

CECIMO Economic and Statistical Toolbox

March - April 2017




cecimo

European Association of
the Machine Tool Industries

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Introduction

The recovery in international trade has continued, global economic activity is improving and the prospects are positive for the near future. Nevertheless, downside risks are intensifying –above all the geopolitical and global ones, while the European ones have diminished–, so more caution is needed when analysing the outlooks and forecasts. The growing scepticism on globalization, trade, multilateral cooperation and immigration heighten policy uncertainty across the globe and dampen expectations, although the impact on economic sentiment is still quite moderate. However, the increased favour of inward-looking policies is relatively far from being a solid trend, so there is room for optimism.

In Europe, the ECB –which kept the key interest rates at the same levels–, similarly to the European Commission standpoint, keeps advocating for globalization and points out its benefits, but recognizes that “it should have a much greater social consideration for the ones who don’t gain or actually get harmed by it”. The European economic growth accelerates but the consolidation gaps still need to be further addressed. In this respect, the Commission assesses that budgets sent by some member states are at risk of non-compliance with the Sustainability Growth Pact. The momentum gain of business and consumer sentiment is noticeable since last summer, as analysed under the sections 1.6, 2.10, 2.11 and 2.12. It could underpin gains in investment and consumption in the short term and, ultimately, bolster and broaden the ongoing economic expansion. However, more determined measures are essential for sustainable and fair growth. The high number of elections in big countries throughout Europe could make politically more difficult or slow to pass new legislation, but undertaking additional structural reforms –both legislation and more effective implementation–, as well as investments in innovation, are needed to increase productivity in Europe and reduce inequality.

On the other side, the unfold of the UK departure from the EU has understandably caught the attention. Following the referendum of 23 June 2016 and the positive vote by the UK Parliament to allow the government to begin Brexit talks, the UK notified the European Council its intention to leave the EU on 29 March 2017. Therefore, the withdrawal process of the UK from the EU under Article 50 of the Treaty formally started that very day. Both parties made appeals to keep enjoying close and special relation, alongside to reduce the uncertainty as much as possible. As stated out in the aforementioned article, the European Council adopted guidelines for these negotiations in April, which, if agreed, could be amended. In the meantime the EU treaties will apply to the UK as before. The UK repeated that it accepts the impossibility of seeking membership of the single market but proposed an FTA between the EU and UK “of greater scope and ambition than any such agreement before it”. The precise extent of the terms of the new relationship to be agreed in the next two years is still unknown, but most likely the discussions will continue beyond 2019 in order to conclude a final agreement. Having said that, no one knows for sure the length of the negotiations and the shape of the deal.

In the US, large uncertainties still remains on the future policies the US administration will pursue. As for monetary policy, the Fed is thought to raise rates soon.

1. Data specific to the European machine tool market

▲ 1.1 CECIMO8 orders ^①

The level of orders of machine tools at the start of 2017 was positive compared to one year ago. According to the latest available data, limited to some countries, for the first quarter of 2017, Italy orders intake markedly increased. With 40% more orders than during the previous quarter, the indicator increased to the greatest extent since the beginning of 2008, booking pre-crisis orders level. Italy overpassed by 6% its own reading of the first quarter of 2016. That high level of ordering was strongly driven by domestic demand (+50%), but the foreign one showed also an above 25% quarter-on-quarter increase. Germany and Czech Republic registered quite similar levels of orders to the previous quarter: a slight drop of 2% in Germany and a minor increase of 2% in Czech Republic. The latter received more orders from abroad (+20%), while the domestic demand weakened 40%. In Spain, following a sharp rise at the end of last year, orders value came back to late-2015 ones, still 15% above the reading during the first quarter of 2016. For its part, the United Kingdom orders intake suffered a modest quarterly fall of 4% during the three first months this year, reaching a level which is 7% inferior to one year ago.

The international picture is a bit more mixed. For instance, following a timid 2% rise of orders of metal cutting machine tools in Japan and a 5% decrease of metal forming MT at the end of last year, the demand of the former category rose 14% during the first three months of 2017, while the orders of Japanese metal forming MT strengthened 20% during the same period. Orders intake in Taiwan booked a slight 2% decline, following a quarterly increase of almost 30% in the last quarter of 2016. In the United States the situation is weak: MT orders from domestic manufacturers fell 41% from December 2016 to January 2017, after recovering to the late 2015 levels in the third quarter of 2016 and further increasing at the year-end. The total of January 2017 represents a 11.4% drop from January 2016. In quarterly terms, demand of US machine tools edged down by 14% during the period January-March 2017, levelling at just 1%.

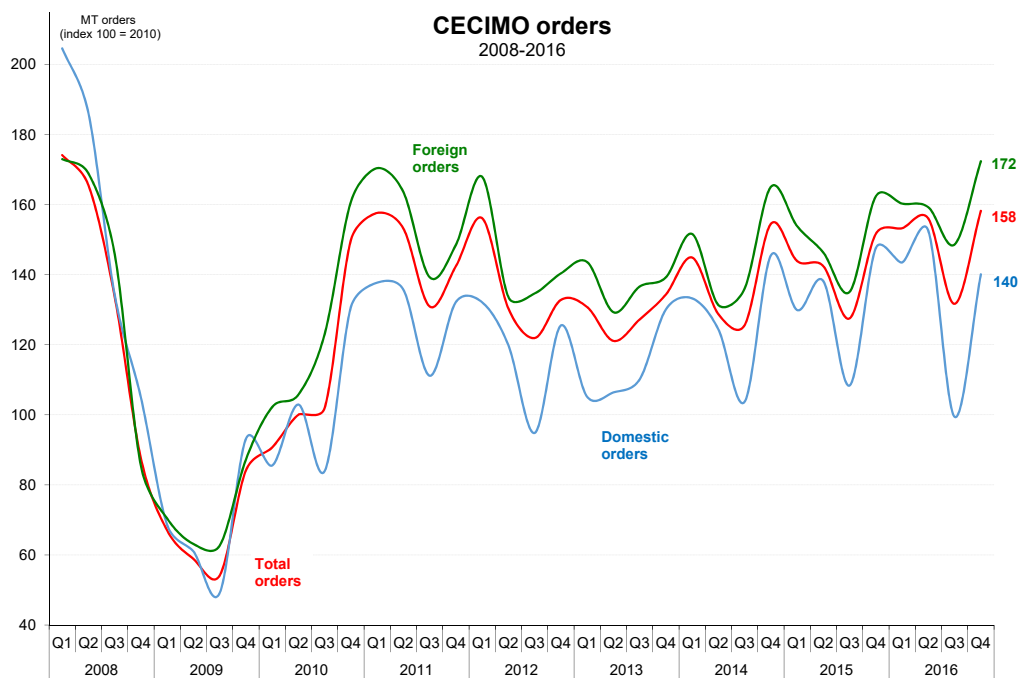
This relatively good news continues the positive trend of last year. As we have already informed in previous editions of this report, the overall level of orders intake of CECIMO-based companies increased last year, and the demand for machine tools strengthened during the last quarter of 2016, compared to the previous one. CECIMO8 total orders increased 20% quarter-on-quarter. It is true that, due to the cyclical activity of the machine tool sector, the fourth quarter is usually better in terms of orders than the third one. However, it is equally true that orders of MT reached a level that is more than 4% higher in interannual terms towards the end of the year. The level of orders MT companies based on CECIMO8 countries received in the last quarter of 2016 is slightly better than in 2015 and 2014, while markedly higher than in previous years. To see such high level of orders one should go back as far as the year 2011.

See graphs on next page

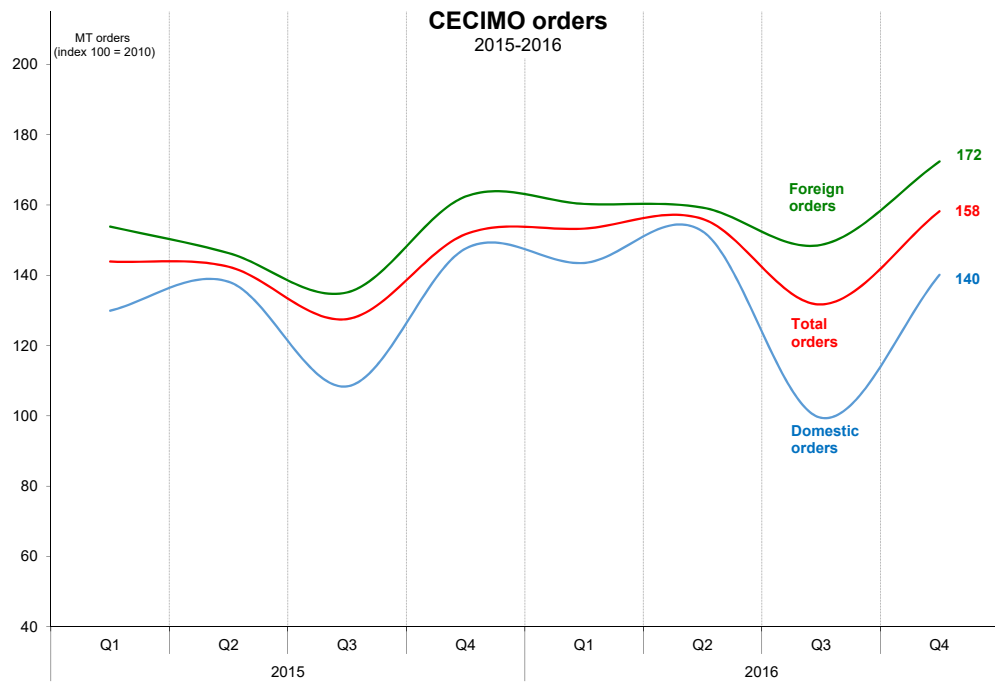
That quarterly increase was driven by Spain (+84%) and Italy (+41%). At a lesser degree, Austria, Switzerland and France registered a quarterly increase ranging from 25% to 30%. United Kingdom (+18%) and the remaining countries also experimented a higher level of new machine tool orders compared to the previous one. The MT orders rebound leads to a quarterly rise of 6% in the seasonally adjusted index and follows a drop of 7% in the third quarter.

Comparing the fourth quarter of 2016 to the one of 2015, the highest hikes in purchase orders were recorded in Spain (+69%), Austria (+41%) and Switzerland (+26%) and the United Kingdom (+15%). The only drops were seen in Czech Republic (-25%) and, at a lesser extent, in France (-6%) and Germany (-4%).

It is worth to mention that this positive picture was led by the 40% quarterly boost of domestic orders. The countries which performed particularly well in terms of domestic orders were Italy, Spain and Czech Republic. These two first countries received around 65% more orders than in 2010, while the latter saw that value doubled. Austria and Switzerland registered quarterly increases. On the other hand, machine tools' orders from abroad augmented 16% in that same period. Once again, Spain showed an outstanding increase of more than 90% in comparison with the previous quarter. The trend in every country with updated data of the last quarter 2016 was quite positive: Austria (+46%), France (+42%), Czech Republic (+31%), United Kingdom (+30%), Italy (+13%), Germany (+5%), Czech Republic (+1%). If we compare these values with those of the previous year, Spain (+75%), Austria (+50%) and United Kingdom (+25%) led the rise of CECIMO orders.



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▲ 1.2 Peter Meier's forecast

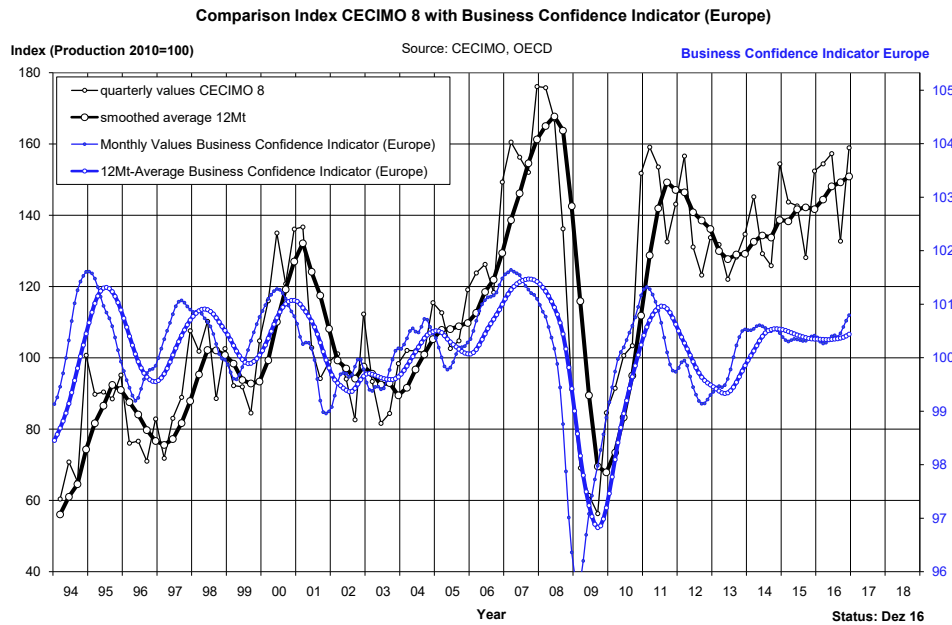
The upswing that has been emerging for some time now is gaining momentum. The business climate indicators have been on the rise already since last autumn. Consumer confidence climbed to 101.5 points in the USA, a level which has not been reached since 2000. In Japan, this indicator is now again in the expansive range after some years and also in China consumer confidence returned. In Europe, consumer confidence has been in the expansive range for some time, but a further improvement in sentiment is not yet apparent. Business confidence, which is traditionally a good indicator of the demand for investment goods, has been rising in all major world markets since last autumn.

In the United States consumption overcame the stagnation of 2014/15. Since mid-2016, the indicator has been on the rise again. In Europe too, the consumption is growing significantly, while in Asia, consumer growth has kept slowing, mainly due to a moderate growth in China. Altogether, consumption, which is now well above the level of 2007 in all world markets, is expected to provide a positive impetus to demand for investment goods.

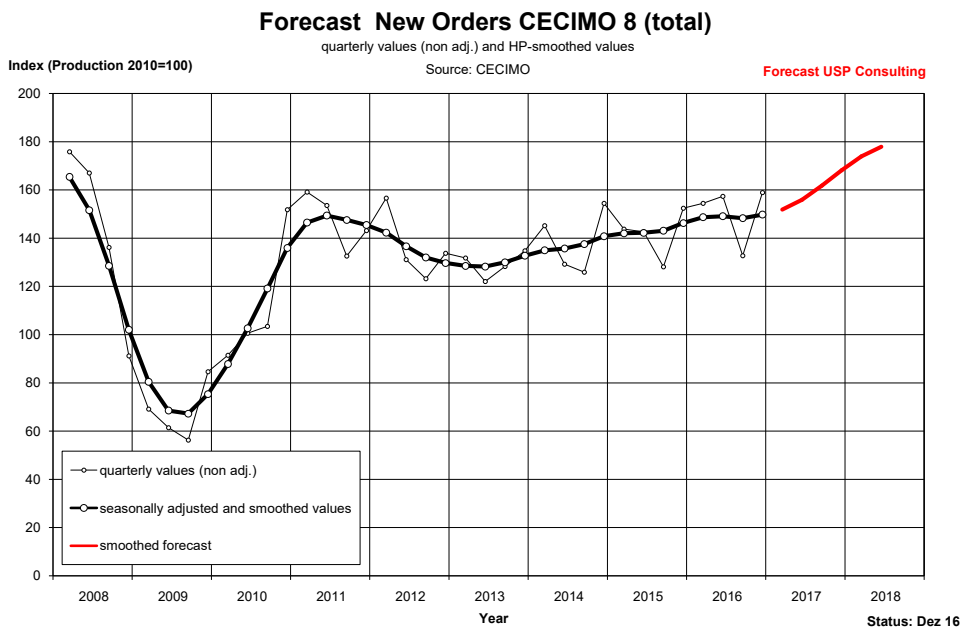
Industrial production, which is ultimately decisive for the demand of investment goods, however, has just bottomed out of the current industrial cycle. In the States, it bobs up and down around the level of 2007. In Europe and Japan it has not yet reached that level, and in China significant overcapacity inhibits the propensity to invest. On the other hand these indicators have been rising significantly in all world markets for months.

Despite a general increase in consumption, the demand for investment goods is likely to develop quite differently in the coming months. Already in 2016 there were big differences: demand in general machinery has moved sideways, it slightly increased for machine tools and we observed a significant upswing in new orders for semiconductor equipment. For 2017, an increase in demand will probably occur, but it is expected to vary quite considerably from sector to sector.

The following graph clearly shows that the European Business Confidence Indicator has been rising in all important world markets since autumn of 2016. Given a time lag of several months, this usually has a positive effect on the propensity to invest in machinery,



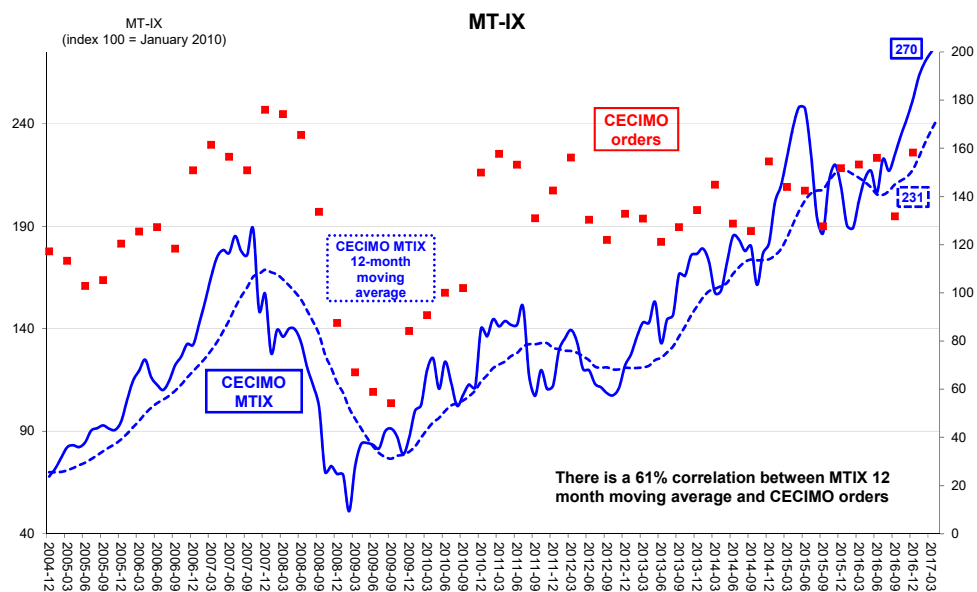
New orders in Q4 were above expectations. The latest economic indicators didn't change the forecast. The demand will most probably be expanding in 2017 by 10% or even more.



▲ 1.3 MT-IX ⁱ

The CECIMO MT-IX has showed an uninterrupted upwards trend since summer last year. In 2016, taking as reference value (100 points) the one registered in January 2010, the index jumped 20%, performing particularly well since August. It gained more than 40 points during the whole year and placed 250 points in December. The MT-IX index rose 9% in the third quarter and 12% in the fourth of last year, leading to an increase of 22% in the MT companies' market value during the whole second half of 2016. This year, it also made a positive start, with quarterly increases above 10% in January and February. The monthly increment rates slowed down from 4.5% to less-than-half rates afterwards. In March 2017, the index posted at almost 275, before increasing towards 280 in April. The indicator accumulated an increase of more than 9% during the first quarter of the year. Therefore, it can be concluded that the momentum in terms of market capitalization of the most important companies in the machine tools sector is positive.

Not only did the general index rise, but CECIMO-based companies played an important role. Its sub MT-IX revealed an above 6.5% increase in value during the period July-December 2016, 10.5% when only considering Switzerland in the calculation. At the beginning of 2017, it registered a more moderate monthly growth of 2% and 1% in January and February respectively. However, it accelerated in March and April: the CECIMO index based on market capitalizations moved up 7% and 4% respectively.



▼ 1.4 CECIMO trade

In January 2017, exports of machine tools from CECIMO countries deteriorated 40% on monthly basis. Some CECIMO members suffered from declines of above 40%, in comparison with December 2016: Italy, Germany, France, Switzerland, Turkey and the United Kingdom. Nevertheless, in interannual terms, which is more relevant when analysing the trends in this cyclical sector, those countries' exports of machine tools were 8% higher. Special mention should be given to the level of Spanish MT exports (+139%) in January 2017 compared to January 2016), Sweden (+80%), Belgium (+33%) and Denmark (+31%). On a market-by-market analysis, Asia was the one hitting the highest number at the beginning of 2017. Its imports of machine tools coming from CECIMO members decelerated 47% compared to those in December, and -14.5% year-on-year.

From a wider perspective, the global context for international trade seems to be improving but at a slow pace, so it is not positive yet and the risks are to the downside. The recovery, both in absolute values and in terms of GDP, is under way even if not solid, and the machine tool sector has not been immune to weak international trade. Upon our calculation, based on provisional data, total exports of machine tools in 2016 weakened by more than 7%.

However, there is much reason for optimism in the sector. The European machine tool builders are coping well with the feeble international context, showing a trade performance above the world average. Despite a little below projections, exports of machine tool from CECIMO-based companies to the rest of the world diminished by 3.4% last year, which is less than half of the MT global trade deterioration. CECIMO countries' exported machine tools worth some 18.25 billion euro in 2016. It represents 49% of total world exports of machine tools. The less-than-expected performance during the second half of the year affected the aggregated data for the whole year: CECIMO MT exports were 9.6 billion euro during the period July-December 2016, which represents a 4% interannual decrease. The region that suffered a hardest contraction in MT exports was Asia, which experimented 13.3% annual negative growth in 2016. The four countries that account for more than 90% of Asian exports of machine tools suffered from large reductions: -17.7% in Japan, -13.7% in South Korea, -8.6% in Taiwan and around -5.5% in China.

On a market-by-market analysis, CECIMO saw a fall in the Asian demand of machine tools of 6.8% in 2016. This was the market that hit the numbers the most, taking into account the whole year. This negative development was led by the 10.5 percent annual plunge in exports to China, which represents the 65% of the total Asian market for CECIMO companies. Despite all this, CECIMO has a stronger position in Asia, with a market share of 33.5%, which is two points higher than in 2014. A quick look at other big markets reveals that MT exports to the United States remained stable above 1.9 billion euro, while those to the Americas decreased 3%. Similarly to the CECIMO market share in Asia, the one in the Americas outpaced 36% up from 35% in 2015. Again, on the negative side, we could point out that CECIMO exports of machine tools to Russia kept markedly falling at impressive annual rates (-33% in 2016). This is certainly not a surprise, as the economic situation and the EU-Russia sanctions are clearly affecting the European MT sector.

On the imports' side, they amounted to 9.7 billion euro in 2016, a bit below estimates. Again, this reduction of 2.5% compared to 2015 was weaker than the global one. CECIMO countries are responsible for 27-28% of MT purchases worldwide. In January 2017, imports also followed a similar trend to exports but less accentuated. They decreased -29% in comparison with December last year but experimented a positive interannual increment of 7%. Among CECIMO countries' most important suppliers of machine tools, as it is already mentioned when describing the export side, imports from Russia declined substantially: -66% in January 2017 in comparison with December last year.

European countries reduced trading with the rest of the world, while strengthening their own commercial exchanges. The fact that this trade relationship better resists the weaknesses of the current environment is confirmed again: Europe is the only region of the world with which CECIMO trade flows incremented compared to 2015 (+0.3%). Consequently, the market share of the European market swelled from 50% in January 2016 to more than 53-53.5% one year later. In other words, half of machine tools foreign sales (in value) by CECIMO countries was destined to a European country. Hence, intra-European trade clearly remains the most important for CECIMO members.

Within CECIMO, 60% of total exports of machine tools in 2016 were originated in Germany and Italy. Germany accounted for 41.7% of total CECIMO exports in 2016. It is, alongside with Italy (16.8%) and Switzerland (12.5%), the most

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important European MT builder. Belgium, France, Spain and, at a lesser extent, the Netherlands, increased their share of exports within this group of countries. In terms of imports, almost 40% of MT purchases abroad were made by Germany (25.5%) and Italy (12.6%). These countries, together with Turkey (9.7%), France (9.1%) and Belgium (8.5%), account for two thirds of CECIMO machine tool imports.

Finally, apart from the business outlook to be analysed in detail under the sections 2.10, 2.11 and 2.12, it should be mentioned that companies are relatively optimistic, notably about exports in the coming years. According to data provided by the European Commission, 20% of the EU industry predicts its exports to increase and only 10% forecasts a short-term decline. The CECIMO Barometers yielded quite similar results in our sector.

CECIMO exports and imports per zones - 2016Q4

in thousand euro. Export destinations and import origins

EXPORTS

Zone	2016Q4	2015Q4	2016Q4/ 2015Q4	Share 2016Q4	Share 2015Q4
I. ASIA	1,204.5	1,327.6	-9%	23%	25%
II. AMERICAS	822.3	864.3	-5%	16%	16%
III. EUROPE	2,775.1	2,713.5	2%	53%	51%
CECIMO	2,192.6	2,076.5	6%	42%	39%
non CECIMO	582.4	637.0	-9%	11%	12%
IV. Russia + CIS	173.5	196.8	-12%	3%	4%
V. AFRICA	79.5	101.2	-21%	2%	2%
VI. OTHERS	127.4	147.3	-13%	2%	3%
TOTAL EXPORTS	5,187.3	5,356.6	-3%		

IMPORTS

Zone	2016Q4	2015Q4	2016Q4/ 2015Q4	Share 2016Q4	Share 2015Q4
I. ASIA	752.2	722.5	4%	27%	26%
II. AMERICAS	116.6	113.1	3%	4%	4%
III. EUROPE	1,905.1	1,928.8	-1%	68%	69%
CECIMO	1,833.7	1,863.0	-2%	66%	67%
non CECIMO	71.5	65.8	9%	3%	2%
IV. Russia + CIS	10.2	2.4	319%	0%	0%
V. AFRICA	2.7	1.0	179%	0%	0%
VI. OTHERS	6.4	10.1	-36%	0%	0%
TOTAL IMPORTS	2,797.3	2,782.5	1%		

CECIMO exports and imports per zones - 2016H2

in thousand euro. Export destinations and import origins

EXPORTS

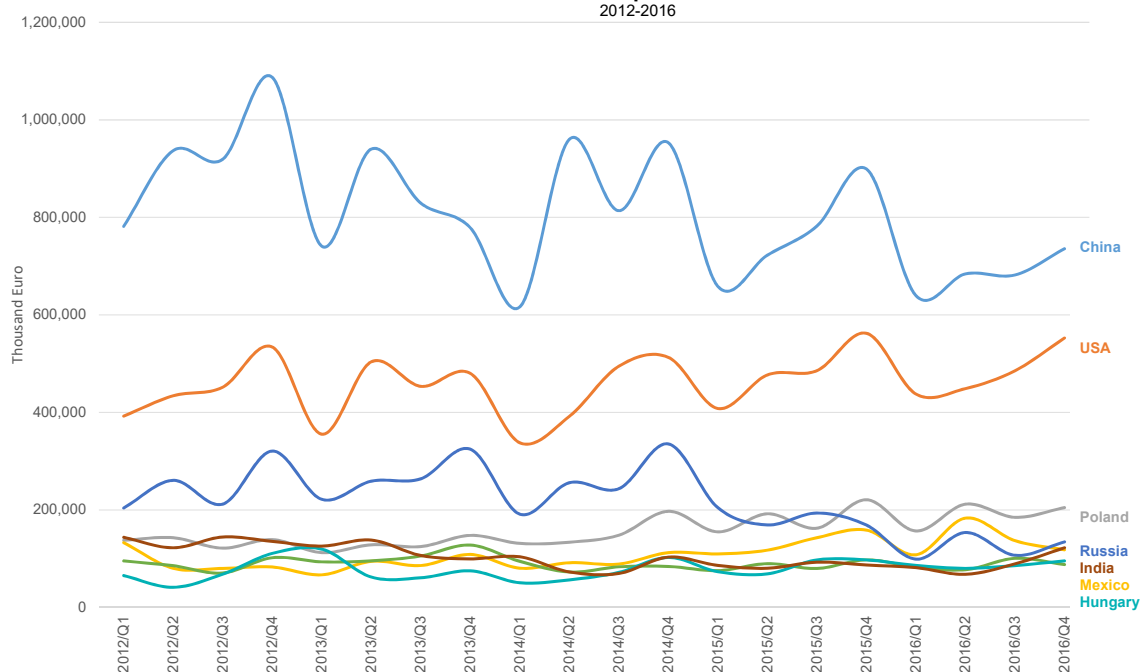
Zone	2016H2	2015H2	2016H2/ 2015H2	Share 2016H2	Share 2015H2
I. ASIA	2,286.9	2,487.9	-8%	24%	25%
II. AMERICAS	1,532.3	1,632.4	-6%	16%	16%
III. EUROPE	5,081.7	5,023.1	1%	53%	50%
CECIMO	4,015.1	3,870.5	4%	42%	39%
non CECIMO	1,066.6	1,152.7	-7%	11%	11%
IV. Russia + CIS	320.7	414.9	-23%	3%	4%
V. AFRICA	158.6	182.0	-13%	2%	2%
VI. OTHERS	224.3	277.4	-19%	2%	3%
TOTAL EXPORTS	9,618.0	10,030.9	-4%		

IMPORTS

Zone	2016H2	2015H2	2016H2/ 2015H2	Share 2016H2	Share 2015H2
I. ASIA	1,409.2	1,430.6	-1%	27%	27%
II. AMERICAS	214.0	225.5	-5%	4%	4%
III. EUROPE	3,404.0	3,493.9	-3%	65%	65%
CECIMO	3,266.5	3,370.8	-3%	63%	63%
non CECIMO	137.5	123.1	12%	3%	2%
IV. Russia + CIS	12.1	6.1	98%	0%	0%
V. AFRICA	3.6	2.9	23%	0%	0%
VI. OTHERS	12.2	15.6	-22%	0%	0%
TOTAL IMPORTS	5,209.8	5,334.2	-2%		

Evolution of CECIMO exports to its main markets

2012-2016



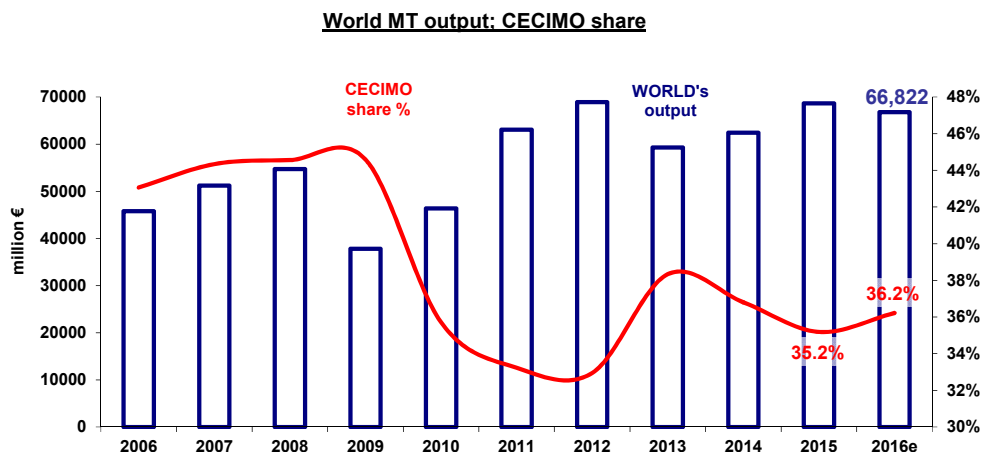
▲ 1.5 CECIMO production

After a 5% growth in last year production of the 15 CECIMO countries, 2016 CECIMO MT production is expected to scarcely increase above 24.2 billion euro. It is important to stress that this fact is taking place in a negative international context, as global production is forecasted to fall by almost 3%. Comparing the global production to the CECIMO one in 2016, CECIMO market share of production will increase beyond 36%.

Among CECIMO countries, the latest forecast on production shows production in all CECIMO countries to raise or remain fairly stable this year, except for the United Kingdom (-19% in euro, -13% measured in sterling pounds), Switzerland (-7.6%), Belgium (-6.7%), Austria (-4%), Czech Republic (-8%) and Turkey (almost -5%). Upward trends can be observed above all in France (+7.6%), Italy (+5.6%), Sweden (+4.2%) and Spain (+3%).

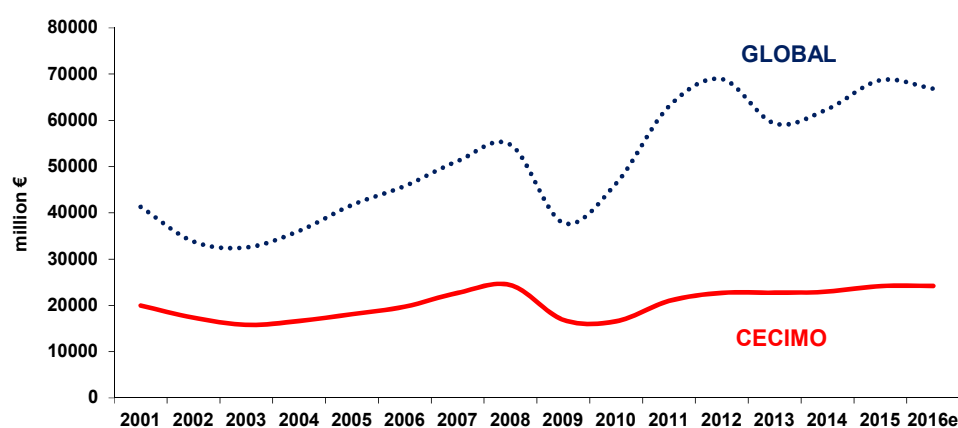
Thus the European machine tool industry has been able to keep its competitive position. Digitisation improvements in the European manufacturing sector are making machine tools exported by CECIMO countries more attractive. In addition, some previously postponed investments are positively influencing local machine tool sales.

A country-by-country analysis indicates that the European MT sector doesn't expect any significant change in the market shares for 2016. Germany, which together with Italy accounts for more than two thirds of CECIMO machine tool output, is, by far, the biggest CECIMO MT producing country with 46.2 percent of its total production last year. Italy and Switzerland represent respectively 19.3 and 12.0%, followed by Spain (3.9%), Austria (3.5%) and UK (3.4%). The three major CECIMO MT producers account for more than three quarters of the MT production in this group of countries.



See figures on next page

Global production of machine tools since 2001



▲ 1.6 CECIMO Business Climate Barometer

The latest edition of the CECIMO Business Climate Barometer keeps reflecting the improvement of the economic sentiment in Europe and in the machine tool sector. The collection of replies to the survey firstly distributed in mid-February 2017 took place until 31 April 2017. The data gathers altogether replies to the CECIMO questionnaire, responses sent by national associations from their own sources and, in the case of German companies, it takes into account data from the Ifo Institute. The responses in the CECIMO Business Climate Barometer are analysed as the difference (net percentage) between the share of companies reporting an increase and the share of companies reporting a decrease in their business activities, or their perceptions about the reality.

More than one third of the companies in the European machine tool sector, measured as net percentage, reported a good business situation. This value is slightly better than the one obtained in the previous Barometer last year. This broadly unchanged assessment of the companies' performance becomes a bit more cautious outlook, once looking ahead for the demand in January-March 2017, compared with the views expressed in November. Nonetheless, the projections are still quite positive and the predictions of the demand have improved in Germany in recent months. Moreover, the forecasts on exports during the first quarter ameliorated.

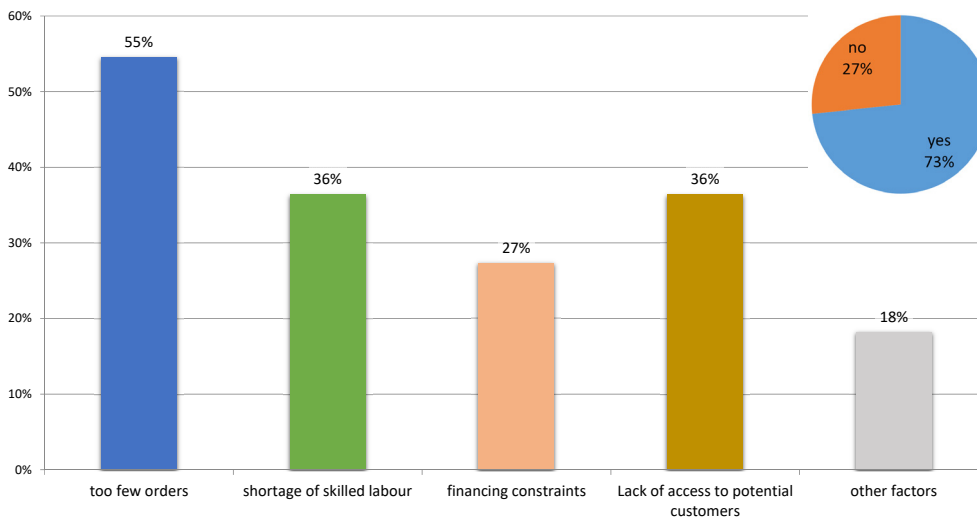
The net percentage of companies expecting the demand for their products to increase was 14%, versus 30% in the previous months. For its part, the estimates on the production for the same period moderately weakened from 41% to 24%, and the index of companies stating to have too few orders decreased from 62 in April to 55 late last year and, more importantly, to 31% in January 2017. Furthermore, it seems greater the role of foreign demand: the net percentage of businesses that are optimistic about their exports improved to 22% in the first quarter this year. On the other side, the overall level of employment is projected to move upwards, but at a slower pace than predicted at the end of last year: a net percentage of 18% informed about plans of increasing the company staff, versus 34% in the November edition of this survey. Just a marginal percentage of respondents expressed plans of reducing its labour force. In this respect, it is worth to mention that more than half of participants found their company limited by shortage of skilled labour. Concerning the companies' current rate of operation as a percentage of full (100%)

capacity, half of them are operating 70% or 80% -one third of managers surveyed reported a rate of operation of 80%-, 15% is at full capacity and more than one tenth is working overtime.

In general terms, it can be concluded that the trend and sentiment in the machine tool sector remain positive, and some improvements in some of these indicators can be reasonably expected in the coming months. From a market perspective, once again, Europe confirms its prominent place of European MT trade, but the survey also reveals that MT companies in the old continent are confident that their sales in Asia and Americas will increase in the short term.

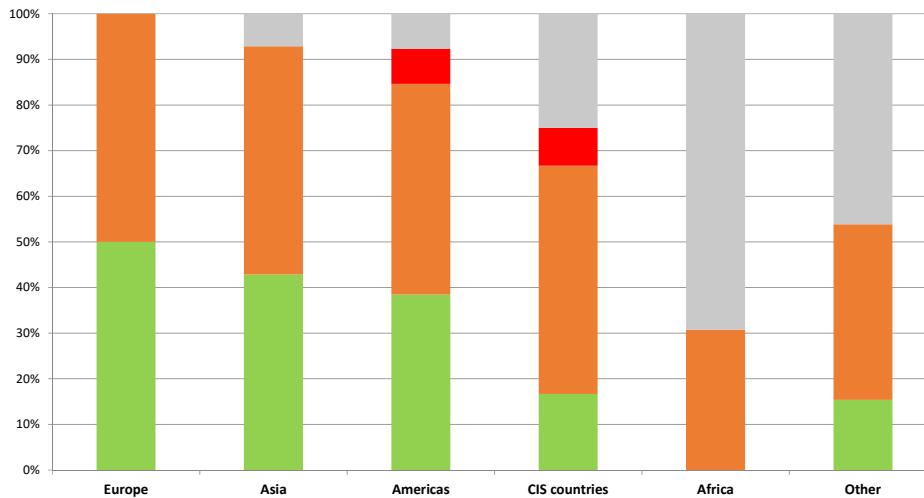


Are there factors limiting your output? If yes, what factors:



- we do not export to the region
- decline
- remain about the same
- increase

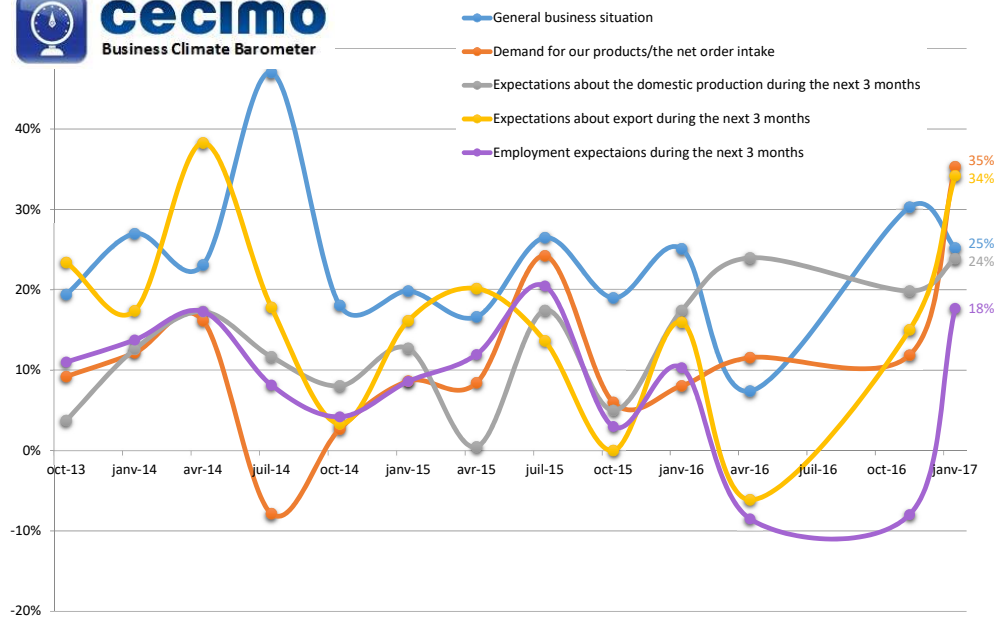
We expect our exports to different regions develop as follows:



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cecimo
Business Climate Barometer



2. Macroeconomic data in relation with machine tool orders

▲ 2.1 GDP

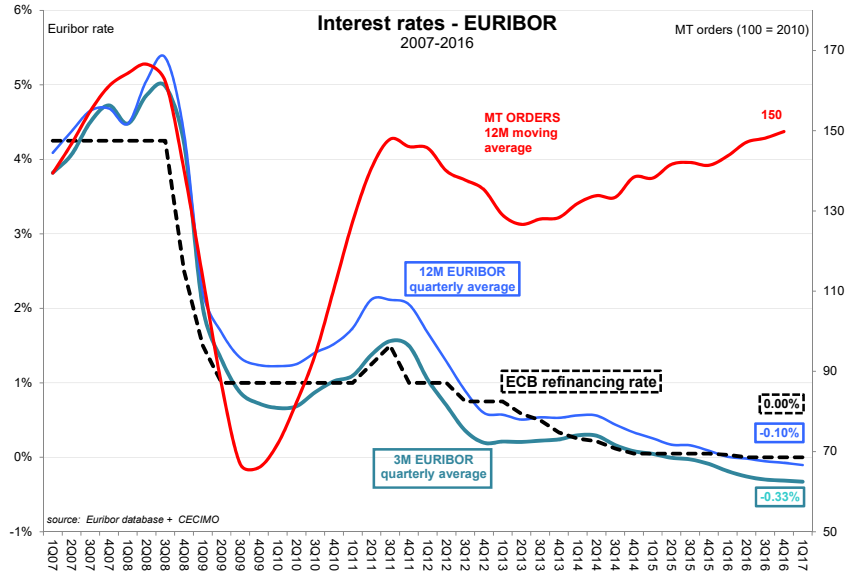
The global economic upswing continues to materialize and is expected to regain momentum in the years to come, rising at 3-3.5%. The International Monetary Fund forecasts slightly revised upwards its projection for the acceleration of the world nominal GDP: it is now expected to increase 3.5% in 2017 (up from 3.4% predicted in January) and 3.6% next year, which is a half percentage point stronger growth rate than in 2016. The institution, though, highlights some serious downside risks such as less general public favoured opinion of globalization, immigration and cross-border engagements. The World Bank also expects a close to 3% economic growth in the next year.

The international picture is quite mixed. Emerging markets and developing economies will lead the growth with rates of 4.5-5%, more than double than advanced countries. However, the situation varies quite significantly across this group of countries. China is performing better than expected and will probably grow above 6% both in 2017 and 2018. Russia and Brazil will put the recession behind: Russia's growth rate is 1.4% and Brazil's 0.2% this year and 1.7% in 2018. Oil prices recovery is definitely giving some respite to the Russian activity and is bolstering its economy. In Turkey, the political instability is negatively affecting the economy. The cyclical positive impact on manufacturing and the trade recovery, alongside with the expected fiscal stimulus in the US, are some underlying factors of the 0.4 percentage points upward revision for the growth pick up of advanced economies (1.6% versus 2%).

In Europe, the projections for the real GDP acceleration in 2017 and 2018 improved and, according to the latest European Commission forecast, it is set to be 1.9%. With regard to the recent evolution, and according to the latest data published by Eurostat, the seasonally adjusted nominal gross domestic product rose by 0.5% q/q in the European Union and by 0.4% q/q in the Euro Area during the third and fourth quarter of 2016. In interannual terms, data for the fourth quarter of 2016 reveals that the seasonally adjusted GDP quarterly rose by 1.8% in the EA and by 1.9% in the EU. Real GDP rose between 1.6% and 1.9%, taking into consideration the whole 2016. It rose at a quarterly rate of 0.3% in July-September last year, thanks to the contributions from the domestic demand. The European Commission projects the real GDP to accelerate at a yearly pace of 1.8% in 2017 and 2018. On a country-by-country analysis, Estonia is expected to top the 2017 ranking with a growth rate close to 2.8%, while Belgium, Germany, Spain, Latvia, Lithuania and Luxembourg will see a rise of their output of around 2%. On the negative side, Slovakia and Ireland are likely to grow at 1% rate or less. As for the official figures for the first quarter this year, which are not still available in all EU countries at the time this report is drafted, the GDP quarterly increased around 1% in Austria and Lithuania, 0.7% in Netherlands, 0.6% in France and 0.3% in Germany.

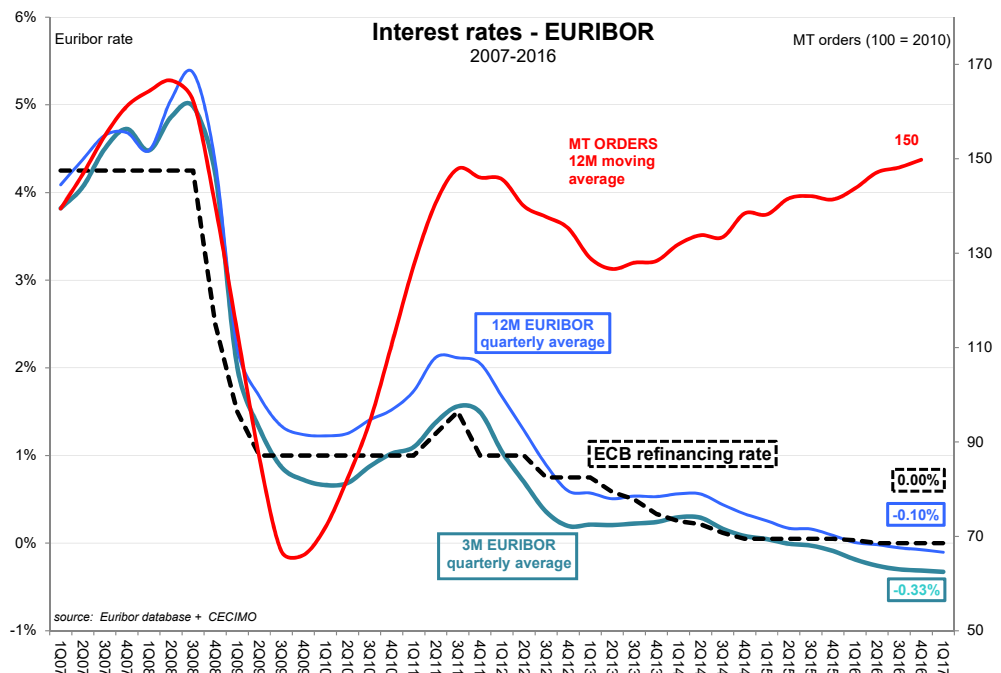
In the US, growth slowed down last year due to the persistence of stagnant productivity, subdued investment and weak level of exports: the real GDP annual growth rate was 1.6%, which is one percentage point less than in the previous year and half the world average. According to the first estimate released by US authorities, this indicator increased 0.7 percent in the first quarter of 2017.

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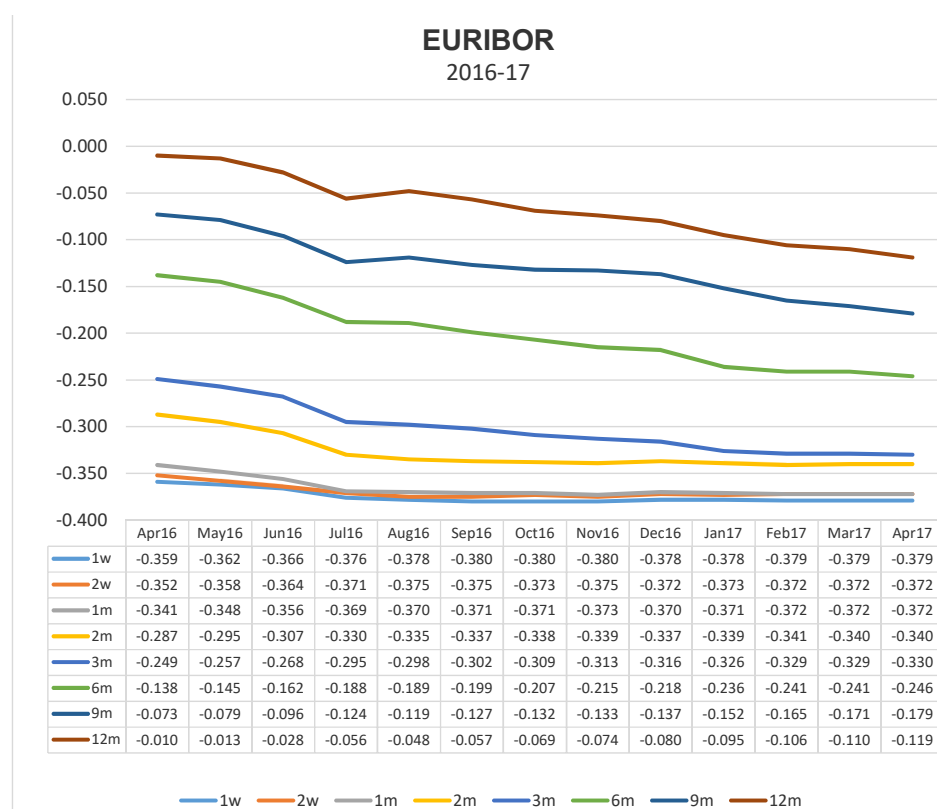


▼ 2.2 Interest rates – EURIBOR ⁱ

The Governing Council of the European Central Bank preserved quite favourable financing conditions by keeping the key interest rates for the Euro Area unchanged at its meetings on 9 March and 27 April 2017. Thereby, the rate on the deposit facility continues at -0.4%, while the rate on the marginal lending facility and the interest rate on the main refinancing operations have remained unchanged since March 2016 at 0.25% and 0% respectively. There is no interest rate increase in sight: the institution, which is responsible for managing the euro, defining and implementing monetary policy for the EA, does not foresee to raise interest rates for a while and, instead, expects them to remain at current or lower levels well past the end of this year. Furthermore, the ECB keeps reaffirming its commitment to the asset purchase programme as it was communicated in the past: it will continue to be in place at a monthly pace of 80 billion euro until the end of March 2017, at 60 billion euro from April to December 2017 and even beyond if necessary. Besides, the main decision-making body of the ECB confirmed that, if needed, the programme could expand in terms of size and/or duration. This scenario could take place, for instance, in case of unwarranted tightening of financial conditions or an important deterioration of economic growth.



In average 2016 values, the 3-months and 12-months Euribor (short for EURO InterBank Offered Rate) were -0.265% and -0.035% respectively. Not only these historically low values remains at the beginning of 2017, but also the Euribor continues falling down: the average 3-months Euribor reached -0.330% in April, slightly down from its March and February value of -0.329% and its January value of -0.326%, after having registered -0.326%, -0.316%, -0.313% and -0.309% in the previous months. The 12-months Euribor interest rate also kept dropping, a downward trend seen since last summer: its average value in April 2017 was -0.119%, lower than the -0.110% in March, -0.106% in February, -0.95% in January, -0.080% in December and 0.074% in November. A similar trend was registered for loans of other maturities, as shown in the figure below.



In the US, the Fed will likely to raise interest rates more than once this year, at a faster than previously expected pace.

▲ 2.3 Inflation

Inflation in emerging and developing economies (4-4.5%) is projected to be more than double than in the advanced markets (around 2%) in the coming years.

In Europe, in spite of the subdued underlying inflation pressure, inflation is on the way back and continues its upward trend from the very low values showed until mid-2016, mostly supported by energy and food price inflation. Although the inflation rate is gradually increasing this year and this upward trend is holding

Continued ►

the course towards a yearly rate of 1.8% and 1.6% in the EA, according to the European Central Bank (ECB), it is not still solid and the underlying inflation pressure is subdued. As it is widely known, the ECB aims at supporting an inflation below but close to 2% over the medium term.

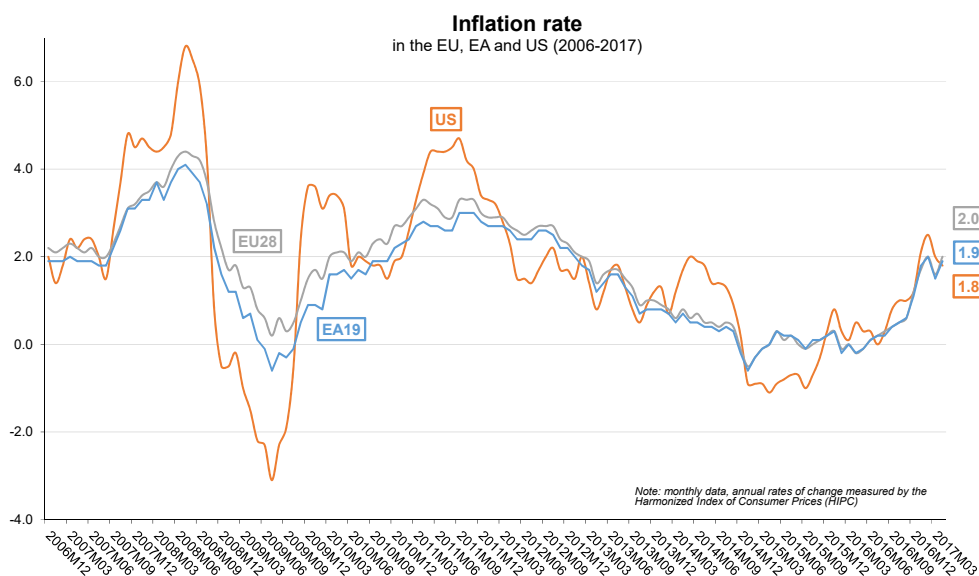
Following a rise in the second half of last year, in interannual terms, the general level of prices rose at a 0.4% monthly rate and 1.9-2% annual rate in April. The only European country that registered a negative annual rate was Iceland (-0.9%). Thereby, the annual inflation keeps picking up from the very low levels of last year and, in general terms, it is set to revive this year in the advanced economies, allaying the fears of deflation. Nonetheless, the underlying inflation is only gradually recovering and remains low. Not surprisingly, energy is still the primary driver of prices upwards pressure, despite the contained upturn of energy inflation, mainly due to the increase of oil production in the US. Prices of energy grew at an annual rate of 7.6% in April, up from 7.4% in March. It clearly contrasts with the negative values of 2015 (e.g. -7.3% and -5.8% in November and December respectively).

In the Eurozone, the inflation annual rate was 1.9% in April 2017, up from 1.5% in March and much higher than 2016 values, when the maximum reading took place towards the end of the year (0.6%). Excluding energy, EA annual inflation continues to rebound and leveled at 1.3% in April, up from 0.9% in March. The recovery of inflation, as it can be observed in the graphs below, is forecasted to reach annual rates of 1.8% in the EU and 1.6% in the EA for the whole 2017, up from the 2016 rate of 0.25%. Finally, the European Commission cut its forecast 0.1 percentage point: the EU inflation is now foreseen to be 1.8% in 2018, versus 1.3% in the EA. So, over the medium term, these forecasted levels are more or less in line with the monetary objective of an inflation below but close to 2%. However, at present, increasing energy prices are recovering inflation but the core inflation is still below targets.

Among the Member States within the Euro Area, the highest annual rates were registered in Estonia (3.6%), Belgium, United Kingdom, Luxembourg and Spain (all 2.6-2.7%), outdistancing the ones in Romania (0.6%), Switzerland and Ireland (both 0.7%). Compared with March 2017, in April the annual inflation rose across the vast majority of the EA countries. It suffered declines that worth a mention only in Czech Republic (from 2.6 to 2.1) and Hungary (from 2.7 to 2.3) and Slovenia (from 2.0 to 1.7). EA monthly rates of 0.8% fell by half in April, reaching the same growth rate of prices during that month than in the EU (0.4%).

In the industrial sector, production prices scaled down 0.3% in the EA and 0.2% in the EU. This decrease was driven by the aforementioned price fall in the energy sector (minus 1.6-1.7%). In interannual terms, industrial producer prices rose by 3.9% in the EA and 4.6% in the EU. It confirms the swift of trend, clearly observed when comparing these values with the ones of 2015 (1.9% in the EU and 2.3% in the EA).

In the United States, the slowdown in energy, transport and health costs led to a reduction of the year-on-year consumer prices increase: it was 2.2% in April this year, lower than March value of 2.4%.



▲ 2.4 Industrial production index ⁱ

The industry sector is still the largest economic activity in the EU, accounting for 19% of total gross value added and for 15% of employment. On average terms, in 2016 the volume of industrial production (excluding construction) for the full year 2016 rose by 1.4% in the European Union and 1.3% in the Euro Area. The employment rose at a quarterly rate of 0.7-0.6% in the period January-September last year.

In February 2017, following an upward movement of the industrial production of 0.9% in the EA and 0.5% in the EU in January (monthly seasonally adjusted rates), it fell by 0.3% in the EA and by 0.2% in the EU. This slight slowdown was driven by declines in the production of energy (-4.7%) and, at a lesser extent, of non-durable consumer goods. Among the EU member states, the sharpest declines were registered in Ireland (-15.5%), France (-1.6%) and Croatia (-1.5%), while the largest increases were booked in Bulgaria and Slovenia (both +3.6%), Hungary (+3.4%) and Latvia (+3.2%). In March, the energy production kept falling (-2.8%) and the industrial production continues to decrease but only at a rate of -0.1%. The readings in Lithuania (-3.1%), Greece (-2.0%) and the Netherlands (-1.7%) are in contrast with the values registered in Romania (+2.6%), Estonia (+2.4%), Poland (+2.1%) and France (+2.0%).

When comparing March values with the ones of the same month last year, the growth of production in industry was 2.4% in the EU and 1.9% in the EA. Among the different sub industries, not surprisingly, the annual fall of energy production (-4.8% in the EA, -5.7% in the EU) is the main contributor to this trend. Analysing the period comprised between March 2017 and the same month of 2016, the production increased the most in intermediate goods (3.2-3.3%). On a country-by-country analysis, the highest year-on-year increases were registered in Estonia (+14.8%), Romania (+10.2%) and Latvia (+10.0%), and the only decrease in the Netherlands (-2.2%).

Continued ►

Finally, in terms of gross value added, provisional data indicates that the manufacturing sector (adding energy and utilities) grew at the same pace as the total GVA during the fourth quarter (+0.4%).

Industrial production

(percentage change compared with the previous month)

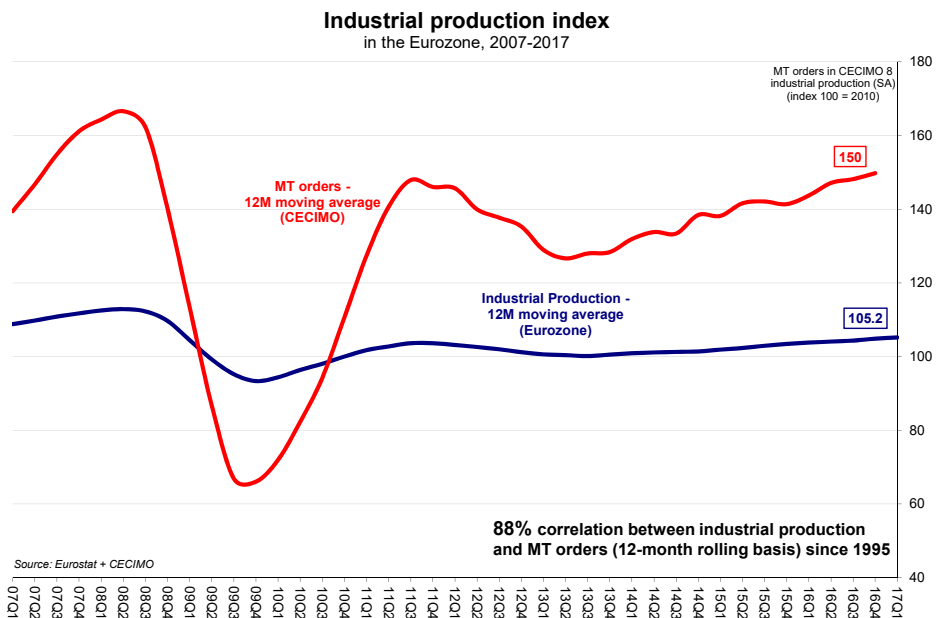
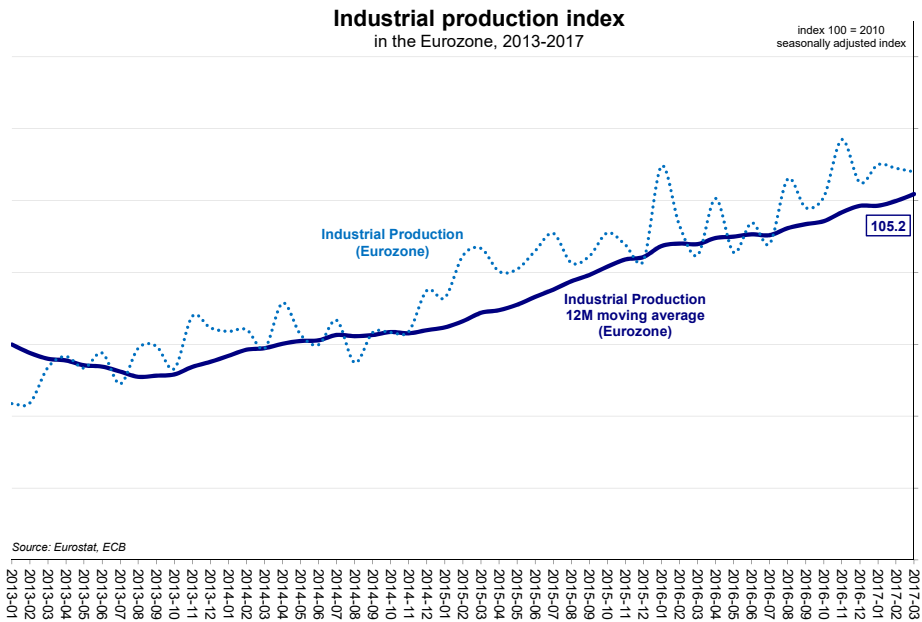
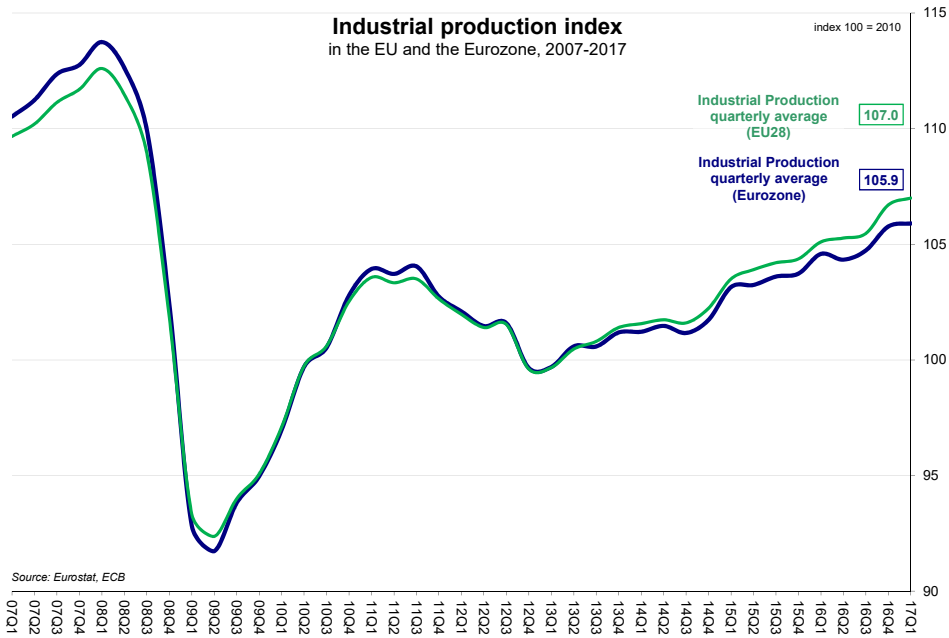
	EA19			EU28		
	January 2017	February 2017	March 2017	January 2017	February 2017	March 2017
Total industry	0.2	-0.1	-0.1	0.1	0.0	0.0
Capital goods	1.0	1.0	0.2	1.0	1.1	0.1
Intermediate goods	-1.0	1.2	0.3	-0.9	0.9	0.4
Energy	2.8	-4.9	-3.2	2.5	-4.0	-2.8
Durable consumer goods	-1.8	0.5	0.9	-1.9	0.8	0.9
Non-durable consumer goods	-1.3	-1.3	2.1	-1.6	-1.1	1.9

Industrial production

(percentage change compared with the same month of the previous year)

	EA19			EU28		
	January 2017	February 2017	March 2017	January 2017	February 2017	March 2017
Total industry	0.4	1.4	1.9	1.4	2.1	2.4
Capital goods	-1.5	1.5	2.7	0.4	3.0	2.4
Intermediate goods	0.7	2.0	3.2	1.7	2.4	3.3
Energy	7.7	2.5	-4.8	6.6	2.2	-5.7
Durable consumer goods	0.7	1.7	4.1	1.3	2.2	3.3
Non-durable consumer goods	-2.9	-2.3	1.7	-2.0	-1.4	2.9

In the United States, the industrial production moved up 0.4% in March and 1% in April, after falling advance 0.2% in February. This is the third consecutive monthly increase. Taking a look at the period January-March 2017, the industrial production has increased by around 1.8%. Among industry groups, manufacturing output was 2.3% higher than in the last quarter of 2016, and the production of machinery augmented 4.7% compared with the total production registered from October to December last year.

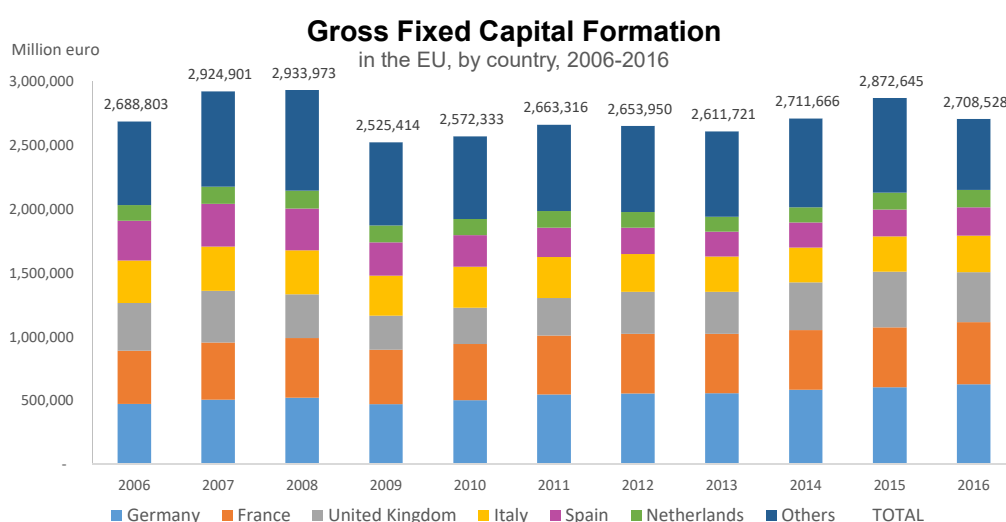


▲ 2.5 Gross Fixed Capital Formation ^①

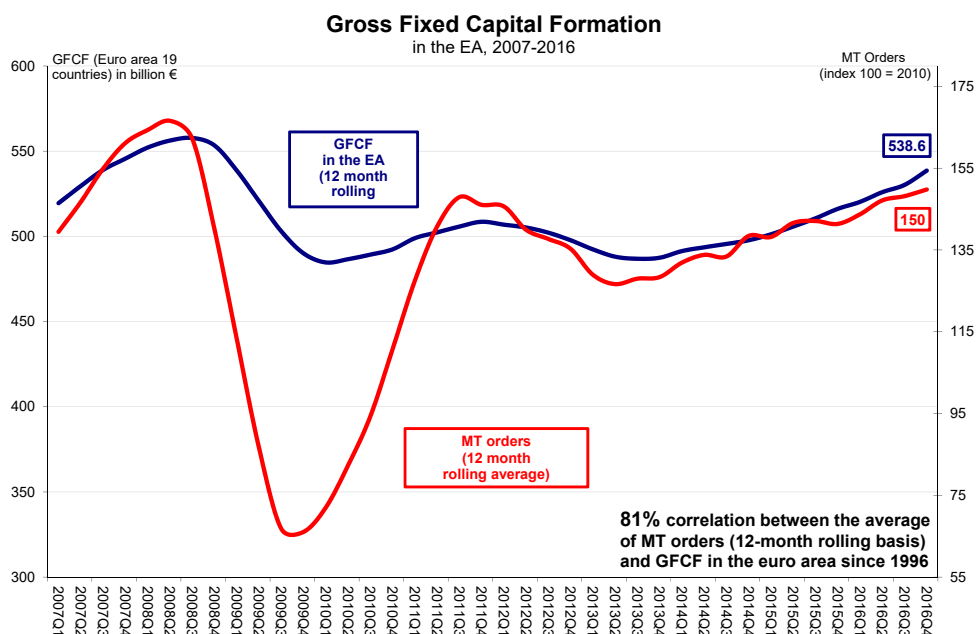
Updated available data of Gross Fixed Capital Formation (GFCF) during the fourth quarter last year is better than expected, both in the EA and the EU. Therefore, statistics of investments of last year present developments in Europe, achieving quite positive levels of investment growth, notably in the second and fourth quarter. This optimistic outcome is expected to continue beyond 2016, thanks to demand upturn, replacement needs, improving profits, accommodative monetary policy, positive consumer sentiment –with consumer spending at higher than expected levels– and favourable financing conditions (see sections 2.7, 2.10 and 2.11 for further information on these two latter). Years of subdued fixed capital formation should encourage investment levels to recover and move up.

Following a moderate growth in summer last year of 0.2% quarter-on-quarter, investment significantly rose at a growth pace above 4.2% towards the end of the year. Investment is benefiting from supportive financing conditions and better corporate profitability. The brisk job creation displayed by employment data also lead to higher households' real disposable income, which is causing increases in private consumption and expectations.

With regard to the GFCF in the machinery sector in the Euro Area, it amounted to 165.1 billion euro in the third quarter, which is higher than the provisional one communicated in the last edition of this report. The net increase in fixed assets is an important indicator for MT builders. In fact, there is a 81% correlation between orders (measured on rolling orders average) and GFCF in the Euro Area since 1996.



In 2016, among the Member States of the European Union, the largest investors were Germany (627 billion euro), France (486 billion euro), United Kingdom (394 billion euro), Italy (284 billion euro) and Spain (222 billion euro). In terms of percentage of GDP, the countries that devoted a larger portion of their output to GFCF in 2016 were Ireland (29.3%), Czech Republic (24.6%), Sweden (24.2%), Romania (23.4%), Belgium (23%) and Austria (22.9%). In contrast, the countries that occupied the last positions in this ranking were Greece (11.4%) and Portugal (14.8%). In the UK (16.7%), investment stagnated but private consumption grew in the last quarter of 2016. Brexit-related uncertainty is likely to increase next year, which is already affecting firms' investment and hiring decisions.

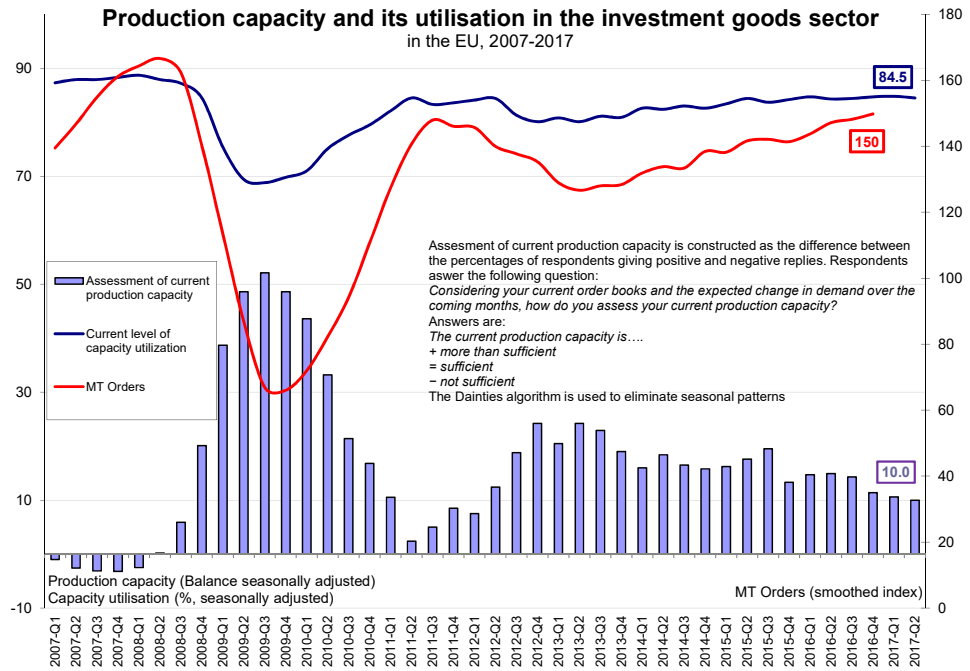


▲ 2.6 Capacity utilisation in the investment goods sector ⁱ

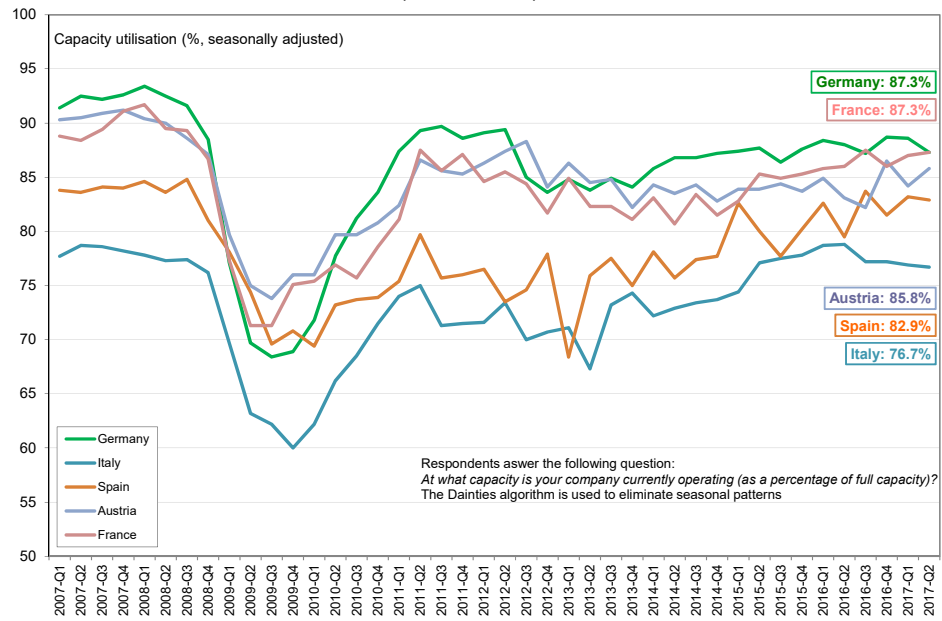
The capacity utilisation in the EU contracted 0.3 percentage points from 84.8 in the first quarter of this year to 84.5 in the second one. It is a little over the recording of one year ago (84.3), and just under the average pre-crisis levels (mean from 2000 to 2008: 84.7%). This reading occurs after an increase of this indicator for three quarters in a row: from 84.3% to 84.7% at the end of last year, and to 84.8% at the beginning of 2017. The highest correlation between the evolution of the level of capacity utilization and machine tools orders is observed when using one quarter time lag. In this case, the correlation is beyond 44% in the period 1996-2017. The capacity utilization in the EA showed the same trend but accentuated: companies in the EA forecast that the capacity utilization during the second quarter will be 84.6%, while it was 85.2% at the beginning of the year. This fall and the value itself are almost identical to the registered one year ago in the Eurozone. Among all EU Member States, the business surveys conducted by the European Commission revealed that the highest capacity utilizations are in Slovenia (88.4% projected for April-June 2017, up from 83.7% in the first quarter this year), Germany (87.3%, down from 88.6%), France (87.3%, up from 87.0%), United Kingdom (86.6%, up from 85.1%) and Austria (85.8%, up from 84.2%), while the weakest levels are in Greece (53.3%, down from 66.2%), Cyprus (61.1%, down from 63.6%) and Malta (65.0%, down from 81.8%). Italy, the second biggest producer of machine tools in Europe, marked a value below 77% (76.7, down from 76.9).

In the US, the capacity utilization for the industrial sector accelerated its growth and substantially ameliorated from 76.1% in March to 76.7% in April, which is 0.7 percentage points above the value of this indicator in April last year. Still, it is 2.5 percentage points below its long-run average. For the manufacturing sector, the capacity utilization in April rose 0.7 percentage points to 75.9%, which is 0.3 pp more than in February.

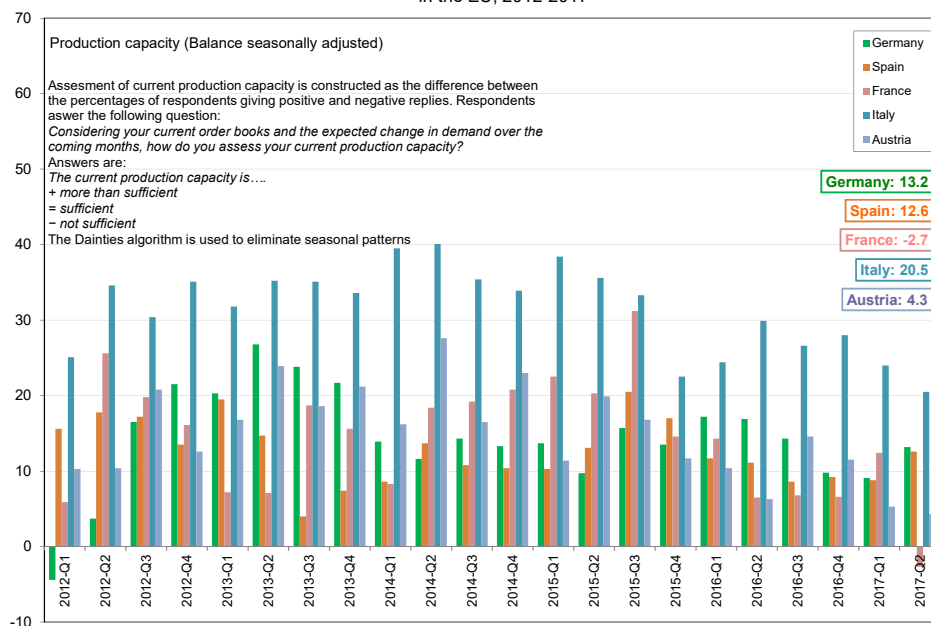
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Capacity utilisation in the investment goods sector of some top machine tools producers, 2007-2017



Production capacity in the investment goods sector in the EU, 2012-2017

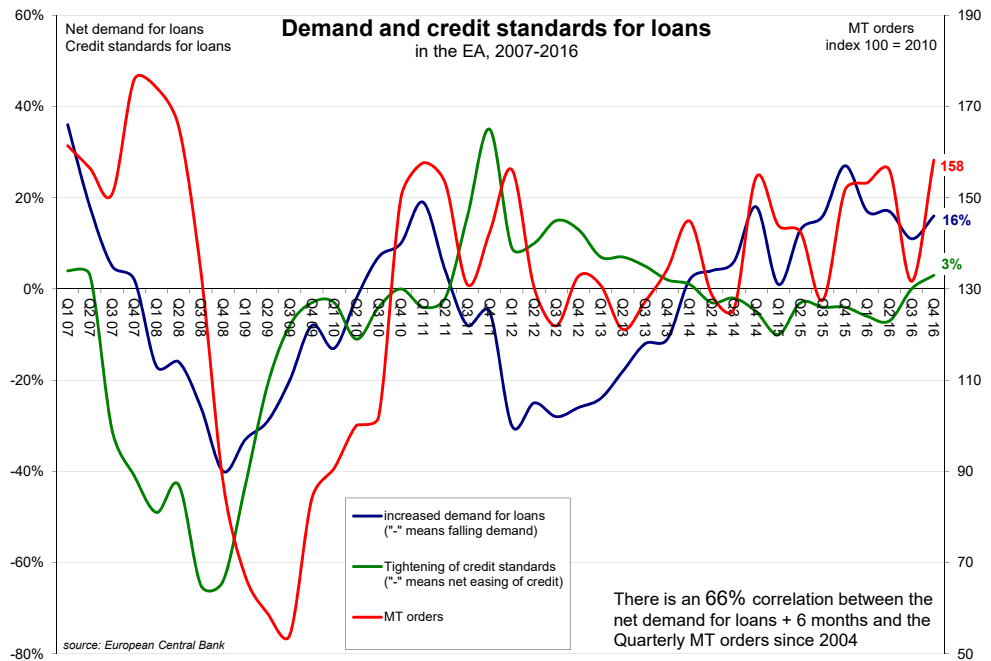


▲ 2.7 Bank lending survey ^①

Euro area banks continued to further reduce their share of rejected loan applications from enterprises, despite the tightening of credit standards in net terms –with the Netherlands playing the main role– in the fourth quarter, as consequence of the lower willingness of banks to tolerate risk. The rejection rate of loans to enterprises decreased at -5 net percentage rate in the fourth quarter of 2016, which follows declines of -7 and -4 net percentages in the two previous quarters. This was mainly due to the competitive pressure, but also somewhat to the banks' lower cost of funds and the decrease of balance sheet constraints. Across the large EA countries, the share of rejected applications for loans to enterprises decreased in Italy, Spain and the Netherlands, while it remained unchanged in Germany and picked up in France. Broadly in line with expectations, the overall credit standards of banks of the EU19 on loans to enterprises have experimented the first tightening in net terms (3%) since the fourth quarter of 2013. However, that 3% is largely the result of the tightening of credit standards to enterprises reported in the Netherlands (34%), as the indicator remain mostly unchanged in the majority of euro area economies. That being said, banks in the EA envisage to ease their credit standards applied to the loan approval for enterprises (-2% in net percentage) during the first quarter of 2017.

As expected, the approved loans and the net demand for loans to enterprises kept increasing during the fourth quarter of 2016 but at a slower path than foreseen. It registered a net percentage of 16%, following a 11% in the third quarter and a 17% rate in the second one. Among the several factors that push the loan demand, the low level of interest rates was the most important one, followed by the increase in debt refinancing, the higher dynamism in Merger and Acquisitions' operations and the increasing consumer confidence. The favourable house market contributed too. Among the large Euro Area members, the loan demand by enterprises increased in Germany, France, Italy and the Netherlands, while it moved down in Spain. Considering the different sizes of enterprises, the small and the medium ones (SMEs) increased their loan demand in a higher proportion than the largest ones: SMEs registered a 16 net percentage rise in the fourth quarter of 2016 (8% in the third one), while the large businesses experimented 9% net positive percentage rate in October-December last year and 6% in July-September.

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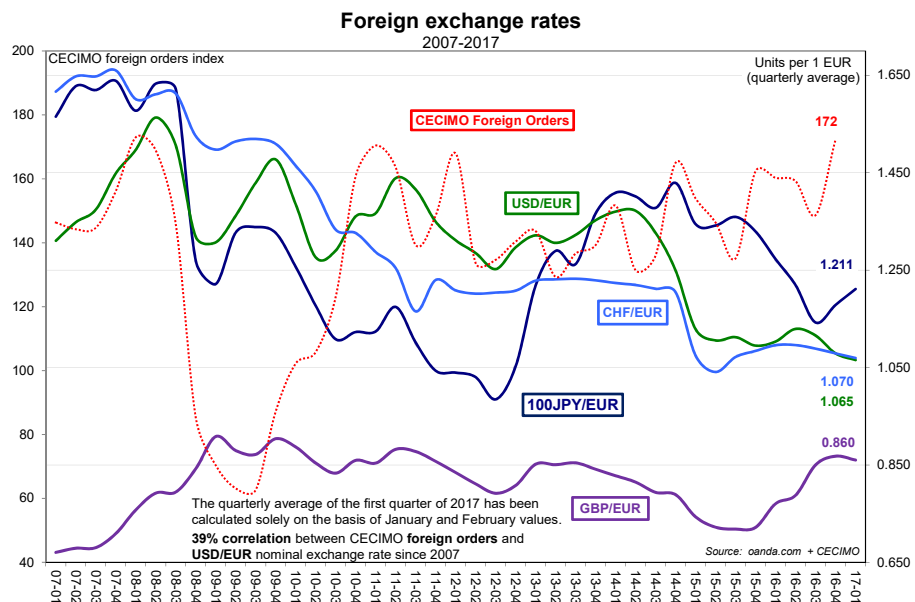


2.8 Foreign exchange rates

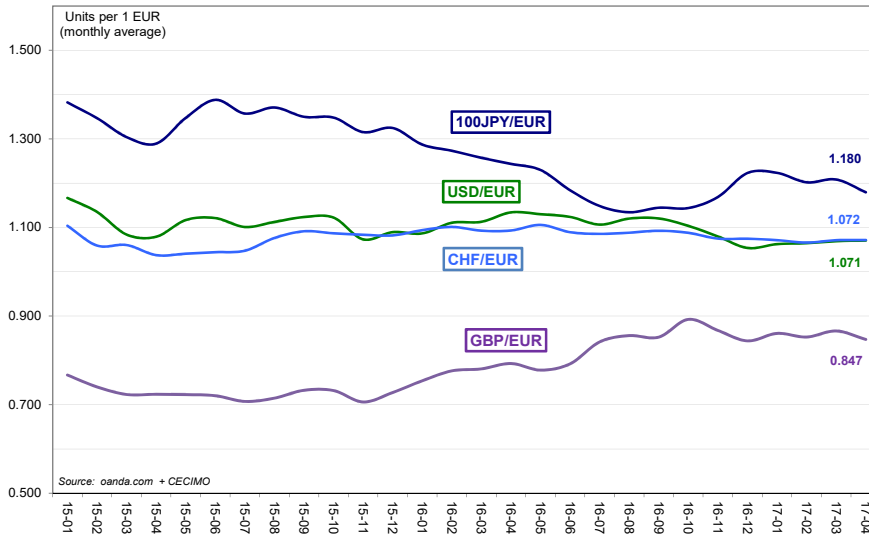
The EA currency has kept recording a small depreciation in trade-weighted terms since March. The nominal effective exchange rate of the euro (i.e. the weighted average of the euro exchange rate relative to a basket of currencies of the EA most important trading partners, non-adjusted for the effects of inflation) fell down in the first four months of 2017. Although since 9 March the euro appreciated 2.9% against the renminbi and 3.2% against the US dollar, the general trend was the opposite one: the euro weakened vis-à-vis the pound sterling by 1.4% and depreciated against the currencies of the majority of other non-Euro Area countries.

In nominal and bilateral terms, in March and April 2017 the euro appreciated more than 0.5% against US dollar and Swiss franc, while it depreciated -0.6% with respect to the pound and almost 2% against the Japanese yen.

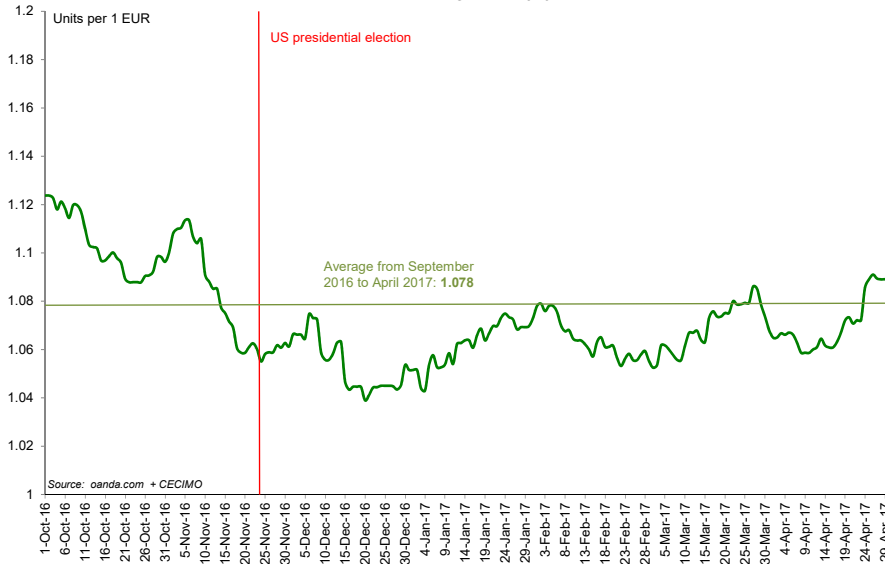
The US dollar recent depreciation this year was partly due to the signals from the Fed that the interest rises will not be four until the end of the year but probably two instead, which slows down the expectations of a faster pace of monetary policy normalisation. Taking a look at all big currencies, the US dollar only appreciated against the sterling.



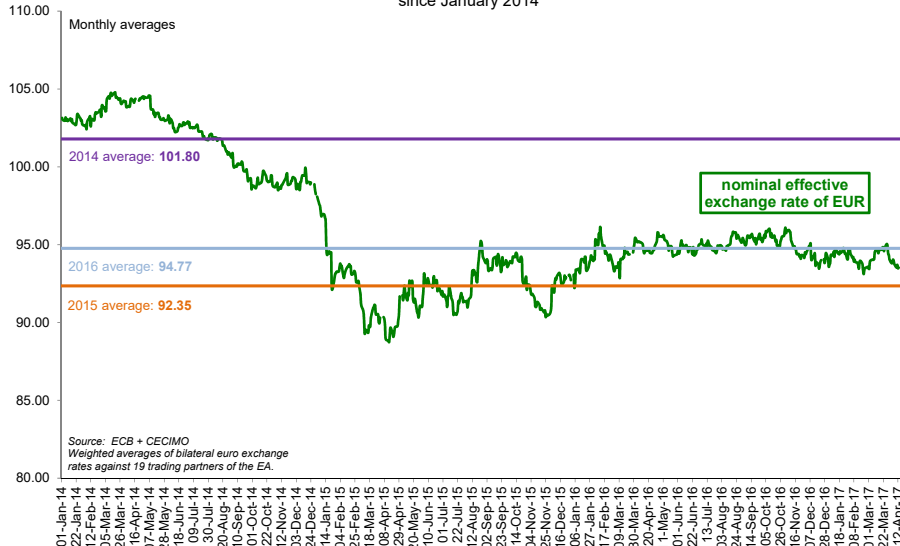
Foreign exchange rates
since 2015



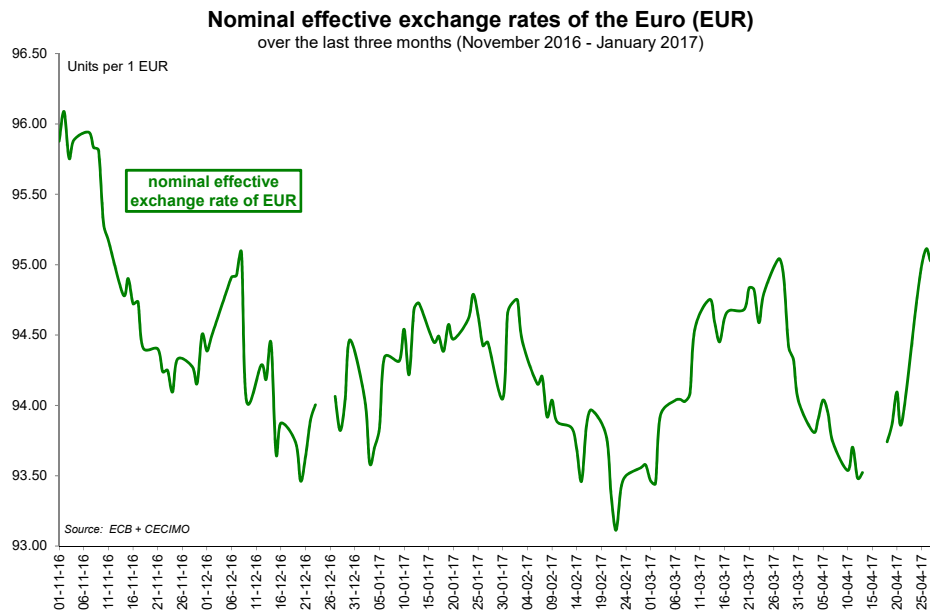
Nominal exchange rates Euro (EUR) to US Dollar (USD)
since October 2016



Nominal effective exchange rates of the Euro (EUR)
since January 2014



See figures on next page



▲ 2.9 Industrial employment

Job creation gathers pace but the conversion of GDP growth into employment is still modest: the industrial employment has not caught up yet with activity and output increases. In the last three years and a half, employment in the euro area increased by almost 5 million, which almost offsets the loss witnessed during the crisis period.

General unemployment is in its lowest levels since 2009. Specifically, in seasonally-adjusted terms, the EA unemployment rate in March 2017 was 9.5%, down from 10.2% one year ago. It is the most positive indicator since April 2009. In the EU, this variable slightly edged down from 8.1% in February to 7.9% in March 2017. The positive trend continued in April, with the EA reaching an unemployment rate of 9.3%, while the EU saw its index to further move down to 7.8%. These are the most promising values since late 2008 – early 2009.

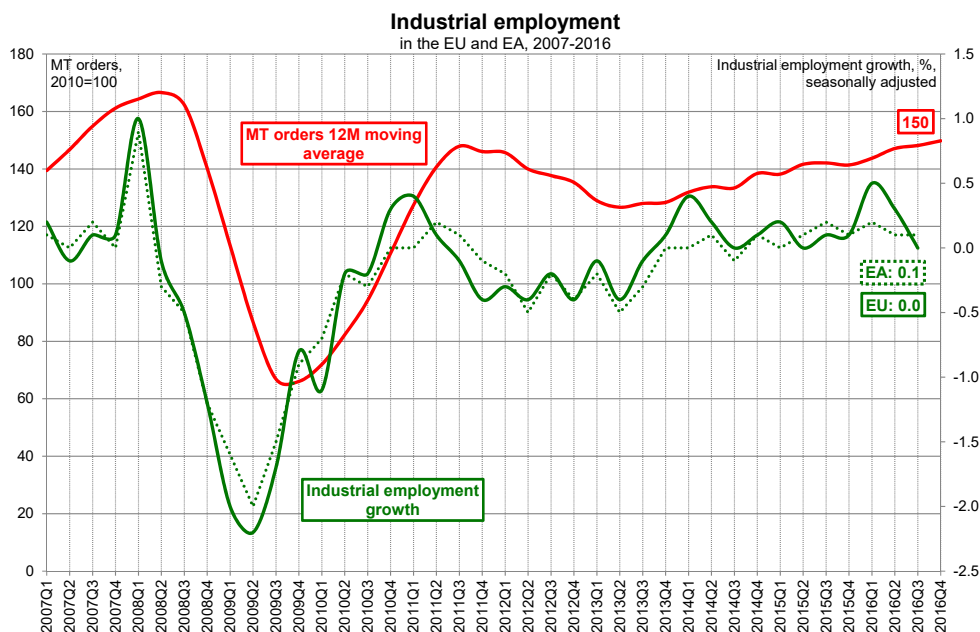
This indicator presents a mixed picture throughout the different EU Member States. In March 2017, it ranged from 3.2% in Czech Republic and 3.9% in Germany to 18.2% in Spain and around 23.5% in Greece. Compared to one year ago, the unemployment fell in all EU member states except five, and in two of those (Germany and Malta) remained stable. Croatia (from 14.0% to 11.3%), Portugal (from 12.0% to 9.8%), Spain (from 20.3% to 18.2%) and Ireland (from 8.3% to 6.4%) registered the largest drops. On the opposite side, the indicator booked an increase in Denmark (from 6.0% to 6.2%), Italy (from 11.5% to 11.7%) and Lithuania (from 8.0% to 8.1%).

In general, industrial employment made a very positive start of 2016, growing at rates not seen since the outbreak of the crisis (1.0% with no adjustment, +0.5% seasonally adjusted), and somewhat slowed down afterwards (+0.7%, -0.1% after adjustment). The correlation between machine tool orders and the industrial employment is 50.6% in the EU and 55% in the Eurozone. According to recent surveys conducted and published by the European Commission, managers'

employment plans in industry and services remain broadly flat at the beginning of 2017, but somewhat more optimistic in the EU than in the EA.

Finally, it is worth to mention that unemployment is certainly one of the main concerns and priorities for authorities and businesses. Despite the room for optimism reflected by the evolution of the indicators, youth and long-term unemployment are still serious causes for concern.

According to the latest Barometer conducted by CECIMO –see section 1.6 of the present report–, around 40% of managers expects to increase its staff in the short term. Some other information published by the European Commission reveals that business' employment plans in industry and services remained broadly flat at the beginning of the year and gives a bit more optimistic view for the EU than the EA.



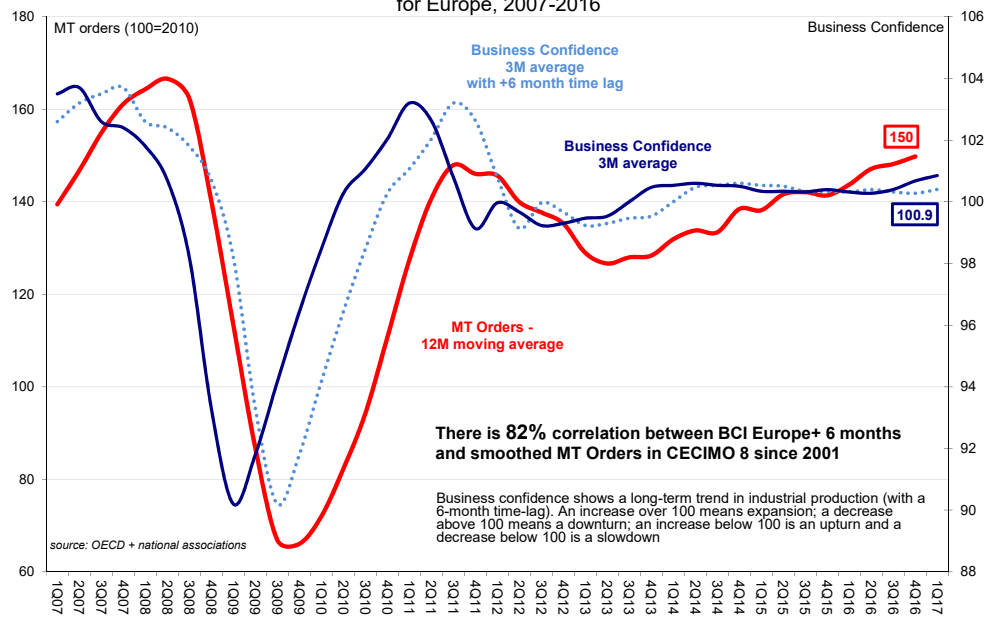
▲ 2.10 OECD Business Confidence Indicator for Europe ⁱ

The economic sentiment is improving and this can be also concluded on the basis of the latest readings of the Business Confidence Indicators (BCIs). They give an indication of a stable growth momentum, moving forward in the OECD and in the EA, particularly in Germany and Canada but also, at a lesser extent, in the United States, Japan, United Kingdom, France or Italy.

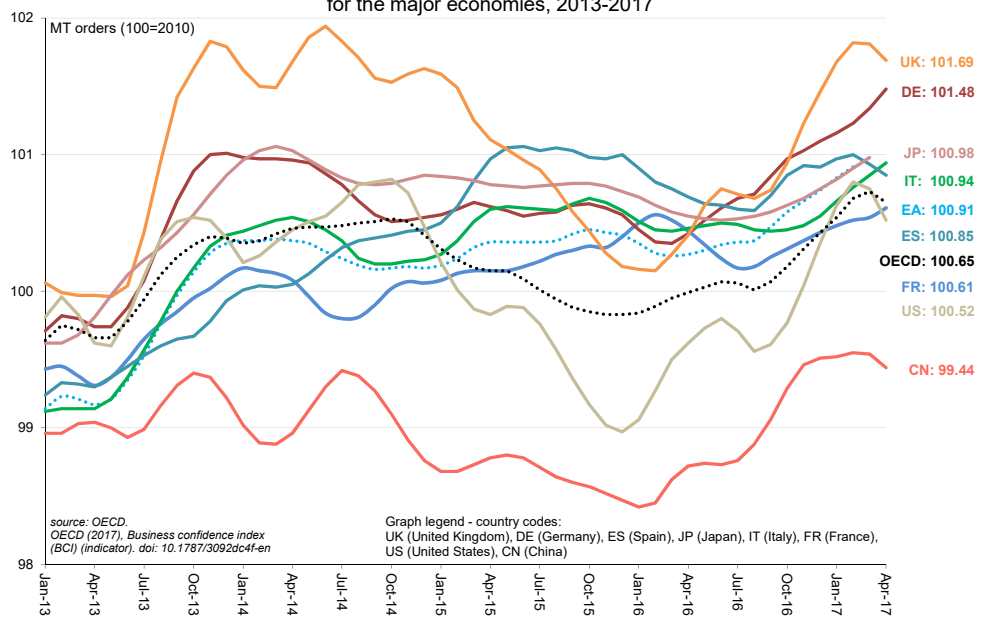
Among the major emerging economies, the BCIs signal an optimistic growth outlook for Brazil and Russia, while they picture stable growth momentum in China and India.

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OECD Business Confidence Indicator (BCI)
for Europe, 2007-2016



OECD Business Confidence Indicator (BCI)
for the major economies, 2013-2017

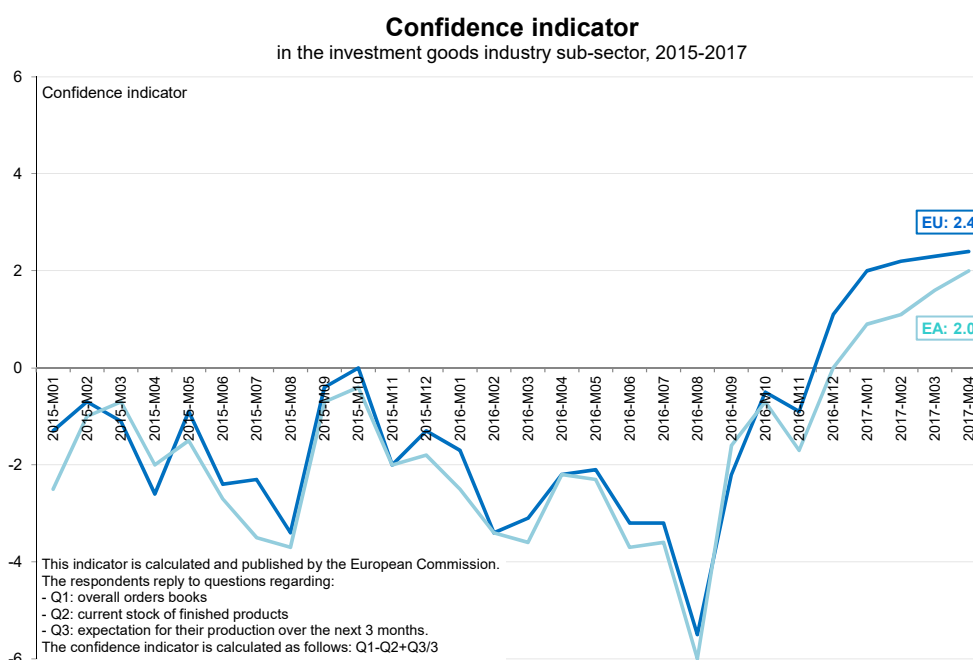


▲ 2.11 European Commission Economic Sentiment Indicator ⁱ

Following the improvement in Europe during the second half of 2016, underpinned by decreases of managers' assessments of stocks and increases in order books levels and production expectations, the EC Economic Sentiment Indicator (ESI) displayed sideways movement at the start of 2017. In April, the indicator for the EA noticeably increased by 1.6 and posted 109.6 points, before easing 0.5 points in May.

The confidence indicator also points out a robust growth momentum in the first quarter of 2017 both in the EU (2.4 in April, the fifth consecutive monthly positive growth) and the EA (2.0 in April, up from 1.6).

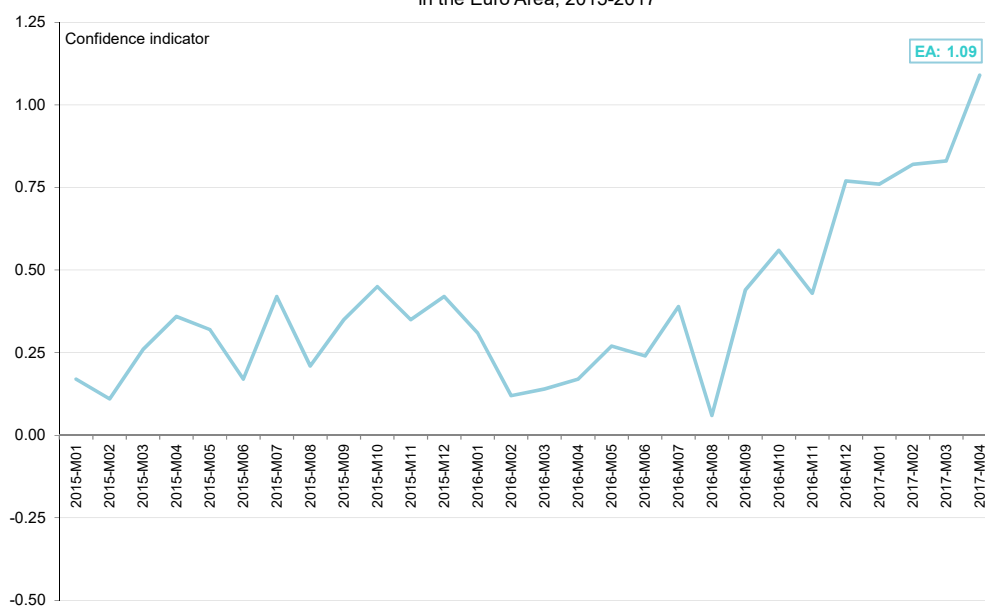
Among all EU Member States, the confidence and economic sentiment in Industry, as measured by the ESI in April, deteriorated markedly in Greece (-5.6), Lithuania (-7.5) and Poland (-8.8), and significantly went up in Czech Republic (+6.6), Sweden (+17.9), Slovenia (+9.3) and the United Kingdom (+6.6). For the overall ESI, the EU and the EA registered an improvement at around +1.5. The overall index for the Euro Area broke once again its record of 2016 (109.6 in April 2017, up from 108.0 in March) and the index for the EU augmented to 110.6. Industry confidence, which is weighted 40 per cent in the calculation of the ESI, augmented by 1.3.



The Business Climate Indicator (BCI) increased in April compared to the previous month. The indicator for the EA moved up 0.26 points, posting at 1.09. Managers' views on the past production, order books and stocks of finished products improved considerably. In the aforementioned period of time, consumer confidence also stepped up by 1.4 points to -3.6 in the EA and by 0.8 point to -3.4 in the EU.

Continued ►

Business Climate Indicator in the Euro Area, 2015-2017



▲ 2.12 Purchasing Managers' Index ⁱ

Purchasing managers' indices remained strong in the first quarter of 2017, above the neutral 50.0 mark for the thirteenth month running, and posting at a quarterly average of 52.9, which is the best outcome since the second quarter of 2011. Looking back one year, a continued upwards trend of the global index can be observed, the neutral 50.0 mark during the past 13 months. The PMI closed the year 2016 at a value of 52.7, level lastly recorded at the beginning of 2014.

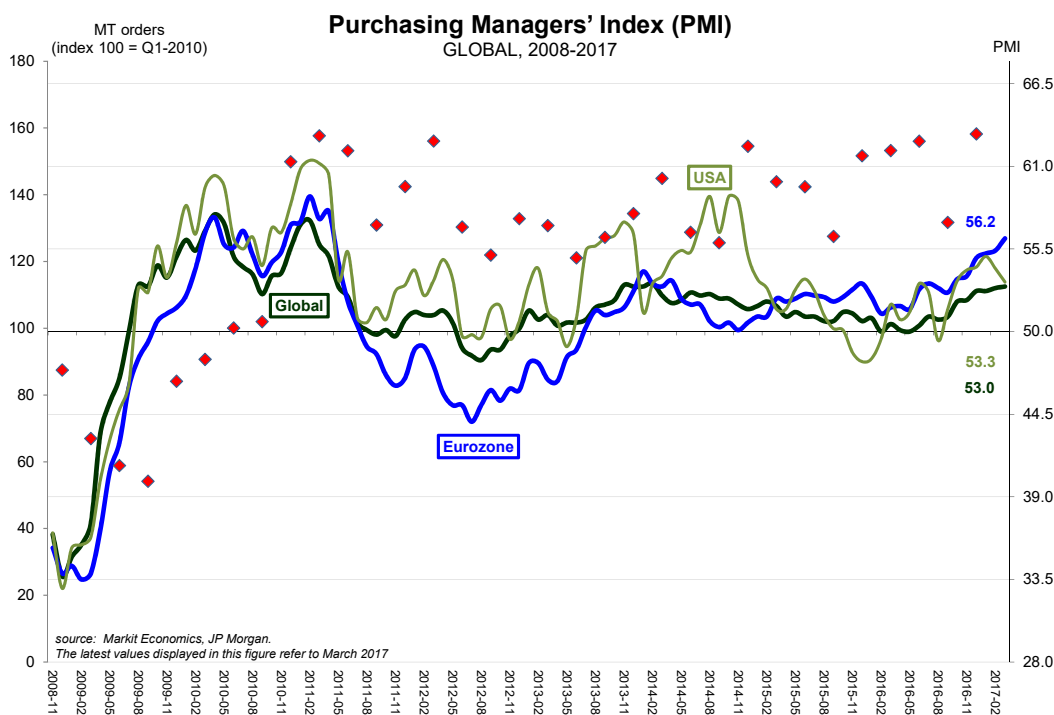
At the start of 2017, global output and orders rates of expansion improved, business confidence increased to a 20-month high and the index rose to 52.9 in February. In April, it recorded a value of 53.7, confirming a solid and broad-based expansion of the economic activity. Jobs creation was positive again in April but at a slower pace. As for inflation, it is rising at similar rates to previous months.

Global Manufacturing and Services PMI (Nov. 2016 – Mar. 2017)

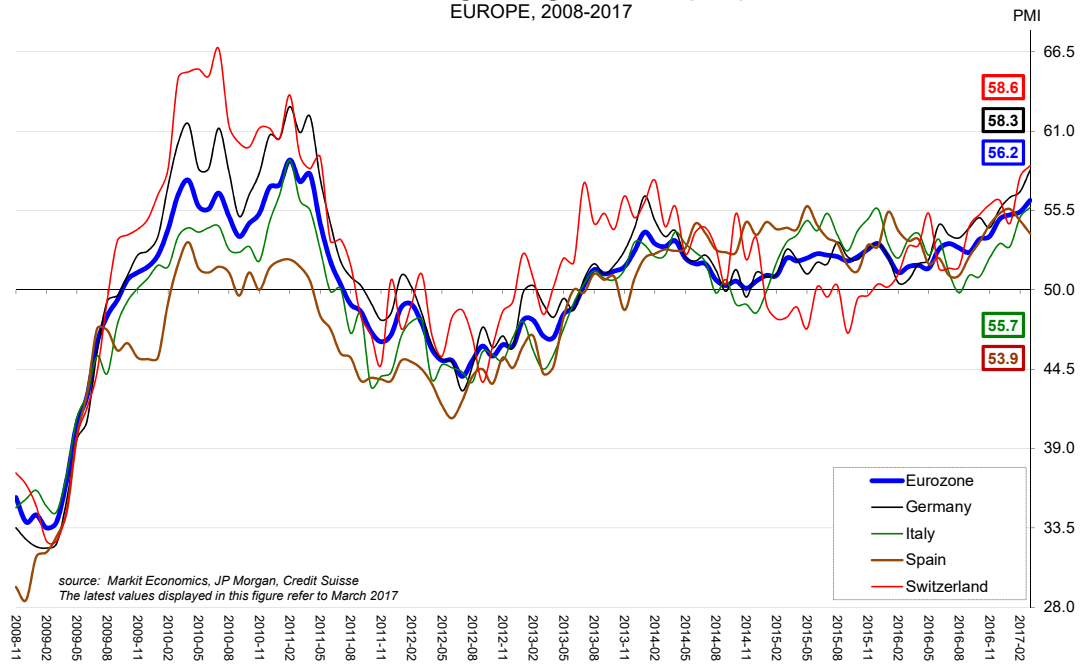
	December 2016	January 2017	February 2017	March 2017
Output	53.6	53.9	53.4	53.8
New orders	53.8	54.3	53.8	53.6
Employment	52.0	52.0	52.0	51.8
Input prices	57.1	57.4	56.3	56.2
Output charges	52.4	52.2	51.7	52.0
Backlogs	50.6	50.9	50.5	50.9

Eurozone output is on the rise and accelerated to a six-year high at the beginning of the second quarter this year. New orders rose throughout the past 29 months. Jobs creation slowed also in Europe but the trend, showed over the past two years and a half, continued. Concerning the inflation rate, the index signalled that core inflation will probably trend higher in coming months. Another positive news is that risks seem to diminish. Therefore, the improvement in business conditions and economic sentiment in Europe is a reality, which can be portrayed taking a look at the March indexes of markets with PMI indexes above 55 points, such as that of Austria (56.8), Czech Republic (57.5), Germany (58.3), Italy (55.7), Netherlands (57.8), Switzerland (58.6) and the UK (57.3). In all EA countries for which data is available, the PMI recorded more than 52 points in April. Markit concluded that *“the encouraging picture from the survey data is likely to help raise many forecasters’ expectations of eurozone economic growth in 2017, and will also no doubt add to speculation that ECB rhetoric will turn increasingly hawkish”*.

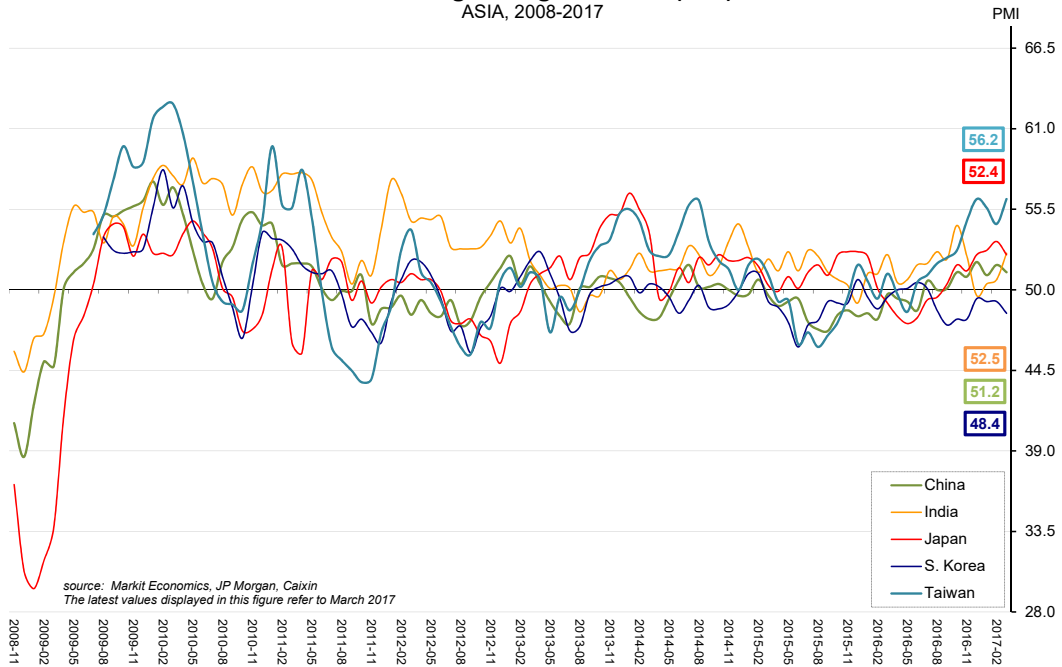
Chinese business outlook for the next 12 months reflects a more optimistic view but the sentiment weakened a little since February. In the US, the momentum eased a bit, with the output index going down from 53.0 in March to the April’s value of 52.7 and the seasonally adjusted PMI registering 52.8 down from 53.3 the previous month. Input price inflation kept rising and it has been the highest since June 2015. Businesses continued to step down their hiring rate. Regarding Japan, its manufacturing sector benefited from higher levels of exports in April and the production is rising at a quarterly rate close to 2%.



Purchasing Managers' Index (PMI) EUROPE, 2008-2017



Purchasing Managers' Index (PMI) ASIA, 2008-2017



Glossary

1.1 CECIMO8 orders

This section presents the “new orders received index” showing the development of the machine tool demand as an indication of future production. An order is defined as the value of the contract linking a producer and a third party in respect of the provision by the producer of goods and services.

The CECIMO8 orders index combines the relevant indexes of Austria, the Czech Republic, France, Germany, Italy, Spain, Switzerland and the United Kingdom.

The weights of the different indexes correspond to the countries shares in total production of the eight countries in 2010. The new orders received are split according to the origin of the order, based on the change of ownership. This identification is the basis for domestic and foreign new orders. The origin is determined by the residency of the third party that has made the order.

1.3 MT-IX

MTIX is an index based on the capitalization of 23 leading, publicly listed machine tool producing companies. The capitalization of the companies included is weighted by the share of machine tool turnover in total revenues. The total capitalization calculated in that way is weighted then by an estimated share of the European companies in the world total output in 2010.

2.2 Interest rates - Euribor

Euribor® (EURO InterBank Offered Rate) is the rate at which euro interbank term deposits are being offered by one prime bank to another within the EMU zone.

Monthly data are calculated as averages of daily values from the banks with the highest volume of business in the euro area money markets.

<http://www.euribor-ebf.eu/>

2.4 Industrial production index

The objective of the production index is to measure changes in the volume of output at close and regular intervals, normally monthly. It provides a measure of the volume trend in value added over a given reference period. The production index is a theoretical measure that must be approximated by practical measures. Value added at basic prices can be calculated from turnover (excluding VAT and other similar deductible taxes directly linked to turnover), plus capitalised production, plus other operating income plus or minus the changes in stocks, minus the purchases of goods and services, minus taxes on products which are linked to turnover but not deductible plus any subsidies on products received.

Industrial production is compiled as a fixed base year Laspeyres type volume-index.

Base period: Year 2010 = 100.

Source: Eurostat.

2.5 Gross Fixed Capital Formation

The Gross Fixed Capital Formation (GFCF) consists of resident producers' acquisitions, less disposals, of fixed tangible or intangible assets. This covers in particular machinery and equipment, vehicles, dwellings and other buildings. The GFCF is a key determinant of both aggregate demand and supply.

Source: Eurostat and ECB.

2.6 Capacity utilization in the investment goods sector

Population: Investment goods producers. Data covered: Assessment of current production capacity, measured as a balance (seasonally adjusted); Current level of capacity utilization, measured in % (seasonally adjusted). More than 38.000

industrial firms are surveyed every month, while the biannual investment survey includes over 44.000 units. Answers obtained from the surveys are aggregated in the form of “balances”. Balances are constructed as the difference between the percentages of respondents giving positive and negative replies. The Commission calculates EU and euro-area aggregates on the basis of the national results and seasonally adjusts the balance series.

http://ec.europa.eu/economy_finance/db_indicators/surveys/documents/userguide_en.pdf

2.7 Bank lending survey

The bank lending survey is addressed to senior loan officers of a representative sample of euro area banks. Its main purpose is to enhance the understanding of bank lending behaviour in the euro area. The questions distinguish between three categories of loan: loans or credit lines to enterprises; loans to households for house purchase; and consumer credit and other lending to households. For all three categories, questions are posed on credit standards for approving loans; credit terms and conditions; and credit demand and the factors affecting it. The responses to questions related to credit standards are analysed in this report by focusing on the difference (“net percentage”) between the share of banks reporting that credit standards have been tightened and the share of banks reporting that they have been eased. A positive net percentage indicates that a larger proportion of banks have tightened credit standards (“net tightening”), whereas a negative net percentage indicates that a larger proportion of banks have eased credit standards (“net easing”). Likewise, the term “net demand” refers to the difference between the share of banks reporting an increase in loan demand and the share of banks reporting a decline. Net demand will therefore be positive if a larger proportion of banks have reported an increase in loan demand, whereas negative net demand indicates that a larger proportion of banks have reported a decline in loan demand.

<http://www.ecb.eu/stats/money/surveys/lend/html/index.en.html>

2.10 OECD Business Confidence Indicator (BCI) for Europe

The Composite leading indicators (CLI), which BCI is part of, comprises a set of component series selected from a wide range of key short-term economic indicators to ensure that the indicators will still be suitable when changes in economic structures occur in future. CLIs are calculated for 33 OECD countries (Iceland is not included) and several regional aggregates, based on enterprises’ assessment of production, orders and stocks, together with its current position and expectations for the near future.

These indexes are designed to anticipate turning points in economic activity relative to trend, on average 6 to 9 months before they happen. While theory says that a turning point in the CLI signals a turning point in the reference series, such turning points, in reality, are determined by a complicated process. Turning points in the detrended reference series are usually found about 4 to 8 months in advance. Therefore, one often needs to wait for several periods to draw a more definite conclusion. A useful way to exploit the information in CLIs is to take their year-on-year growth rate.

Typical indicators in the CLI include orders and inventories changes, financial market indicators, business confidence surveys and data on key sectors and trend in the main trade partners.

The standardised BCIs represent only the manufacturing sector. It is based on companies’ assessment of production, orders, stocks and its current position and expectations. BCI shows a long-term trend in industrial production (with a 6-month time-lag). An increase over 100 means expansion; a decrease above 100 means a downturn; an increase below 100 is an upturn and a decrease below 100 is a slowdown.

<http://stats.oecd.org/mei/default.asp?lang=e&subject=5>

2.11 European Commission Economic Sentiment Indicator

The Economic Sentiment Indicator (ESI) is a composite indicator made up of five sectoral confidence indicators with different weights: Industrial confidence indicator, Services confidence indicator, Consumer confidence indicator, Construction confidence indicator and Retail trade confidence indicator. Confidence indicators are arithmetic means of seasonally adjusted balances of answers to a selection of questions closely related to the reference variable they are supposed to track (e.g. industrial production for the industrial confidence indicator). Surveys are defined within the Joint Harmonised EU Programme of Business and Consumer Surveys. The economic sentiment indicator (ESI) is calculated as an index with mean value of 100 and standard deviation of 10 over a fixed standardised sample period. Data are compiled according to the Statistical classification of economic activities in the European Community, (NACE Rev. 2). The industry confidence is weighted at 40 per cent in the calculation of the ESI. Source: DG ECFIN

2.12 Purchasing Managers' Index (PMI)

The Global Report on Manufacturing is compiled by IHS Markit and J.P. Morgan in association with ISM and IFPSM based on the results of surveys covering 9.000 purchasing executives in 30 countries. Together these countries account for an estimated 86% of global manufacturing output. Questions are asked about real events and are not opinion based. Data are presented in the form of diffusion indices, where an index reading above 50,0 indicates an increase in the variable since the previous month, below 50,0 a decrease and equal to 50.0 means no change on prior month. All the indices are seasonally adjusted at the national sector level.

<http://www.markiteconomics.com/Survey/Page.mvc/AboutPMIData>

Geographical information

CECIMO countries

The European Association of the Machine Tool Industries (CECIMO) bring together 15 national associations of machine tool builders from the following countries: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Italy, the Netherlands, Portugal, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Euro area (EA)

The euro area (EA19), also called Eurozone, consists of those Member States of the European Union that have adopted the euro as their currency. It includes Belgium, Germany, Estonia, Ireland, Greece, Spain, France, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Austria, Portugal, Slovenia, Slovakia and Finland.

European Union (EU)

The European Union (EU28) includes Belgium, Bulgaria, the Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, the Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden and the United Kingdom. EU15 refers to the 15 countries forming the European Union before the enlargements of 2004, 2007 and 2013.

Other symbols and acronyms

GDP

Gross Domestic Product

Billion

Billion means one thousand million

US

United States

Q1, Q2, Q3, Q4

1st quarter, 2nd quarter, 3rd quarter, 4th quarter

EUR / €

Euros

USD / \$

United States Dollar(s)

CHF

Swiss Franc(s)

ECB

European Central Bank

GBP

Great Britain Pound(s), the pound sterling

IMF

International Monetary Fund

WB

World Bank

MT

Machine tools

CECIMO countries

Countries whose machine tool sector is represented by CECIMO

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Member Associations

Austria: FMTI
Fachverband Metalltechnische
Industrie
www.fmti.at

Belgium: AGORIA
Federatie van de Technologische
Industrie
www.agoria.be

Czech Republic: SST
Svazu Strojírenské Technologie
www.sst.cz

Denmark: The Manufacturing Industry
a part of the Confederation of Danish
Industry
ffi.di.dk

**Finland: Technology Industries of
Finland**
www.teknologiateollisuus.fi

France: SYMOP
Syndicat des Entreprises de
Technologies de Production
www.symop.com/fr

Germany: VDW
Verein Deutscher
Werkzeugmaschinenfabriken e.V.
www.vdw.de

Italy: UCIMU
Associazione dei costruttori Italiani
di macchine utensili robot e
automazione
www.ucimu.it

Netherlands: FPT-VIMAG
Federatie Productie Technologie /
Sectie VIMAG
www.fpt-vimag.nl

Portugal: AIMMAP
Associação dos Industriais
Metalúrgicos, Metalomecânicos e
Afins de Portugal
www.aimmap.pt

**Spain: AFM - Advanced Manufacturing
Technologies**
Asociación española de fabricantes
de máquinas-herramienta, accesorios,
componentes y herramientas
www.afm.es

Sweden: MTAS
Machine and Tool Association of
Sweden
www.mtas.se

Switzerland: SWISSMEM
Die Schweizer Maschinen-, Elektro-
und Metall-Industrie
www.swissmem.ch

Turkey: MIB
Makina Imalatçileri Birliği
www.mib.org.tr

United Kingdom: MTA
The Manufacturing Technologies
Association
www.mta.org.uk

cecimo

is the European Association representing the common interests of the Machine Tool Industries globally and at EU level. We bring together 15 National Associations of machine tool builders, which represent approximately 1300 industrial enterprises in Europe (EU + EFTA + Turkey), over 80% of which are SMEs. CECIMO covers 98% of total Machine Tool production in Europe and about 36% worldwide. It accounts for almost 150,000 employees and a turnover of nearly €24 billion in 2016. Approximately 75% of CECIMO production is shipped abroad, whereas around half of it is exported outside Europe. CECIMO assumes a key role in determining the strategic direction of the European machine tool industry and promotes the development of the sector in the fields of economy, technology and science.