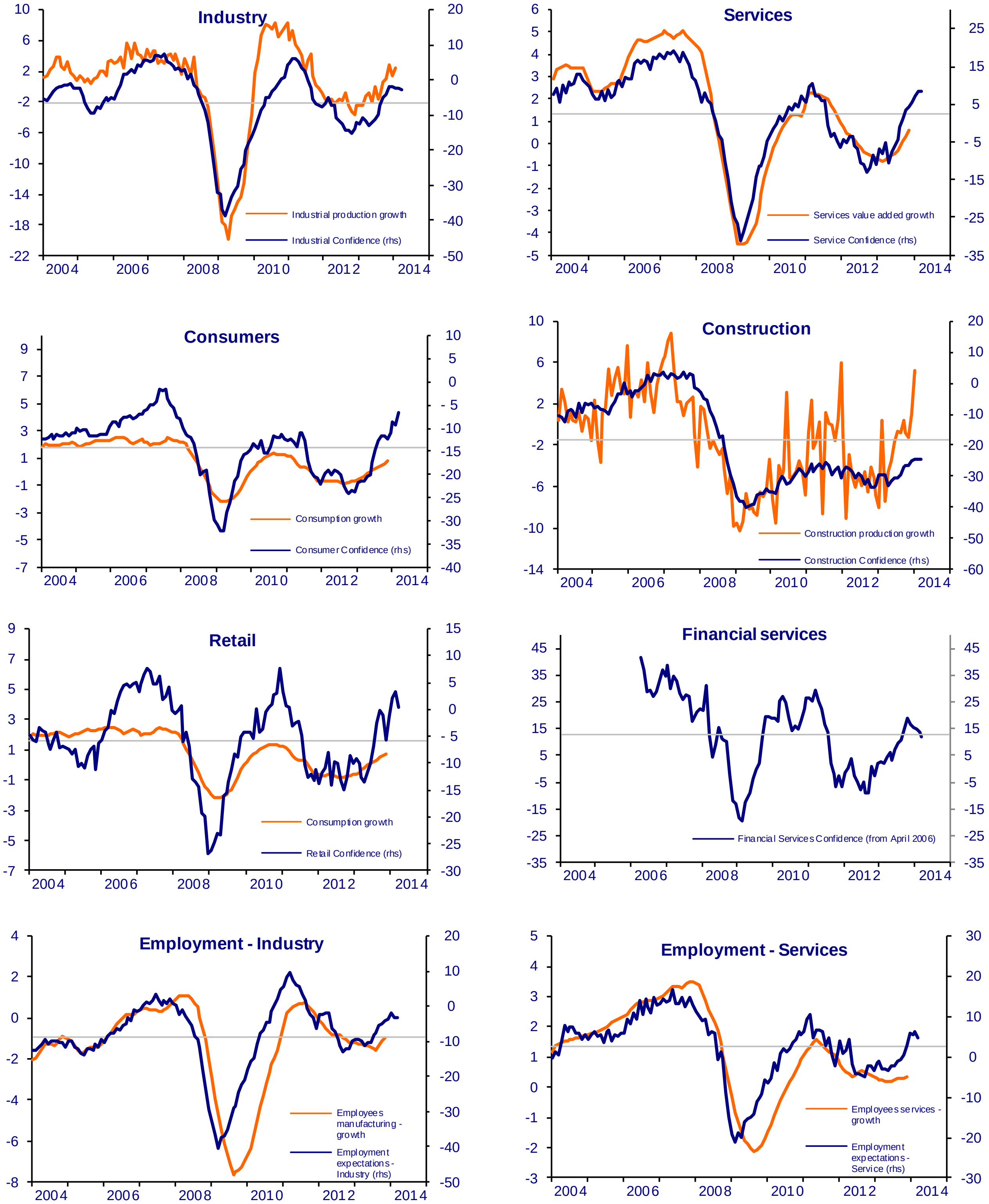
Sector developments

The first quarter of 2014 saw confidence in **industry** moving sidewards in both the EU and the euro area. After a slight deterioration in January, confidence was virtually unchanged in February and March. The flat development over the most recent months corroborates the slow-down in the consolidation of sectoral confidence that already emerged in December 2013. In both European aggregates, the quarterly profile of managers' assessment of the current level of order books remained flat, while their assessment of the stocks of finished products worsened. By contrast, managers' production expectations improved in the euro area and remained unchanged in the EU. Of the survey questions not included in the industrial confidence indicator, managers' assessment of production trends observed during recent months improved (especially in the euro area). Export order books edged down in the EU and remained stable in the euro area. Employment expectations were virtually unchanged over the quarter, whilst selling price expectations were revised downward. In all seven largest EU countries, the confidence index followed an erratic pattern: compared to the end of 2013, it increased in the Netherlands, Poland and Italy, while remaining broadly unchanged in Germany, France and Spain. The UK booked substantial losses.

January's results for the quarterly manufacturing survey confirmed the upward trend of the previous two quarters. Capacity utilisation rose to 80.1% in the EU (from 78.3%) and 80.0% in the euro area (from 78.4%). These figures are still around 1 point below their respective long-term averages.

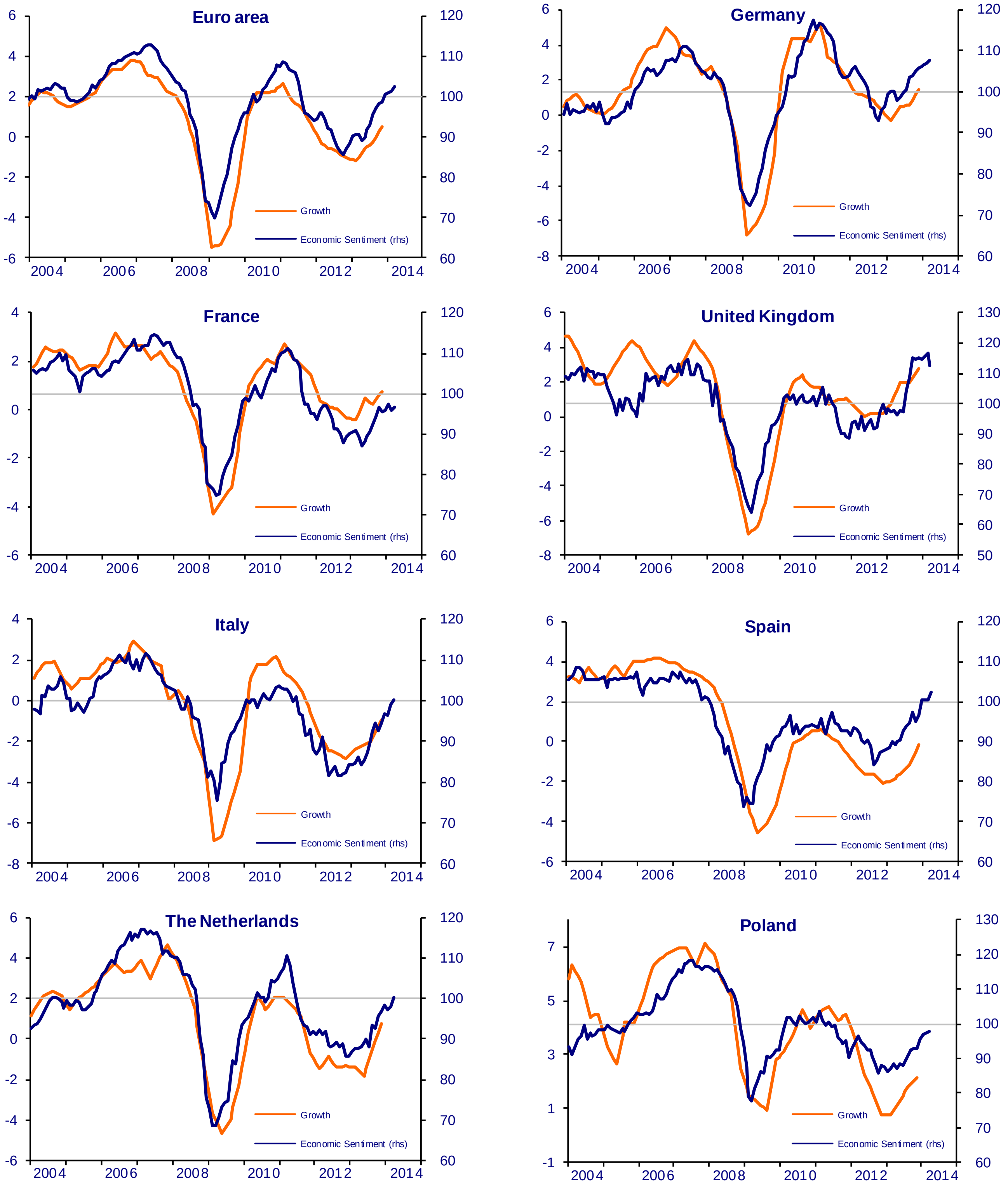
Confidence in **services** brightened in the first quarter of the year, continuing the upward trend that has started in the second half of 2013. While in the EU a drop in sentiment in March casts some doubts on the continuation of the upturn, the recovery in the euro area continued at unchanged speed compared to the last quarter of 2013. Improved confidence was fuelled by improvements in all components of the confidence indicator (past and expected demand as well as past business situation). Compared to the euro area, gains in the EU were less pronounced, particularly for past demand. Looking at the largest EU countries, confidence marked gains of about 9 points in Italy and Spain, while the Netherlands, Germany, France and Poland experienced more moderate improvements (of about 2-3 points). Noticeably, Italy and France scored three monthly increases in a row. By contrast, confidence worsened in the UK due to a sizable drop in March.

Graph 1.1: **Sectoral confidence indicators and reference series for the EU (January 2004 to March 2014 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 2004 to March 2014 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.

Retail trade confidence increased in the first quarter of 2014 in both the EU and the euro area. The developments reinforced the recovery that has started in the second quarter of 2013 (but was partially interrupted in 2013Q4 in the EU) and shifted the indicators up to their long-term averages. Improved confidence in the euro area resulted from positive developments in all components (appraisal of companies' past and expected business activity as well as their assessment of the adequacy of their stocks of finished products). A similar picture emerged for the broader European aggregate, except for managers' expectations on business activity that remained virtually unchanged. Focusing on individual countries, the Netherlands, Germany Poland, Italy and Spain marked sizable increases. By contrast, the indicator plummeted in France due to a sharp drop in January. The broadly flat quarterly profile in the UK masked extremely volatile dynamics: the gains booked in January and February, which lifted the indicator up to its historical maximum, were followed by a substantial loss (-16.6 points) in March.

Compared to the end of 2013, sentiment in **construction** remained unchanged in the EU and worsened in the euro area (due to a marked loss in January only partially absorbed in February). These developments interrupted the recovery observed during the second half of 2013, so that the indicators have continued scoring below their long-term averages. While both aggregates saw managers' appraisal of current order books decreasing, expectations about employment rose in the EU as opposed to the flat development in the euro area. Confidence declined in Germany, France, Italy and Spain; by contrast, the Netherlands booked gains in every month of the quarter. Also in Poland and the UK confidence improved, owing to improvements in January and March temporarily interrupted in February.

After the moderate increase in December 2013, confidence among **consumers** regained momentum in the first quarter of 2014. In both the EU and the euro area, confidence followed a V-shaped pattern, with gains in January and March, partially eroded by mild reductions in February. Optimism among consumers was fuelled by vastly positive developments of all components of the indicator (improved expectations about personal financial situation, general economic situation and savings coupled with sharp downward revisions of appraisals of future unemployment). All the seven largest EU economies booked significant improvements, ranging from about 2 points (in France and Poland) to 6-9 points (in Italy, the UK and Spain). Developments in countries belonging to euro area largely reflected the overall EU/euro area profile. Poland, on the other hand, saw sentiment decreasing in January and rising in the other two months of the quarter, while the UK scored three increases in a row.

After two consecutive quarters of increasing readings, confidence in **financial services** – which is not included in the ESI – deteriorated over the first quarter. Compared to December 2013, worsened sentiment was backed by managers' more negative assessment of the past business situation and past demand. For both components of the index, losses in the euro area were more pronounced than in the EU.

The developments in survey data over the first quarter are illustrated by the evolution of the climate tracers. The economic climate tracer for the EU is in the expansion quadrant (see Annex 1 and Annex 2 for further details). This movement was driven by the climate tracers for industry and retail trade, which moved even further into the expansion quadrant than the overall indicator. The services and consumer climate tracers have reached or moved very close to the border between the upswing and expansion quadrants. On the other hand, construction sees its cyclical phase lagging behind those of the other surveyed sectors, with the climate tracer remaining in the upswing quadrant. Also for the euro area, the overall economic climate tracer crossed the expansion border in the first quarter of 2014. At the country level, the climate tracers for Germany, the UK and Poland have moved further into the expansionary quadrant, while the Netherlands and Spain saw their indicators approaching the expansion area. By contrast, the climate tracer remained in the upswing quadrant for Italy and France.

2. Recent developments in selected Member States

During the first quarter of 2014, sentiment has further recovered in the seven largest EU Member States. The only exceptions are France, where the ESI was virtually unchanged compared to the previous quarter, and the UK, where the headline indicator, after reaching its historical maximum in February, plummeted in March. The sentiment index has kept scoring below its long-term average only in France and Poland.

Economic sentiment in **Germany** continued the recovery that had started in May 2013, backed by moderate increases in every single month of the quarter. At 107.5 points, the ESI is comfortably above its long-term average of 100. The improvement of the headline indicator was driven by sharp increases in consumer and retail trade confidence. Also service confidence rose, although at a more moderate pace, while industry showed a broadly flat quarterly profile. Confidence in construction marked sharp losses.

In **France,** the ESI registered a drop in February that partially offset the gains booked in January and March. These monthly movements translate into a broadly flat outcome for the quarter. At 96.6 points, the sentiment index remained clearly below its long-term average of 100. Worsened construction confidence eroded the gains booked by confidence in service, retail trade and among consumers. Sentiment in industry was broadly flat.

After two increases in January and February, which led the sentiment index in the **United Kingdom** to its historical high (116.9), March's reading showed a sharp deterioration of the headline indicator, resulting in a contraction in March compared to December 2013. Yet, at 112.8 points, ESI stands well above its long-term average of 100. Worsened sentiment was driven by deteriorated confidence in industry and, to a lesser extent, services. On the other hand, confidence among consumers and in construction improved considerably. Though broadly unchanged on a quarterly basis, retail trade exhibited an extremely volatile monthly pattern.

In **Italy,** the ESI brightened in February and March after a flat development in January. After an increase of 3.5 points compared to the end of 2013, the sentiment index reached 100.3 points, thus surpassing its long-term average of 100 for the first time since July 2011. The increase was backed by remarkable improvements in confidence in services, retail trade and among consumers. Industry marked mild improvements, whilst construction confidence lost ground due to a sharp drop in January.

The first quarter of the year saw the ESI increasing in **Spain**, resulting from gains in March after flat developments in January and February. At 102.5 points, the sentiment indicator is noticeably above its long-term average of 100. While industry confidence remained broadly unchanged and construction confidence declined, improvements occurred in the other three surveyed sectors, especially among consumers and in services.

In the **Netherlands**, sentiment picked up in the first quarter of 2014 compared to December 2013. The ESI booked gains in January and March and saw a broadly flat development in February. At 100.3, the indicator currently stands slightly above its long-term average. The positive developments were the result of recovering confidence in industry, services, among consumers and – more pronounced – in construction and retail trade.

Sentiment in **Poland** picked up in January, followed by broadly flat developments in February and March. Compared to December of last year, the first quarter brought an increase, although limited when compared to the increases seen in the second half of 2013. At 97.6 points the ESI currently scores slightly below its long-term average. All surveyed sectors marked positive changes on a quarterly basis. Noticeably, retail trade confidence scored three consecutive increases. Construction confidence saw a consolidation of the gains recorded since May 2013. After a drop in January, consumers were more optimistic in February and March; on the other hand, industry and services confidence declined.

3. Highlight: What do survey data tell us about future price developments?

The current economic environment in the EU and the euro area is characterised by still subdued economic growth and low inflation rates. As expectations of falling prices could have the potential to drag down current inflation, it is important to carefully monitor various measures of price expectations.

Against this background, this section investigates the usefulness of qualitative survey data for monitoring and analysing price developments. Two main sets of survey data are presented: the first consists in survey data that can detect price pressure at an early stage of price formation, such as managers' selling price expectations. The second set includes data on consumers' price expectations, which might be telling on whether the recent decline in consumer-price inflation (as measured by the HICP) has had an impact on inflation expectations.

Price pressure along the supply chain

Producer prices are of particular interest since they can help identify price pressure at an early stage of the value chain that could subsequently be passed on to finished goods and hence to consumer prices[1]. Indeed, our analysis of survey data shows that managers' opinions on current and future developments in producer prices can be a reliable and leading indicator of the producer price index (PPI) in the manufacturing sector and therefore could help anticipate inflationary (or disinflationary) pressures[2].

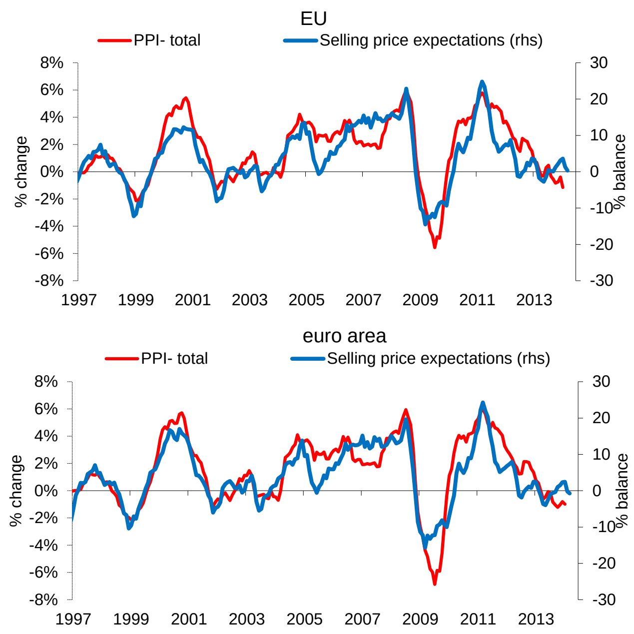
The analysis is based on replies to question 6 of the European Commission's monthly Industry Survey. The question reads "How do you expect your selling prices to change over the next 3 months? They will increase, remain unchanged or decrease". We will limit our analysis to the EU and euro area. As the question specifically relates to manufacturing, we assess it against the PPI for the manufacturing sector (NACE 2 section C), which represents 84% of the 'total industry excluding construction' in both the EU and the euro area. The results are compared with the

[1] The aim of this section is not to analyse the pass-through from producer prices to consumer prices. However, it is interesting to note that the correlation between producer prices in the manufacturing sector and overall HICP is 0.8 over the period Jan-1998 to Jan-2014.

[2] Survey data for month t is available one month earlier than official PPI data.

performance of similar survey data collected by Markit Economics (PMI)[3].

Graph 1: **Selling price expectations** (balance statistic) **and producer prices in the manufacturing sector** (in year-on-year percentage changes)

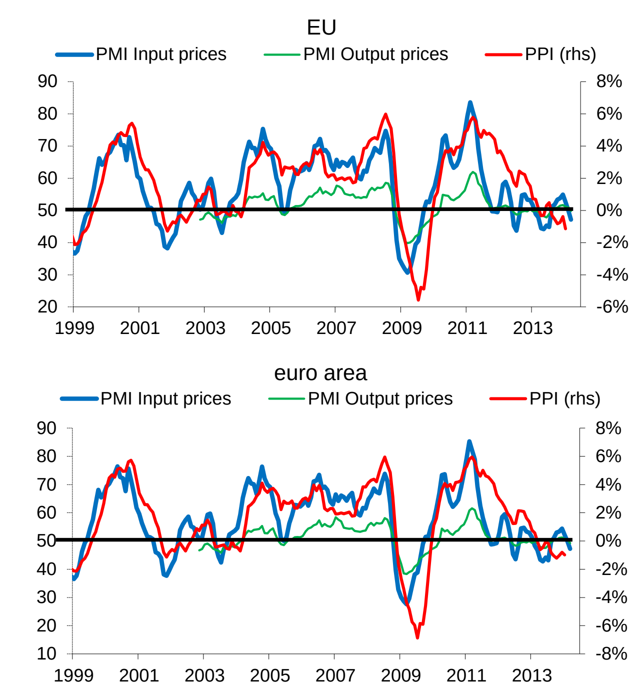


Source: European Commission.

Graph 1 depicts the close co-movement of selling price expectations and producer prices. While the evolution of these variables diverged visibly in the period 2006 to 2007[4], both in direction and strength, selling price expectations and producer prices moved more closely together again since the beginning of 2008. Managers' replies correctly signalled both the decrease and the rebound in the PPI registered from August 2008 to July 2009 and from August 2009 to March 2011. Afterwards, both selling price expectations and the PPI followed a downward path. Since mid-2012, however, selling price expectations have been see-sawing around a stabilising trend, while the PPI continued to decline. Clearly, this divergence indicates that the current situation differs from 2009, when surveys (and PPI data) plummeted vertically to historically low levels.

To complement the picture with other survey-based information, Graph 2 shows PMI input and output prices along with year-on-year changes of producer prices. Also in this case, a close co-movement between the series is visible. Focusing on the most recent developments in the survey, the variables PMI input and output prices have been fluctuating around a level of 50, considered as the threshold between positive and negative growth rates in the reference series. This is in line with the earlier observation of managers' selling price expectations fluctuating around their long-term averages since mid-2012.

Graph 2: **PMI input and output prices** (index) **and producer prices in the manufacturing sector** (in year-on-year percentage changes)



Source: Markit Economics and European Commission.

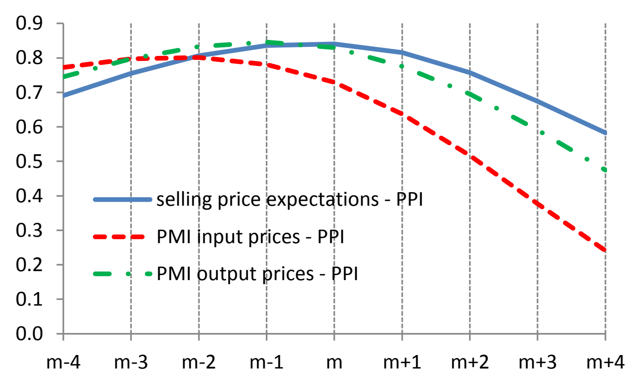
The visual inspection is supported by the analysis of correlation coefficients, which indicate that selling price expectations and PMI input and output price developments track producer prices in the manufacturing sector quite closely (see Graph 3). In both the EU and the euro area the relationship is strongest for year-on-year price changes. Question 6 of the EC industry survey and the PMI question on output prices show very similar correlation curves. Both achieve the highest correlations with the reference series in a coincident or slightly leading (1

[3] The exact wording of the questions asked in the manufacturing sector is, for the output prices: "Please compare the average price that you charged per unit of output (volume weighted) this month with the situation one month ago"; and for the input prices: "Please compare the average price of your purchases (volume weighted) this month with the situation one month ago". It should be noted that the PMI does only cover selected EU Member States.

[4] The developments in energy prices (which are not covered by the BCS survey) mainly explain this divergence. Indeed, over the same period PPI for energy had a quite different trend compared to the developments in PPI for industry excluding energy.

month) set up ("m" and "m – 1" on the horizontal axis of the graph). In line with the theoretical leading behaviour in the supply chain, the survey series on input prices shows a somewhat lower contemporaneous correlation with the reference series but a maximum correlation for future PPI data ("m – 4" to "m - 1" on the horizontal axis).

Graph 3: **EU - Correlation between year-on-year % change of 'Manufacturing PPI' and EC 'Selling price expectations' and PMI input and output prices – over the period Nov 2002 to Jan 2014**

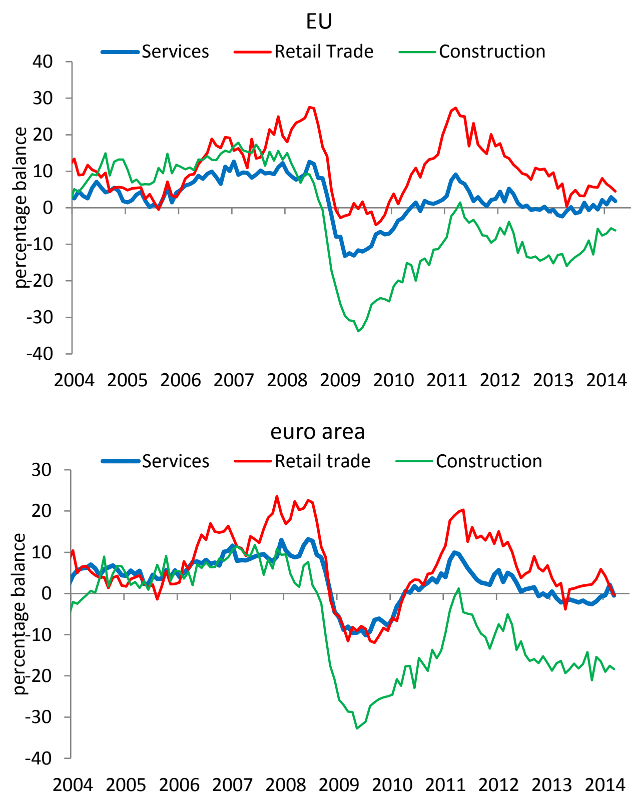


Source: Markit Economics and European Commission.

The European Commission's question about selling price expectations also features in other sectors covered by the business surveys (services, retail trade and construction). As shown in Graph 4, the trend of these series, albeit at different levels, is rather similar to that observed in the manufacturing sector. Concerning the more recent development, selling price expectations in the services sector have been on a timid and volatile upward trend since April 2013 in the EU, while in the euro area the mild upward path has been interrupted by a drop in March 2014. Expectations on prices charged in the EU construction sector have been on an upward path since April 2013, while in the euro area the series has shown a rather flat development. Finally, selling price expectations in the EU and euro-area retail trade sector – which are highly correlated with year-on-year changes of the harmonised index of consumer prices (HICP) – decreased during the last three months, mostly offsetting the increases observable from April to December 2013.

All in all, though cross-sector business survey data have kept fluctuating around rather stable levels, the latest developments in managers' selling price expectations suggest that further decreases in producer price indices cannot be excluded.

Graph 4: **Selling price expectations in the services, retail trade and construction sectors**



Source: European Commission.

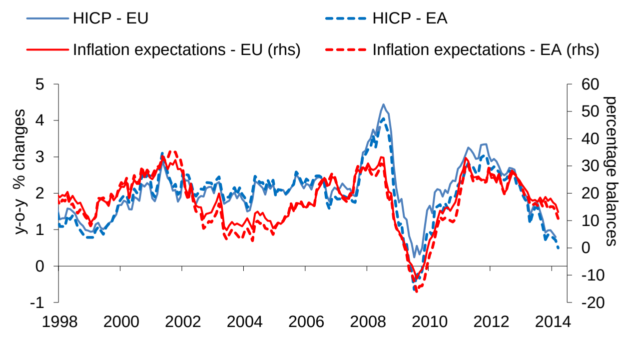
Inflation expectations

At the current juncture, characterised by low inflation rates (0.5% in the euro area according to Eurostat's flash estimate for March 2014), it is important to carefully monitor the available indicators of inflation expectations.

There are various surveys of private sector inflation expectations for the euro area for different time horizons. Among them, DG ECFIN's qualitative consumer survey covers short-term inflation expectations, whereas the ECB's quantitative Survey of Professional Forecasters (SPF) focuses on both short- and long-term expectations. The target population of these two surveys differs (consumers vs. professional forecasters).

As shown in Graph 5, prior to the euro cash changeover in January 2002, there was a close relationship between consumers' inflation expectations and actual inflation developments, with a correlation higher than 0.9[5]. The close co-movement between the two series was disturbed in the aftermath of the euro cash changeover, but became stronger again from the beginning of 2008 until the beginning of 2013. In 2013, consumers' inflation expectations remained broadly stable while actual HICP inflation declined further. Since the beginning of 2014 inflation expectations have again been on a downward trend.

Graph 5: **Actual HICP inflation and consumers' inflation expectations in the EU and euro area**

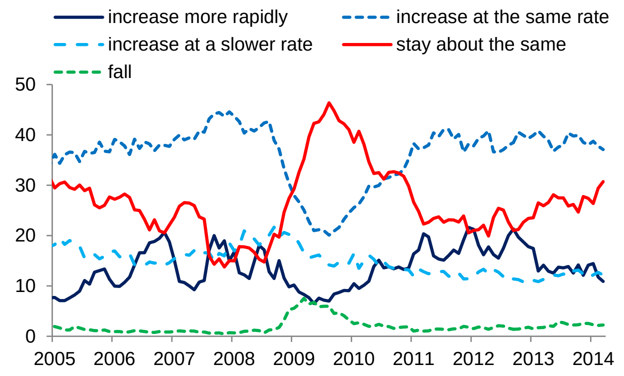


Source: European Commission.

Despite the recent decline in inflation expectations, a disaggregate analysis of the evolution of inflation expectations over time suggests that the present situation is different from the one observed in 2009, when a short period of negative inflation occurred in the euro area, and that there are currently no expectations of falling prices among consumers (Graph 6). Contrary to what happened in 2009, the share of consumers expecting that prices will fall has remained very low and stable since 2011. The only visible changes are (i) an upward trend since the end of 2012 in the share of consumers expecting prices to remain broadly unchanged and (ii) a decrease at the end of 2012 and at the beginning of 2013 of the share of respondents expecting an acceleration of inflation.

Overall, developments in consumer price expectations – at least for the short-term – do not point to a risk of "self-fulfilling" dynamics which could eventually pull down inflation.

Graph 6: **EU consumers' inflation expectations, disaggregate analysis**



Source: European Commission.

Another survey based on private sector inflation expectations is the quarterly ECB Survey of Professional Forecasters (SPF). The SPF collects information about forecasts for euro area HICP inflation one, two and five years ahead. In addition to the quantitative estimation of expected inflation, forecasters are asked to provide a probability distribution for expected inflation at both shorter and longer-term horizons. The panel comprises more than 70 forecasters located across the EU. Around 60% of the SPF panel are participants from the financial sector (mainly banks), while the remainder are non-financial research institutes, employers' associations and labour organisations.

Standard measures of forecast performance, such as the root mean square error, show that SPF forecasts are more accurate than a naïve, purely backward-looking forecast, and that they contain information about future inflation rates beyond that already contained in the inflation rate for the most recent past.[6]

The latest SPF[7] (2014 Q1) indicates inflation expectations at 1.1% for 2014 and 1.4% for 2015, revised downwards from the previous SPF by 0.4 and 0.2 percentage points, respectively. Compared with the previous survey round, the aggregate probability distributions for expected inflation in 2014 and 2015 have shifted towards lower outcomes. However, according to respondents, the probability of negative inflation remains very low: 1.3% in 2014 and 1.2% in 2015. Longer-term inflation expectations have remained unchanged at 1.9%. This confirms that

5 It has to be noted that a cross-correlation analysis between actual HICP (year-on-year growth) and consumers' inflation expectations shows that the latter tend to be more strongly correlated with inflation developments in the recent past and contemporaneously than with inflation in the next twelve months, to which the survey question refers.

6 See ECB Monthly Bulletin article on "Measures of inflation expectations in the euro area", July 2006.

7 For detailed information see ECB Monthly Bulletin, February 2014.

longer-term inflation expectations of professional forecasters remain firmly anchored at levels consistent with price stability.

Conclusions

Notwithstanding exceptions and divergences in specific periods, the presented analysis shows that survey data on managers' selling price expectations and consumers' inflation expectations provides useful information on the evolution of prices along the supply chain to the final consumer prices.

The recent results of DG ECFIN's manufacturing selling price expectations and Markit Economics' PMI input and output prices are fluctuating around a rather stable level, clearly distinguishing the current situation from the one observed in 2009, when both PPI and selling price expectations were plummeting. At the same time, while still at 'normal' levels, latest developments in managers' price expectations suggest that further decreases in producer prices cannot be excluded.

Concerning inflation expectations, the analysis shows that consumers do not actually expect inflation to fall further but rather to stay broadly stable at current levels. In the current context of low inflation this is essential to counteract the risk of protracted very low inflation or even deflation. In addition, SPF results indicate a very low probability of negative inflation for 2014 and 2015. Finally, long-term inflation expectations as measured by the SPF appear to remain well-anchored at levels consistent with price stability.

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.

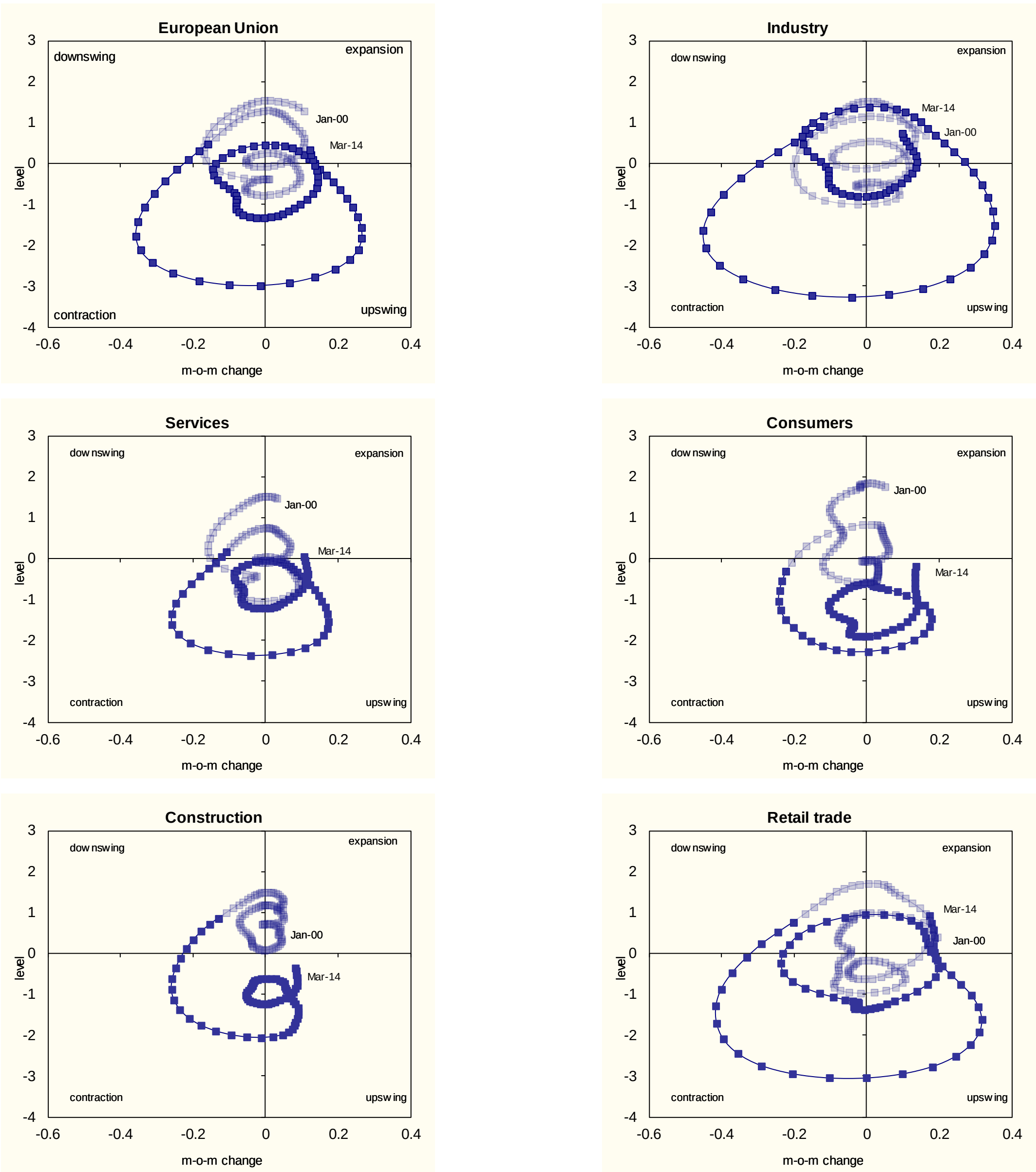
The series levels are plotted against their first differences (m-o-m changes), so that each chart depicts — at the same time — the current stance of the sector/country and its most recent dynamics. Series are smoothed to eliminate short-term fluctuations.

The four quadrants of the graphs enable to distinguish four phases of the business cycle: "expansion" (top right quadrant), "downswing" (top left), "contraction" (bottom left), and "upswing" (bottom right).

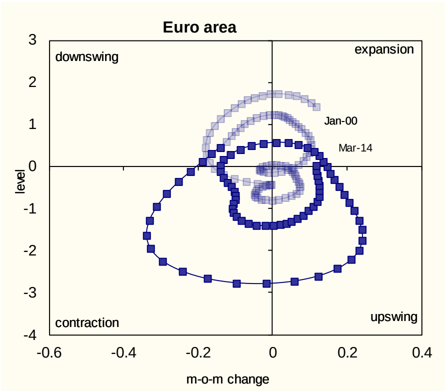
Cyclical peaks are positioned in the top centre of the graph, and troughs in the bottom centre.

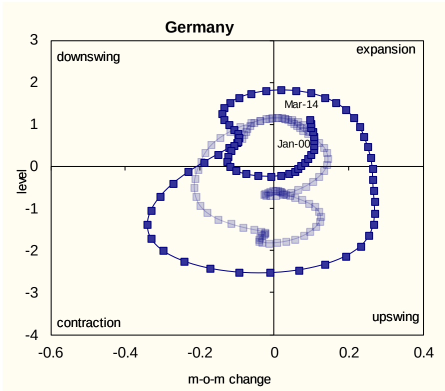
In order to make the graphs more readable, two colours have been used for the tracer. The darker line shows developments in the current cycle, which in the EU and euro area roughly started in January 2008.

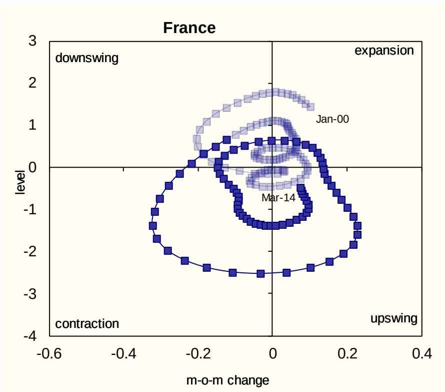
Economic climate tracer across sectors, EU

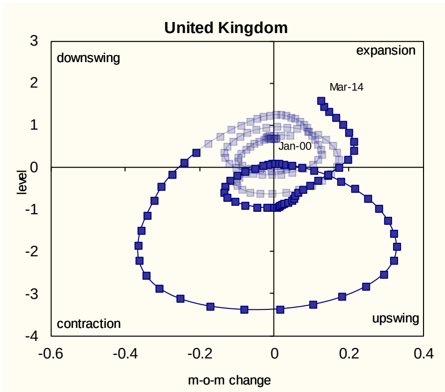


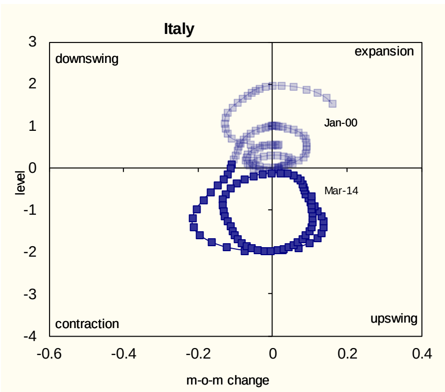
Economic climate, largest EU Member States

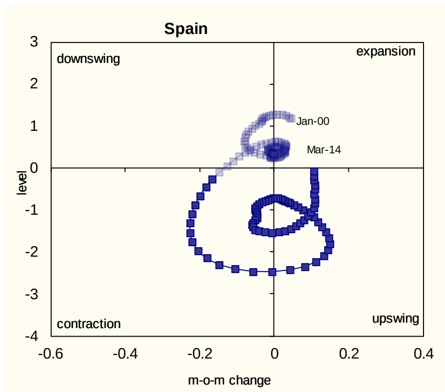


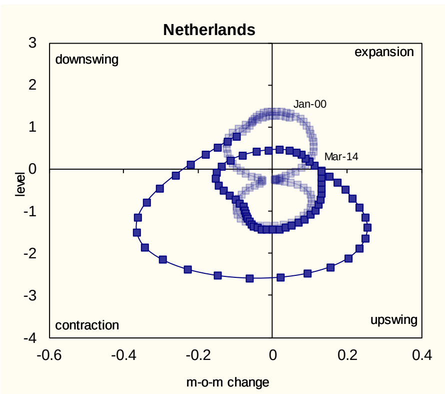


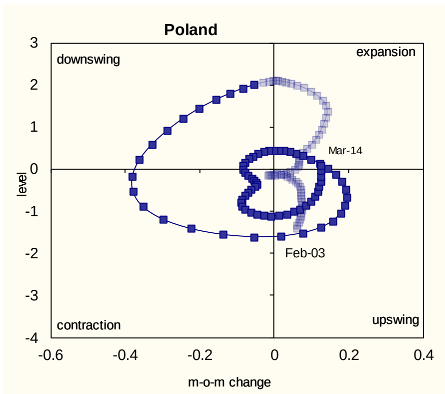












Annex 2: Reference series

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.