

# cecimo

European Association of the Machine Tool Industries  
and related Manufacturing Technologies

# Economic & Statistical Toolbox

Third Quarter 2018



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# Introduction

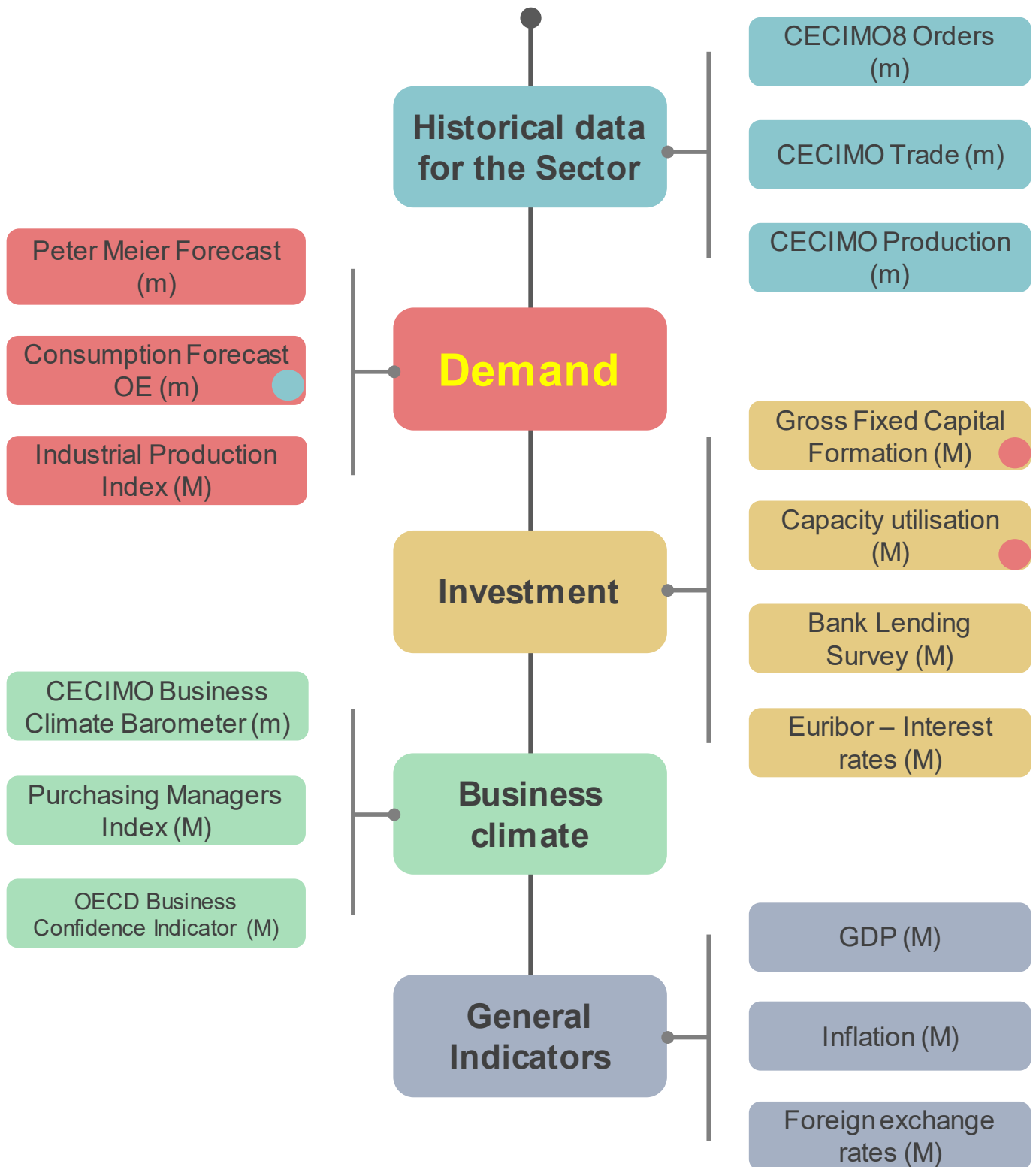
The EU economy is entering its sixth year of uninterrupted growth. But the rebound of global growth, driven by stronger-than-ever trade in 2017, is wearing off amid greater trade tensions and an economic outlook clouded by domestic and interrelated external risks. Both the European Commission and the European Central Bank (ECB) have signalled that the European economy has moved down a gear.

Robust domestic fundamentals should support some economic activity. The ECB finally announced the end of its quantitative easing policy. But investment will still benefit from favourable financing conditions, despite the upcoming normalisation of the monetary policy.

In the third quarter, demand for machine tools is usually lower. But, this year, the drop appears to be sharper, due to the real economy context. GDP growth weakened, partially reflecting production bottlenecks in the car manufacturing sector. Inflation picked up in the third quarter but is moderating towards the end of the year. In the near term, growth is projected to recover.

To read previous versions of the toolbox on our website, visit: [www.cecimo.eu/site/the-industry/data-statistics/](http://www.cecimo.eu/site/the-industry/data-statistics/)

# Toolbox Mind Map

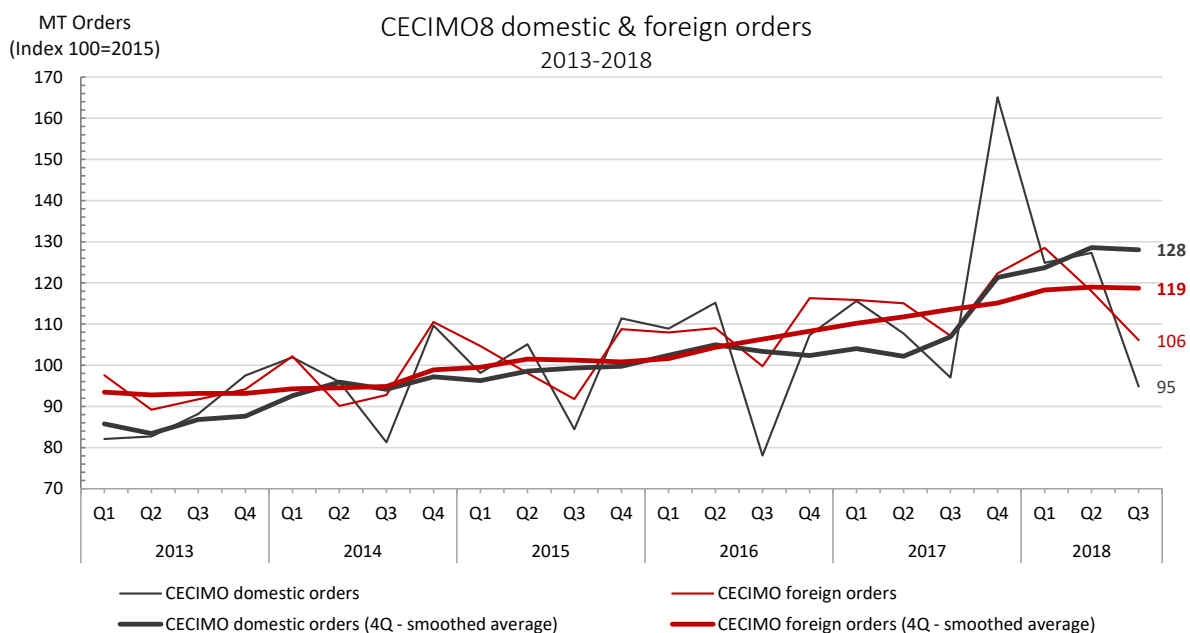


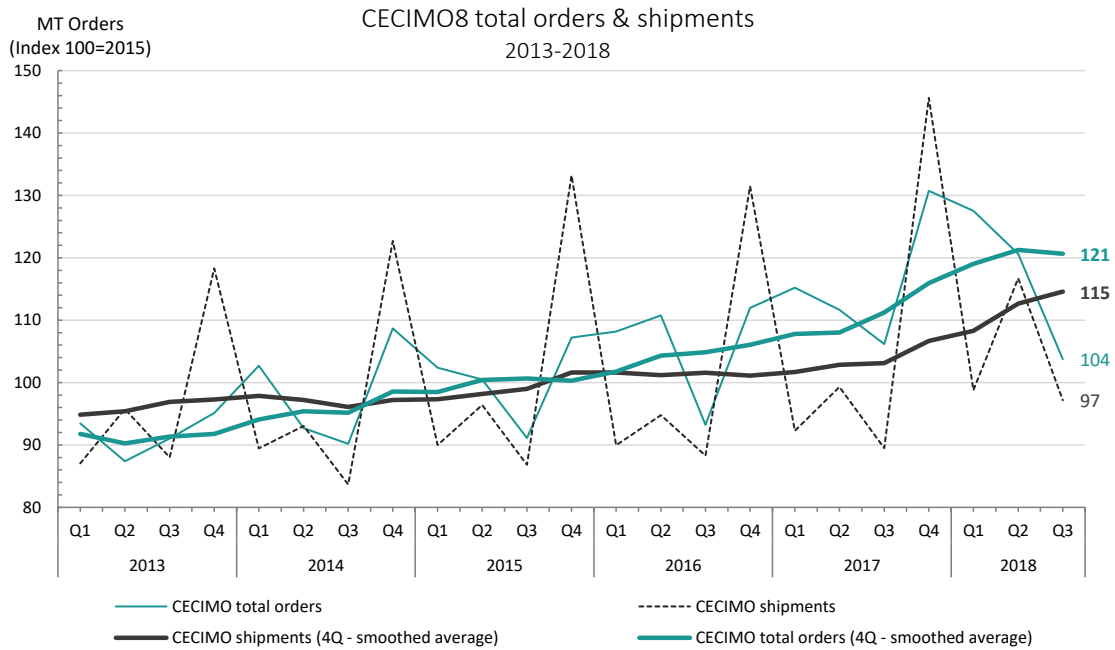
# 1. Historical Data for the Sector

## 1.1 CECIMO8 Orders (m)

In the third quarter of 2018, the CECIMO8 Orders indicator dropped further by -8%, compared to the previous quarter, but marked a +10% increase compared to the same quarter last year. The indicator reached its peak in the fourth quarter of 2017 and seasonally decreases in Q3 2018.

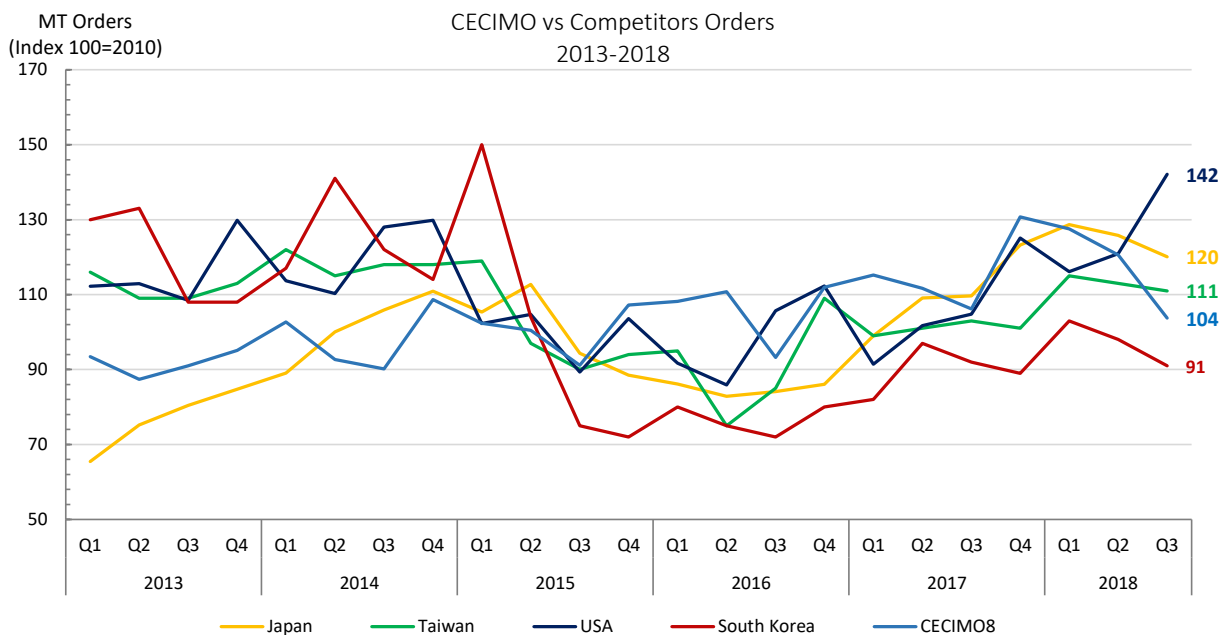
- In CECIMO, the main improvements on a year-to-year basis were observed in Spain (+11%) and Austria (+4%).
- The sharpest reduction was observed in Czech Orders (-10%).
- Larger gains in domestic demand resulted in an uptick in Austria (+39%) and the Czech Republic (+24%).
- Important drops in domestic demand: Spain (-31%), France (-26%) and Italy (-15%).
- Conversely, foreign demand substantially increased in Spain (+24%) and France (+23%).





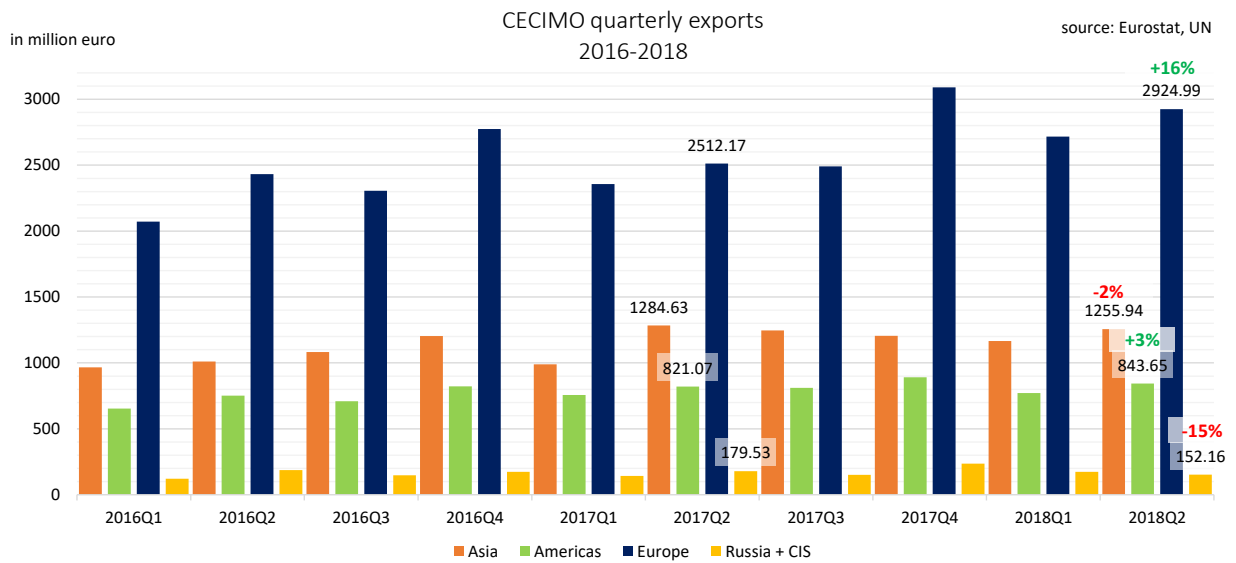
Our competitors registered rather positive rates in Q3 2018, compared to Q3 2017:

- US (+36%), Japan (+10%) – due to metal forming (+27%) and metal cutting (+7%) increments.
- Taiwan (+8%).
- Sharp drops in domestic demand in South Korea (-23%), compensated by foreign orders (+20%).
- Important increases in domestic demand for Japanese metal forming (+35%).



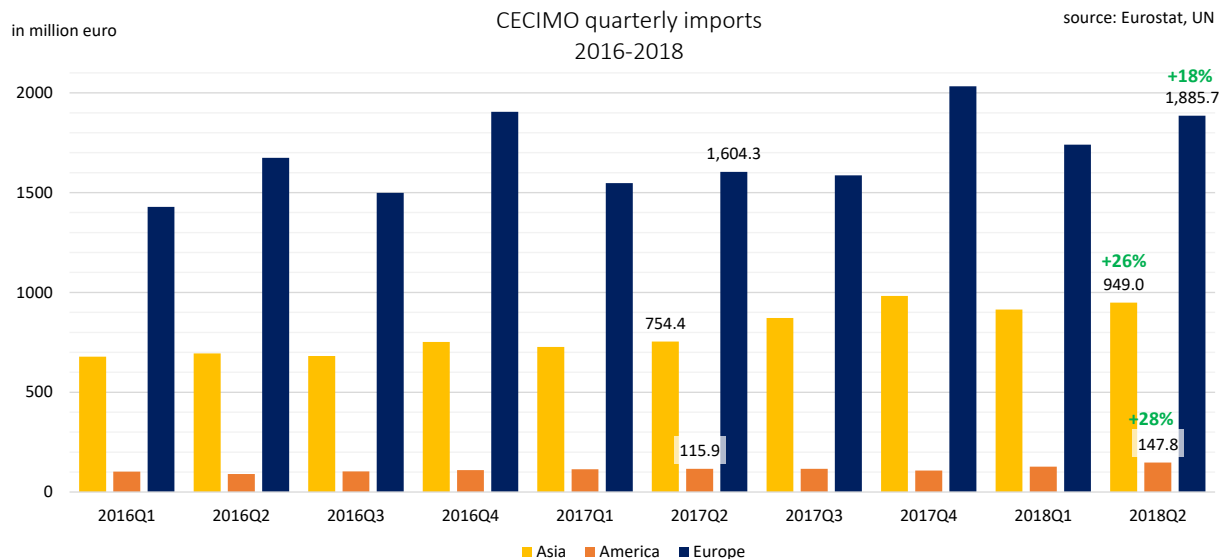


# 1.2 CECIMO Trade (m)



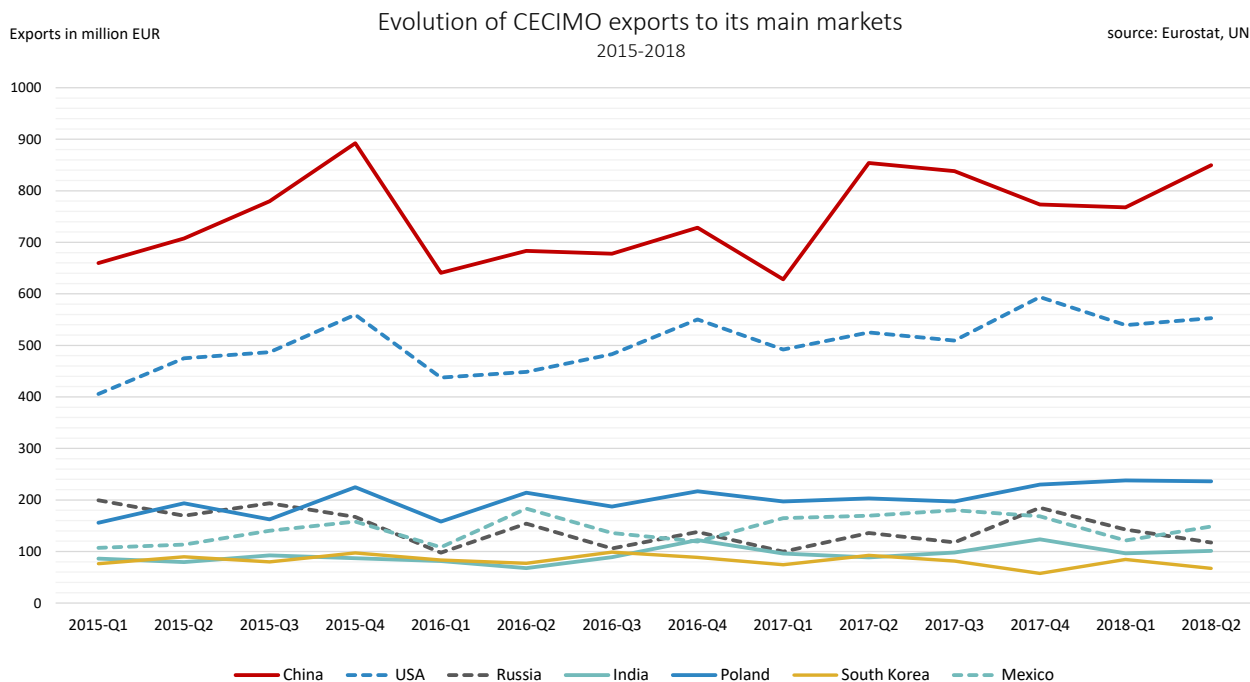
Quarterly exports for Q2 reached about €5.4 billion, €2.3 billion of which represent intra-CECIMO exports.

- +8% increase compared to Q2 of 2017.
- Exports to Europe and the Americas grew by +16% and +3% over the year.
- Exports to Asia and Russia & CIS countries fell by -2% and -15% in Q2 2018.

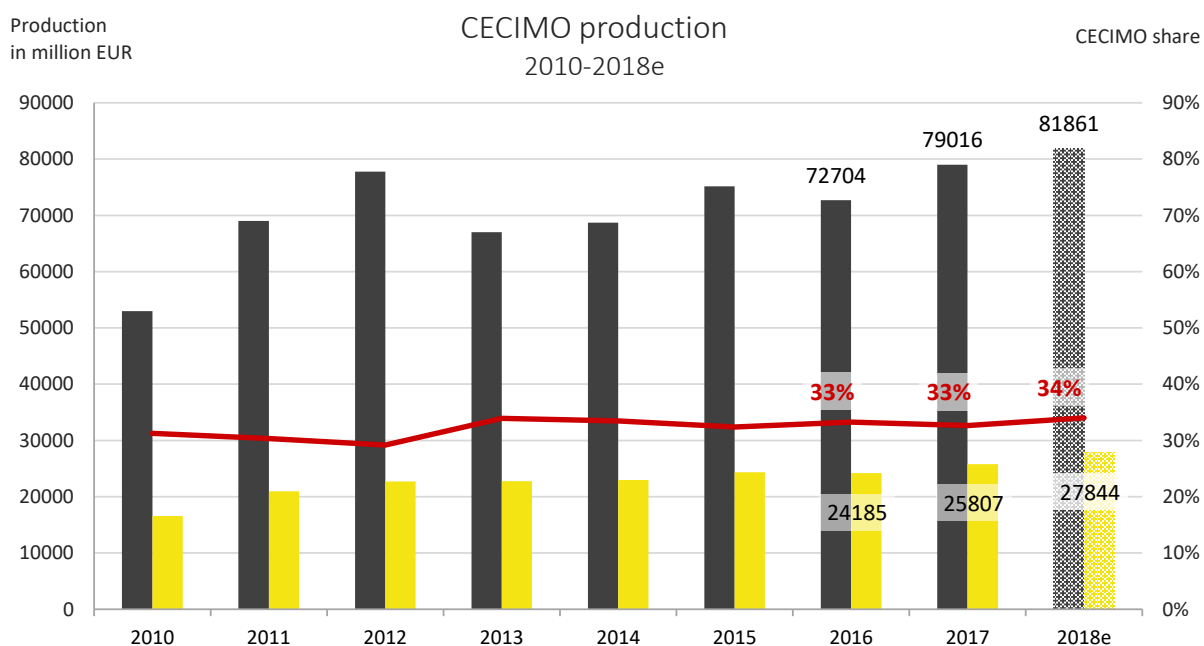


Quarterly imports for Q2 amounted to €3 billion, €1.8 billion of which originated from another CECIMO country. A steeper increase in quarterly imports marked an increase in demand that was not met by national production.

- +20% increase in quarterly exports compared to Q2 of the previous year.
- Import figures increased for all the regions: Asia (+26%), the Americas (+28%), Europe (+28%). Imports from Russia & CIS countries, although minor, increased by +165%.



## 1.3 Production (m)



source: CECIMO, Gardner, national associations

Revised figures for 2017 show a total production of €25.8 billion for CECIMO countries, 7% higher than in 2016. In 2017, CECIMO production grew slightly slower than world production. Provisional figures for 2018 suggest an 8% increase for CECIMO, or €27.8 billion in absolute value. Global production is expected to grow more slowly (+4%). CECIMO share in world production is expected to rise to 34%.



# 2. Demand

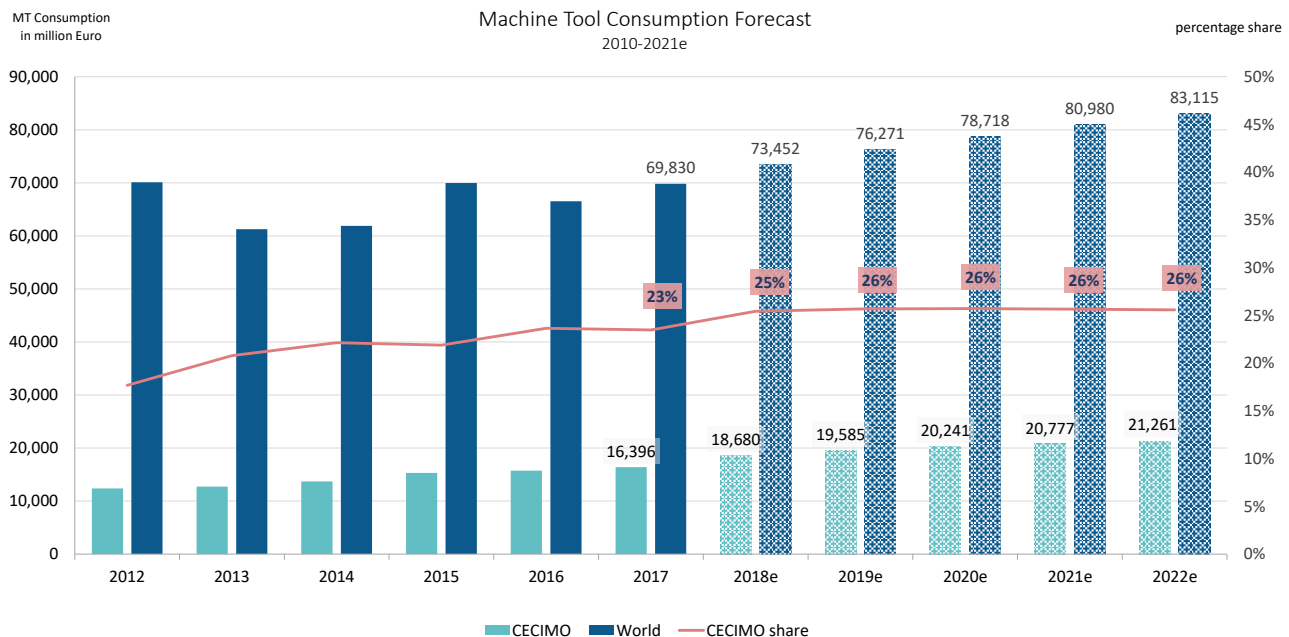
## 2.1 CECIMO Consumption (m)

### Oxford Economics Consumption Forecast

CECIMO MT consumption reached €16.4 billion in 2017; 5% higher than in 2016.

#### Forecasts:

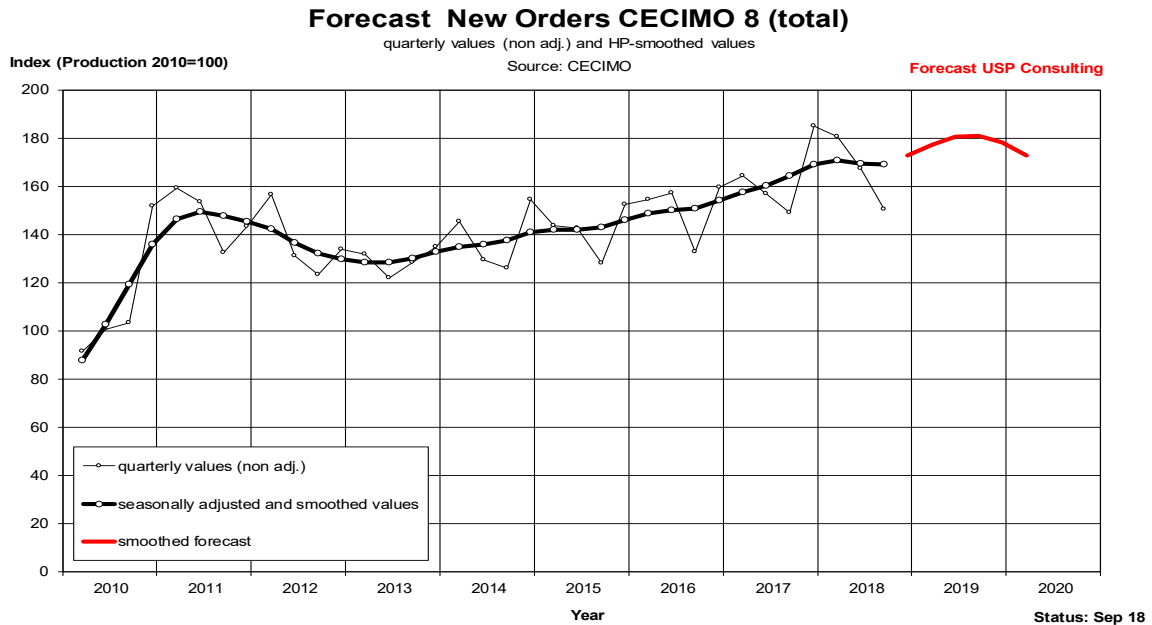
- CECIMO estimates an 11% increase in consumption for 2018. Consumption levels are expected to reach €18.2 billion for 2018.
- Oxford Economics' forecasts for 2018 are more optimistic and suggest an increase of 14% for CECIMO and 5% for the world, as shown on the graph.
- Consumption growth is expected to slow down to 4.8% for CECIMO and 3.8% for the world in 2019. It will then stabilise at 3% (on average) in the next 4 years.



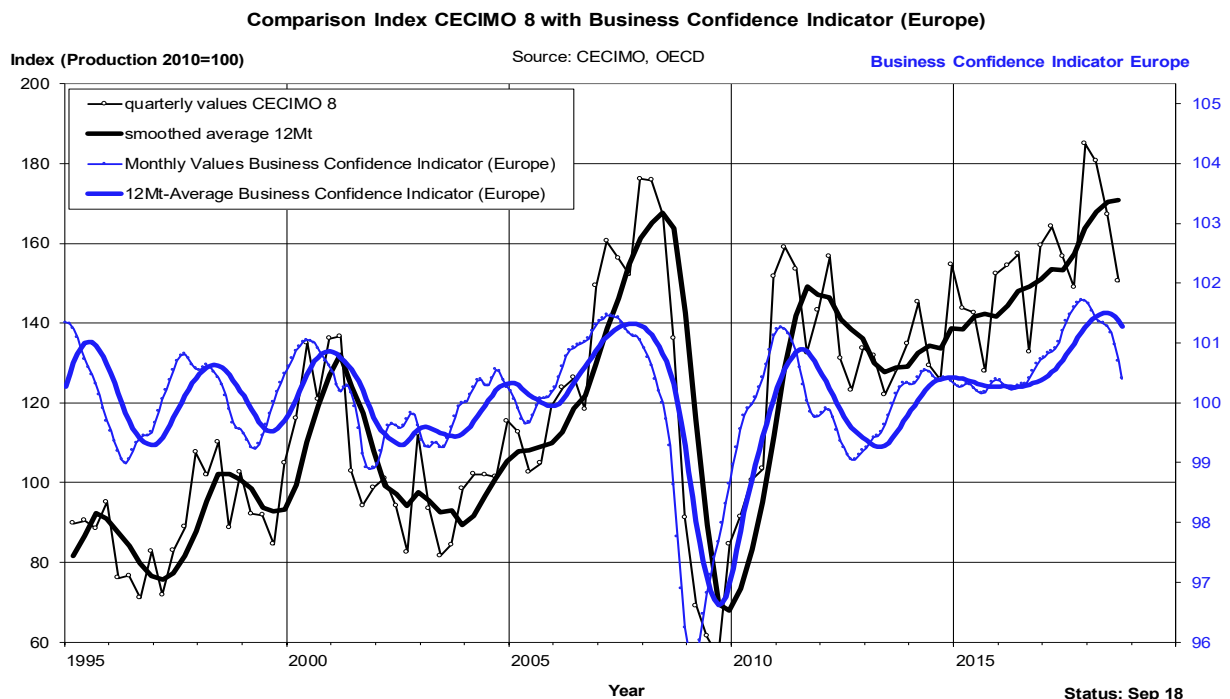
MT consumption will be supported by the dynamism of MT buying sectors from emerging countries. More importantly, the nature of MT consumption will change due to the alteration of the traditional automotive sector and its gradual shift towards e-mobility.

## 2.2 Peter Meier CECIMO8 Orders Forecast (m)

Although new orders usually drop in the third quarter, this year they declined far below the forecast values. Demand should continue to rise until mid-2019, but at a slower pace than in 2017. The 12-month average is still within the forecast curve (thick red line).

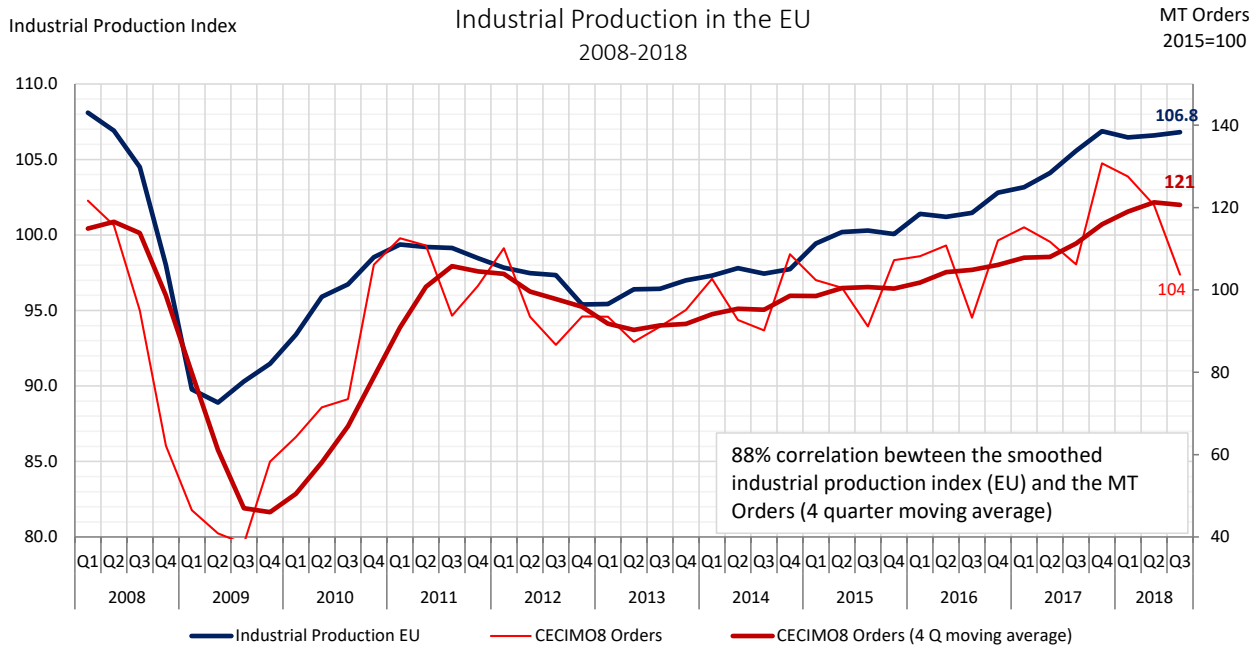


After several strong quarters, incoming orders in many European sectors have fallen in the last 3 months and the outlook for the coming months has deteriorated. European Industrial production is developing at a worse rate than expected. Consumption is still supportive and continued to rise but is approaching its peak. Leading sentiment indicators are still at a high level but passed their peak in early 2018. US sentiment is still good. Industrial production in the last quarter rose sharply. But the euphoric mood is flattening out, as effects of tax-cuts fade. US consumption might reach its peak towards end-2018/start-2019. Asian consumption passed its peak at the start of 2017. Industrial production rose in the recent months, but Asian market sentiment is lower than in all other markets.



## 2.3 Industrial Production Index (M)

In October, industrial production saw flat growth of 0.2% in both the Euro-area and EU28.



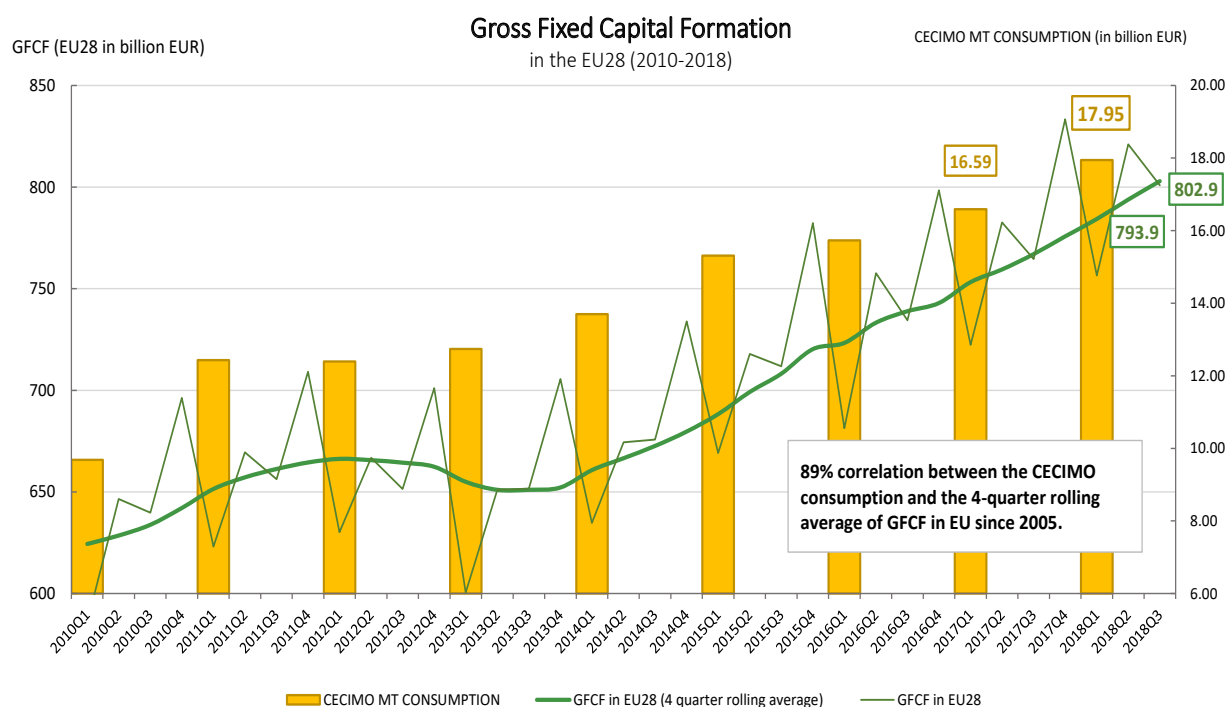
Source: Eurostat + CECIMO

- The highest increases among CECIMO members were observed in Sweden (+4.5%), Denmark (+3.8%) and Czechia (3.3%).
- Erosions of industrial output were registered in the UK (-0.8%), France (-0.6%) and Portugal (-0.5%).

EU 28	July 2018/ July 2017	Aug 2018/ Aug 2017	Sept 2018/ Sept 2017	Oct 2018/ Oct 2017
Total industrial production	<b>0.80%</b>	<b>1.20%</b>	<b>1.10%</b>	<b>1.30%</b>
Capital goods	2.10%	1.60%	2.40%	3.30%
Durable consumer goods	0.30%	1.20%	1.40%	1.20%
Intermediate goods	0.60%	0.40%	0.20%	0.10%
Energy	-0.90%	-0.70%	-1.00%	-1.70%
Non-durable consumer goods	0.50%	2.80%	1.80%	1.50%

# 3. Investment

## 3.1 Gross Fixed Capital Formation (M)



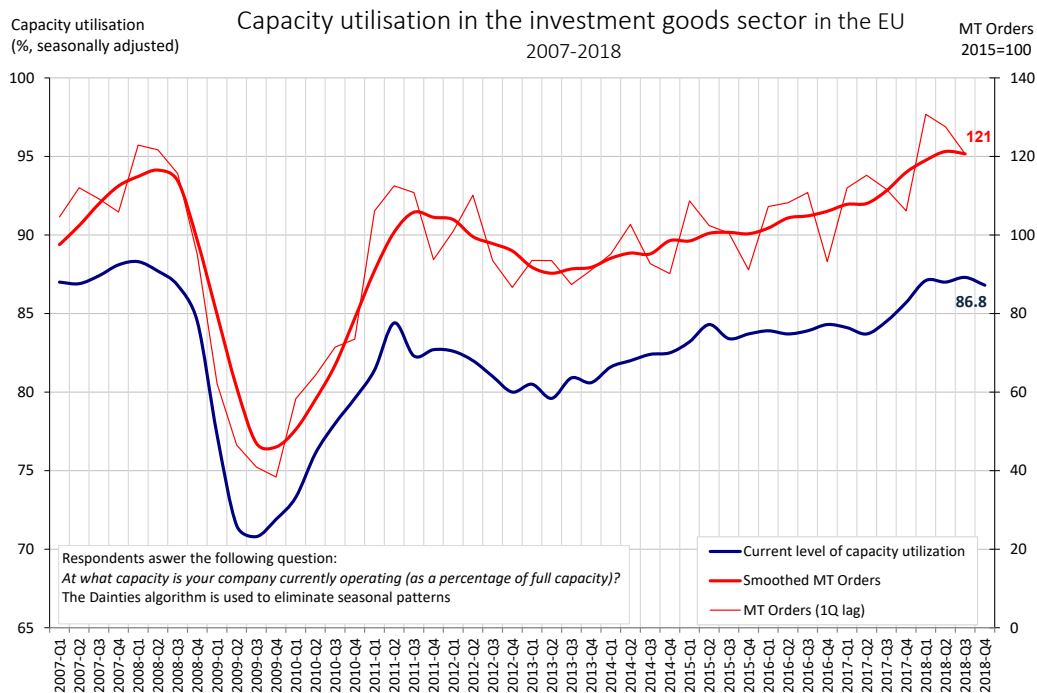
Quarterly Gross Fixed Capital Formation (GFCF) in the EU gained 5% in Q3, compared to the same quarter last year.

**OECD investment forecasts:** GFCF is expected to increase by 3.4% in 2018, 3.1% in 2019 and 2.8% in 2020 in the Euro area.

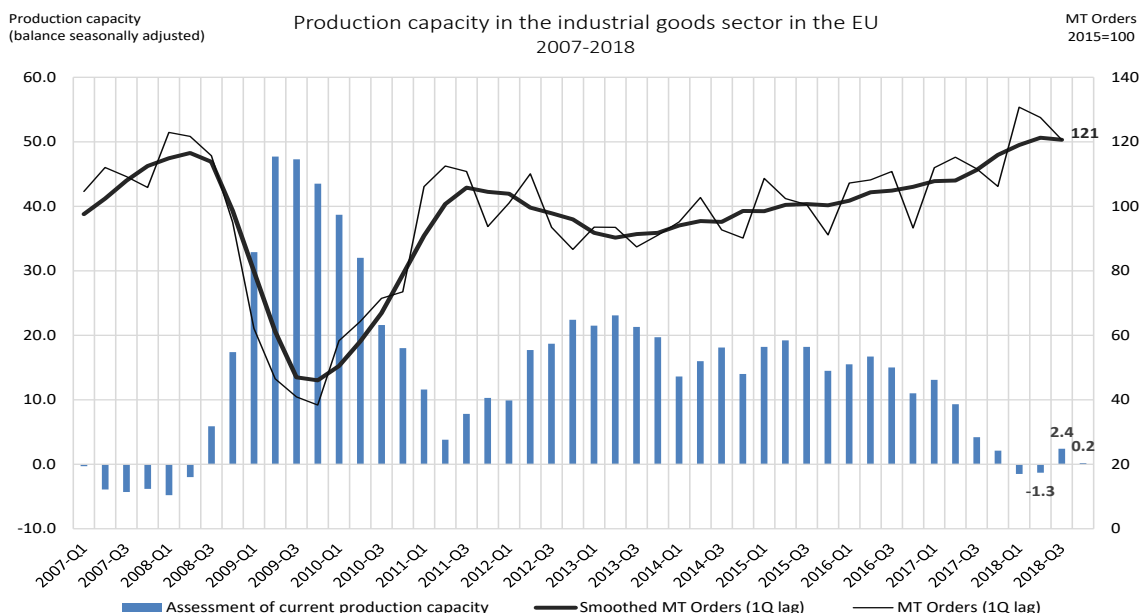
Historically, the growth between the EU and Euro area was comparable. The high correlation (89%) between rolling 4 quarters GFCF average and the CECIMO consumption suggest that we can expect MT consumption to continue to grow up to 2020, but at a decreasing pace.

## 3.2 Capacity Utilisation in the Investment Goods Sector (M)

Capacity utilisation in the EU dropped from 87.3% to 86.8% in Q4, below the yearly average. CECIMO8 MT Orders are highly correlated with this indicator (96%). Although the drop in capacity utilisation might mean a deterioration of demand for MT – as long as it is above the threshold (usually 80%-90%), it should support some investment and therefore MT demand.



Production capacity in the industrial goods sector in the EU remained flat at 0.2% in Q4. This means that a similar number of managers assessed their production capacity as sufficient, compared to those who assessed it as insufficient. We cannot conclude major trend changes for MT orders.



### 3.3 Bank Lending Survey (M)

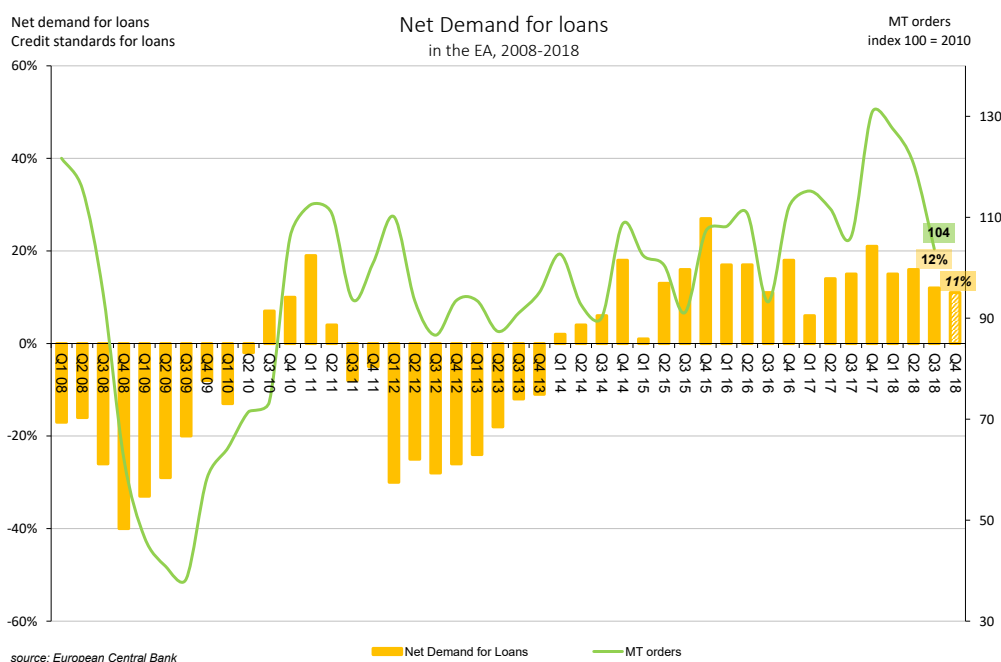
According to October 2018's results, credit standards further eased for loans to enterprises in the third quarter of 2018.

**Credit standards for loans to enterprises** eased from -3% in Q2 to -6% in Q3, exceeding banks' expectations in the previous survey.

- Main factors for easing: price competition and low risk perceptions.
- Banks' costs of funds and balance sheet constrains had a neutral impact.
- Net percentage of rejected loan applications remained rather unchanged.
- Credit standards eased in all largest EZ members expect for France.
- EA banks expectations for loans to businesses in Q4: broadly unchanged (-1%).

**Net demand for loans to enterprises** increased in the Q3 by +12%, compared to the 16% in Q2.

- Net demand increased but weaker than expected in previous round.
- Main factors for the increase: low general level of interest rates, fixed investment, inventories and working capital and M&A activity.
- Net demand for loans to enterprises increased in all largest EZ members, expect for Spain.
- Banks expect net demand to continue to increase in the fourth quarter (+11%).



CECIMO MT Orders have a 70% correlation with 2 quarter lagged demand for loans. An increase in demand for loans should point to an increase in MT demand.

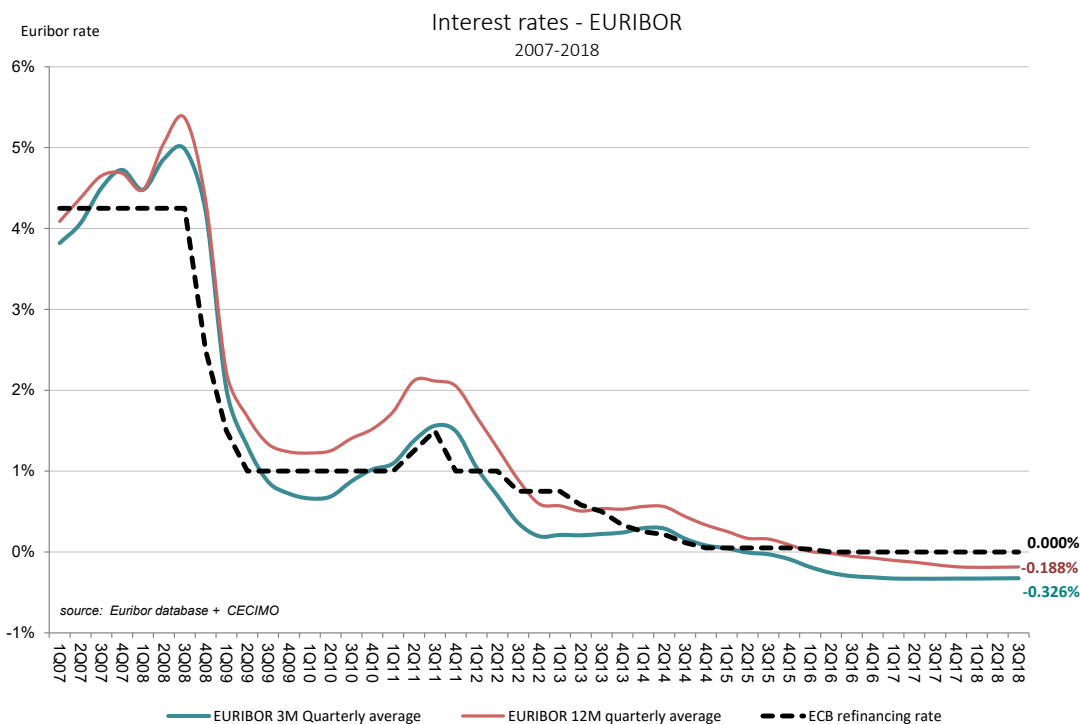


## 3.4 Euribor - Interest Rates (M)

The European Central Bank (ECB) confirmed on 13 December that the **massive asset-bond buying program is ending this month** to soften inflation and reduce volatility in financial markets. For four years it has stimulated the Eurozone's economic recovery through its quantitative easing programme.

The ECB implied that it would continue to reinvest the principal payments for an extended period of time to keep conditions accommodative:

- Interest rates will remain at their present accommodative level (0.00%) until next summer.
- Marginal lending rate is left at 0.25%.
- Deposit facility rate stays at 0.40%.



The ECB is expected to proceed very slowly with a gradual normalisation of monetary policy.

# 4. Business Climate

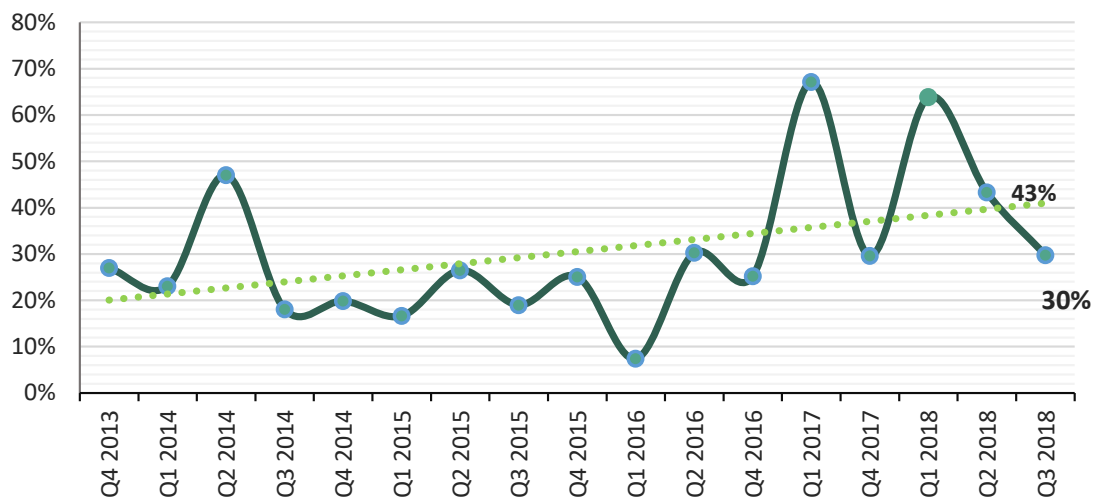
## 4.1 CECIMO Business Climate Barometer (m)

The Business Climate Barometer is a quarterly survey that assesses CECIMO-based companies' current business sentiment and expectations for the next quarter. This edition is based on the responses of companies and national associations from 8 CECIMO member countries and was carried out in October 2018.

### Methodology

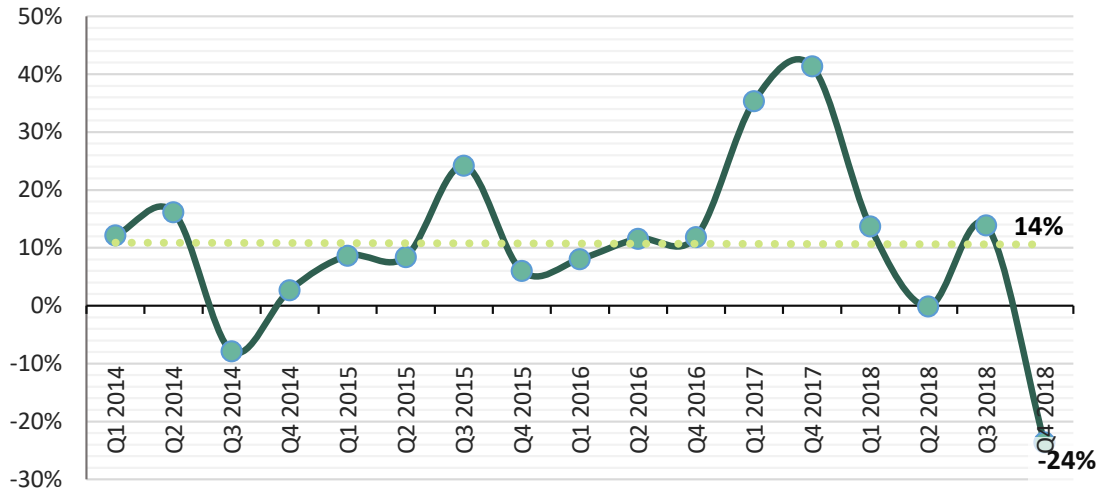
National associations and individual companies assess their business climate and expectations for Q3 2018 on a basis of 3 options (positive, neutral and negative), regarding demand, domestic production, export sales and employment. Moreover, respondents state their current rate of operation and indicate the factors hindering their activities. The results shown below correspond to the difference between positive and negative answers for each question – excluding the neutral ones, which are represented on the Y axis. The X axis corresponds to a timeline.

Assessment of general business climate in Q3



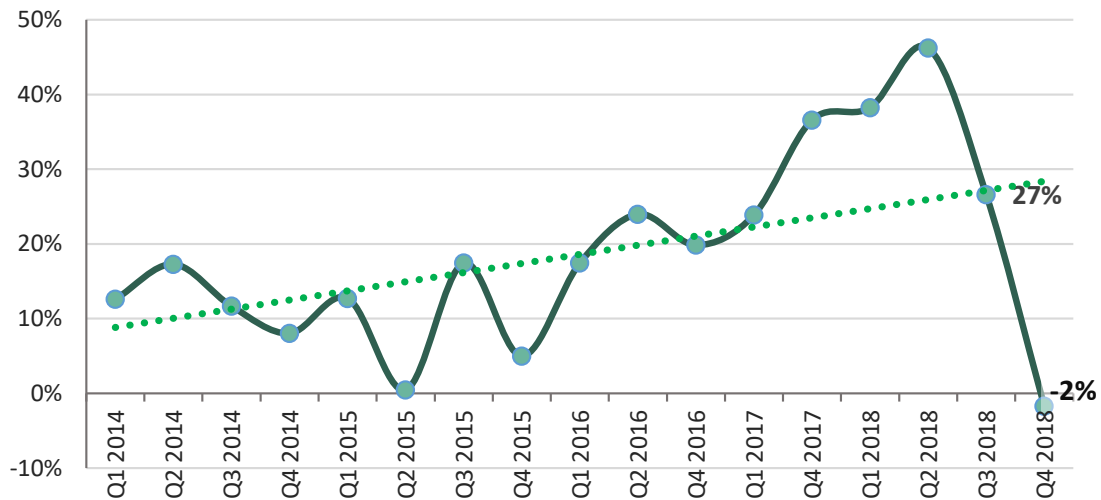
The business climate among CECIMO machine tool builders dropped from 43% to 30% in Q3. Seemingly, our manufacturers' assessment of the business situation is sensibly lower than in the beginning of the year, but at comparative levels to the fourth quarter of 2017.

### Net order intake October



In October, the number of CECIMO respondents evaluating their net order intake as negative was at the highest level since 2014. 24% more participants signalled that their orders decreased compared to the previous month.

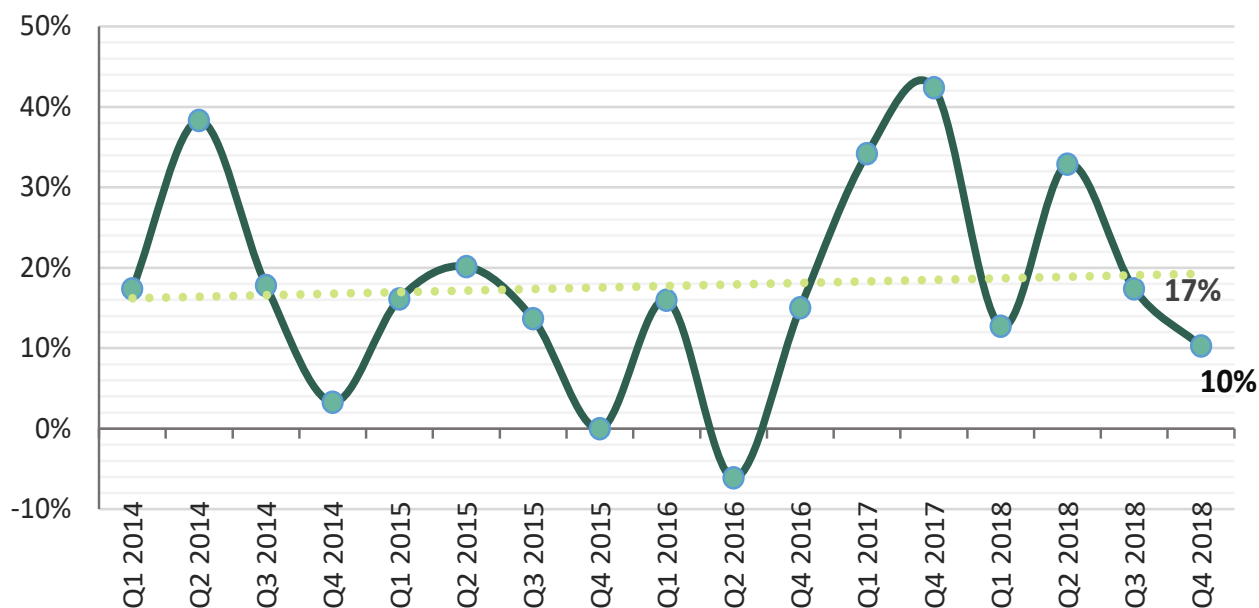
### Expectations over domestic production in Q4



The expectations for domestic production among CECIMO members sharply deteriorated. A negative number (-2%) suggests that more respondents expected a drop in production than an increase in production for the fourth quarter of 2018. This may have resulted from diminishing orders and a worse overall business sentiment.

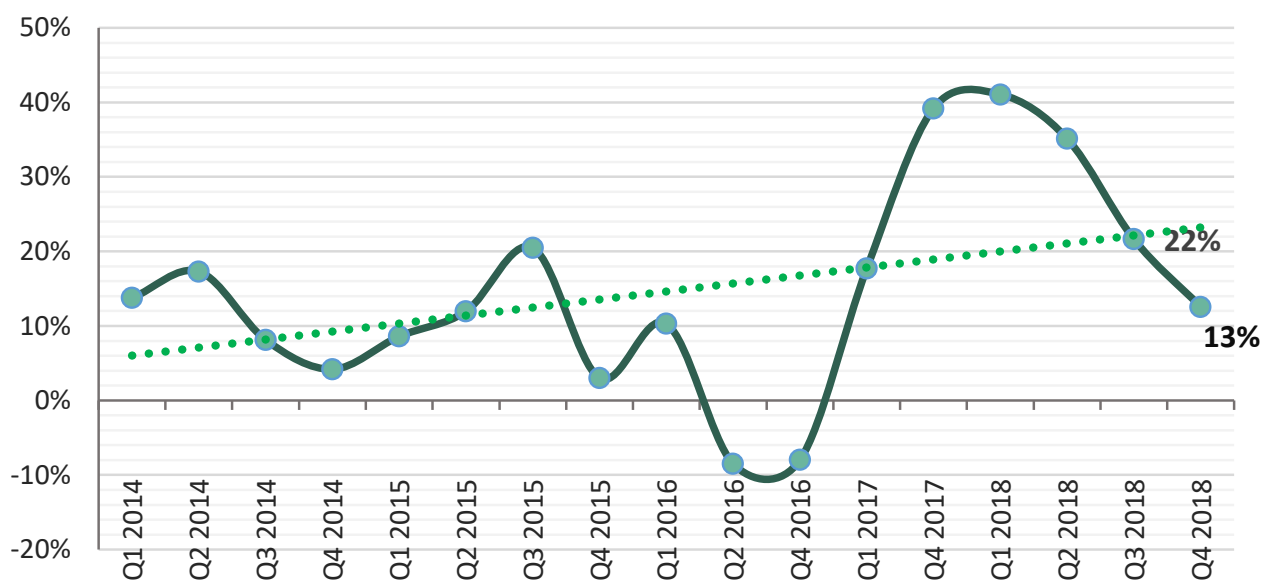
More graphs on next page

### Expectations over exports in Q4



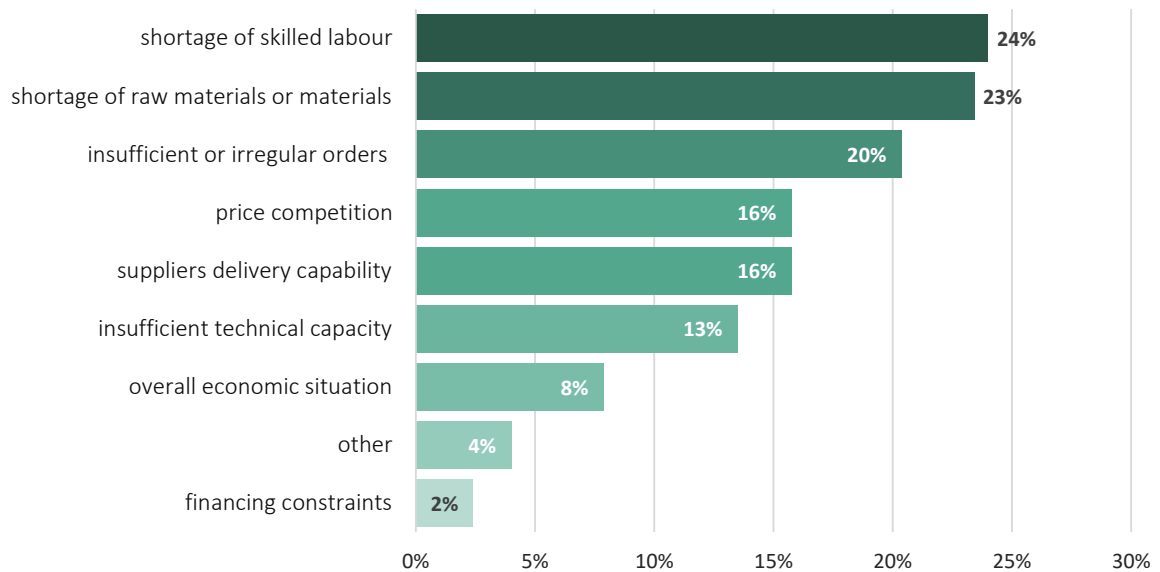
➔ The expectations on MT exports also worsened compared to Q3 and Q4 of the previous year. Only 10% more respondents among CECIMO manufacturers expected their exports to increase rather than decrease. Expectations about exports to the Americas were quite optimistic (39%).

### Expectations over employment in Q4



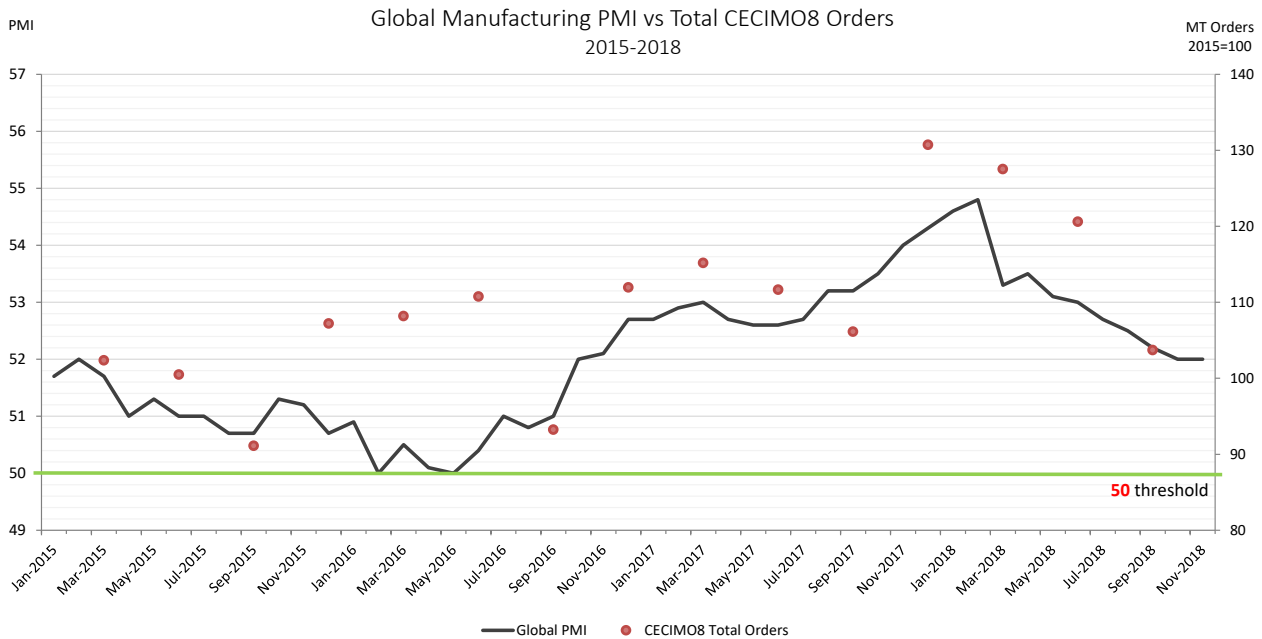
➔ MT managers' expectations about employment dropped for the third quarter in a row. Only 13% more respondents foresaw an expansion of staff in their companies.

## Obstacles hindering the activity

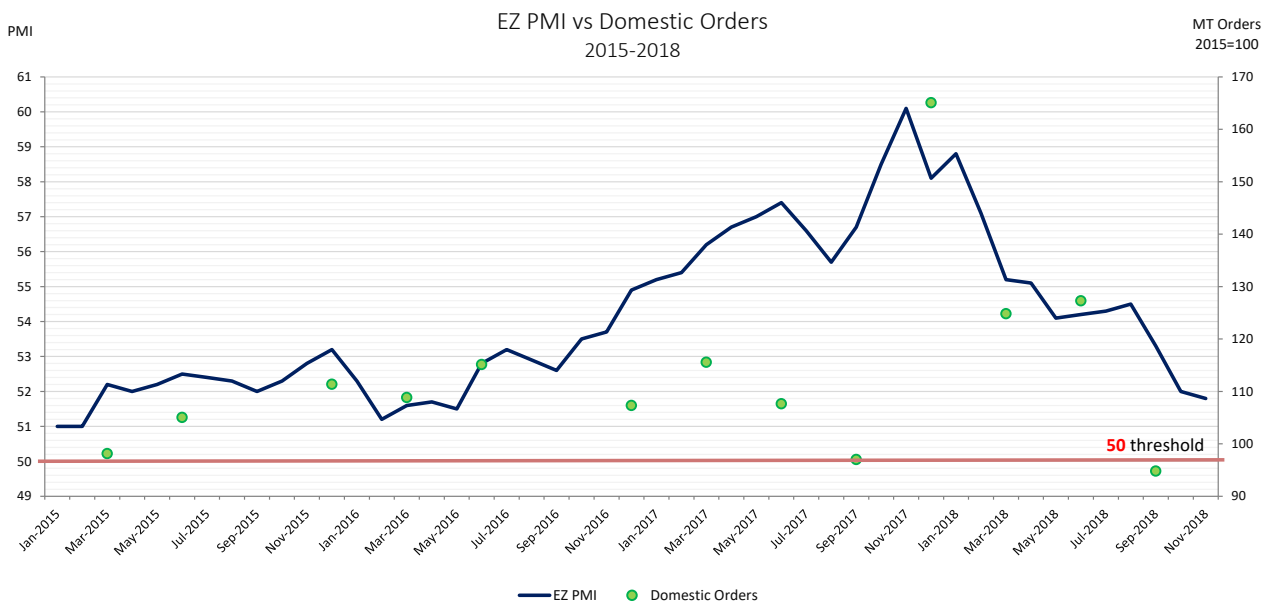


68% of respondents in CECIMO say that their production activity faces constraints. This time, the top three obstacles hindering MT production were the shortage of skills, shortage of materials and orders. The percentage of companies picking the first two reasons almost halved, compared to the second quarter. However, this time more MT manufacturers invoked insufficient or irregular orders. On average, CECIMO companies operated at 91% of total capacity.

## 4.2 Purchasing Managers Index (M)

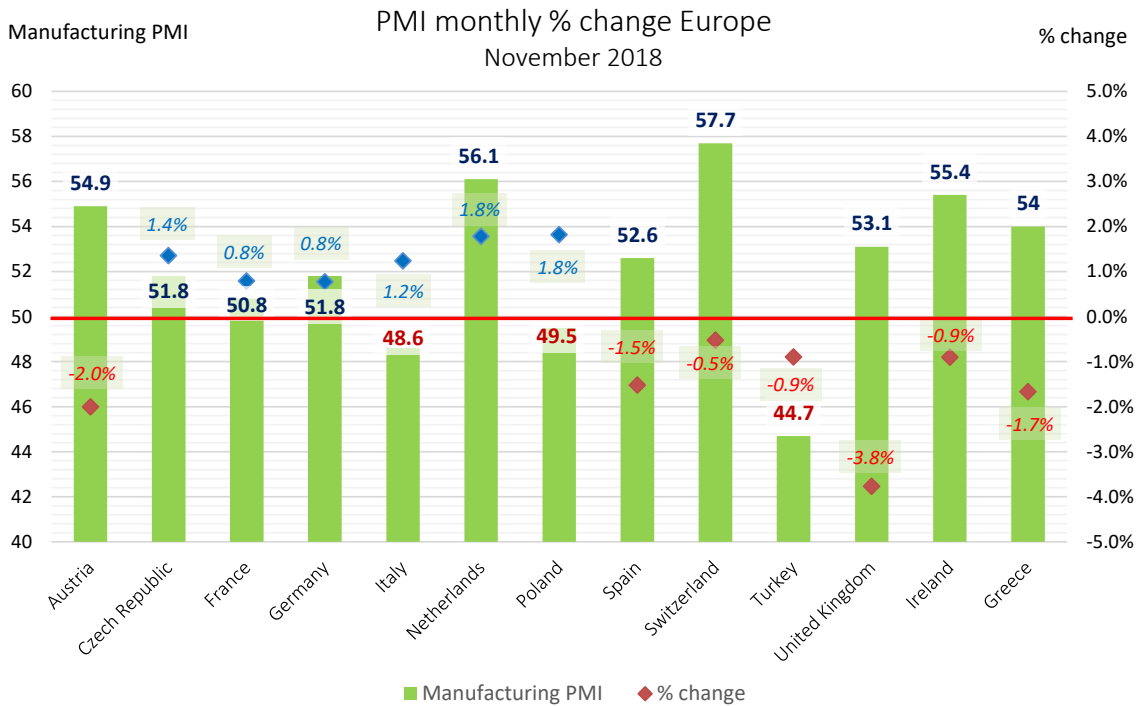


**Global** manufacturing activity remains subdued in November. Manufacturing business conditions improved in the US, Eurozone, Japan, China, UK, Brazil and India. Deteriorations were observed in Italy, Turkey, Korea, Taiwan and Mexico.



The manufacturing **Eurozone** economy continued to slow down its growth as trade and investment goods registered falls. The index is still above 50 supported by solid growth among consumer goods producers.





**German** manufacturing PMI drops to 31 months low, as producers of goods recorded a further decrease in new orders and output rose only marginally. November saw the steepest decrease in orders, due to important downfalls in export sales.



**France** registered the weakest improvement of operating conditions in two years, due to falling new orders and job shedding, while prices and input costs continued to rise.



**Spanish** manufacturers saw a solid growth despite a weaker confidence. The manufacturing sector strength was supported by increasing output, new orders and job creation. Prices and cost pressures remained high.



**Italian** manufacturing conditions deteriorated at the quickest pace in the last four years. Confidence levels fell at their lowest since 2013. Production and new orders and export sales also decreased. Output charges continued to rise.



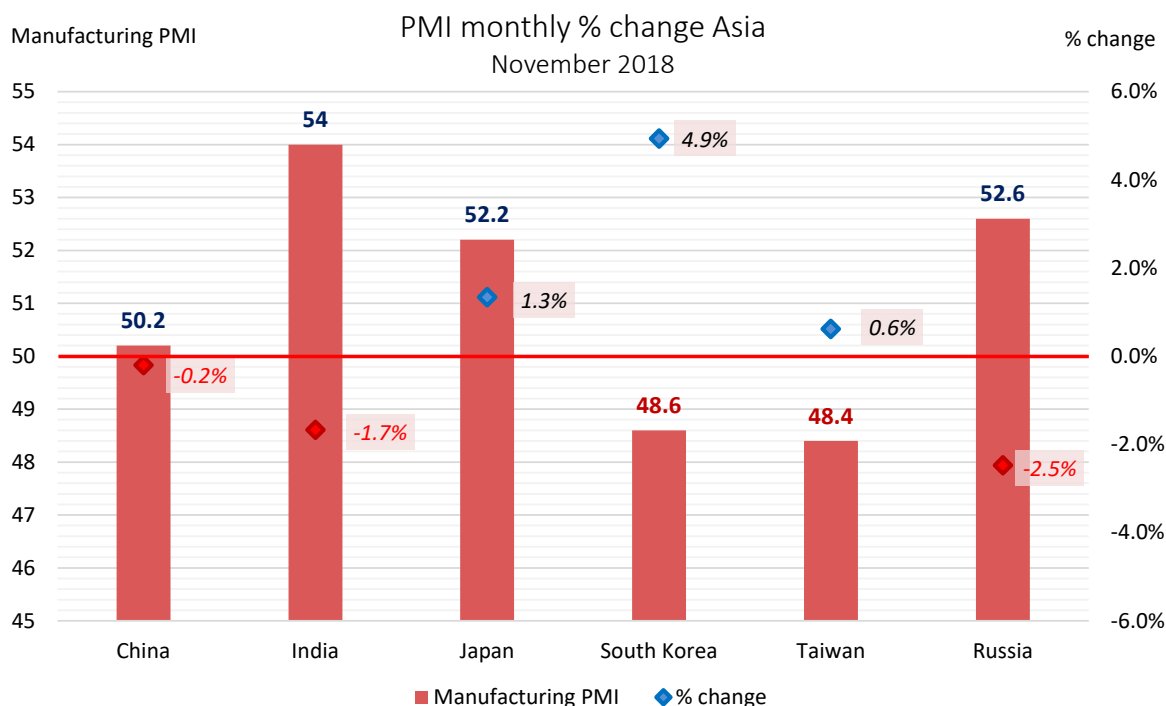
The rate of improvement of **UK** manufacturing conditions slightly picked up, but the sector's performance remained subdued as foreign orders further dropped. The manufacturing activity is mainly supported by domestic demand and improvements among consumer, intermediate and investment goods sectors.





The business conditions in the **Czech** manufacturing sector signalled their weakest improvement since August 2016. The lacklustre performance is due to low sentiment and weaknesses in the automotive sector and foreign demand.





In November, **Turkish** PMI indicated a further moderation of output, new orders and employment, but less sharply. Manufacturing conditions remain challenging.





 Operating conditions in manufacturing sector in **China** improved marginally. Companies signalled stronger increase in new orders, but less foreign demand. Efforts to keep costs down lead to staff cuts.

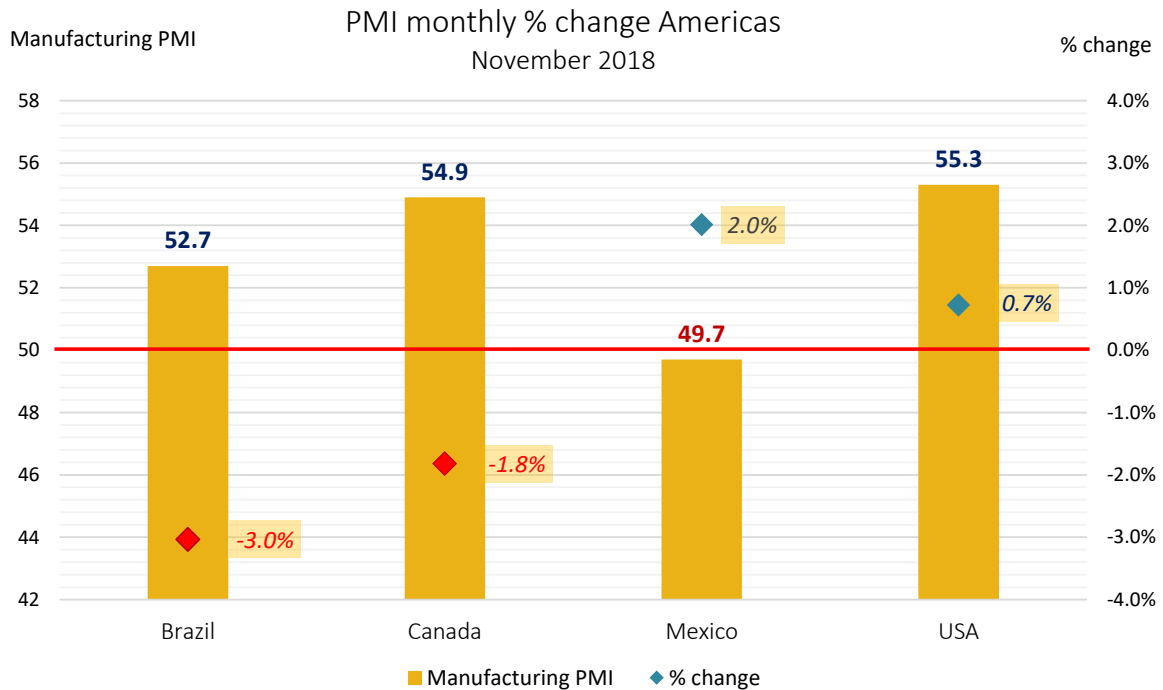
 **Japan's** manufacturing sector continued to expand at a slower rate, because of a low confidence. But production, new orders increased enough to hire additional staff.

 South Korea registered the steepest drop in exports in the last 5 years. As demand and trade activity fell, companies reduced production and employment driving the PMI below the 50 threshold.

 The operating condition in the **Taiwanese** manufacturing sector deteriorated at the steepest pace for 37 months. Solid declines in output and new orders drove companies to substantially reduce their purchasing activity. Cost inflation and staffing levels increased moderately.

 Manufacturing operating conditions in **India** improved for the third month in a row. Cost inflation moderated, while increasing new orders and better overall sentiment encouraged companies to increase production levels and create jobs.

 **Russia's** PMI rose to its highest level since July 2017, due to improved demand, new business and strong increases in employment. Trade activity rose solidly, while input cost inflation was reduced by passing some costs to the clients.



**US** purchasing managers signal a strong improvement of operating conditions in manufacturing, supported by steep increases in new orders and employment. Robust increases in output and capacity pressures led to stockpiling. Cost burdens rose, due to tariffs, shortages and inflation in input costs.



Manufacturing conditions in **Mexico** further worsened. Weak demand and job creation led to the first cut in production since August.



**Brazil** saw the strongest expansion of output in the last eight months, as demand picked up, new staff was hired and purchasing activity improved. Business confidence improved to the highest in the history of the survey.

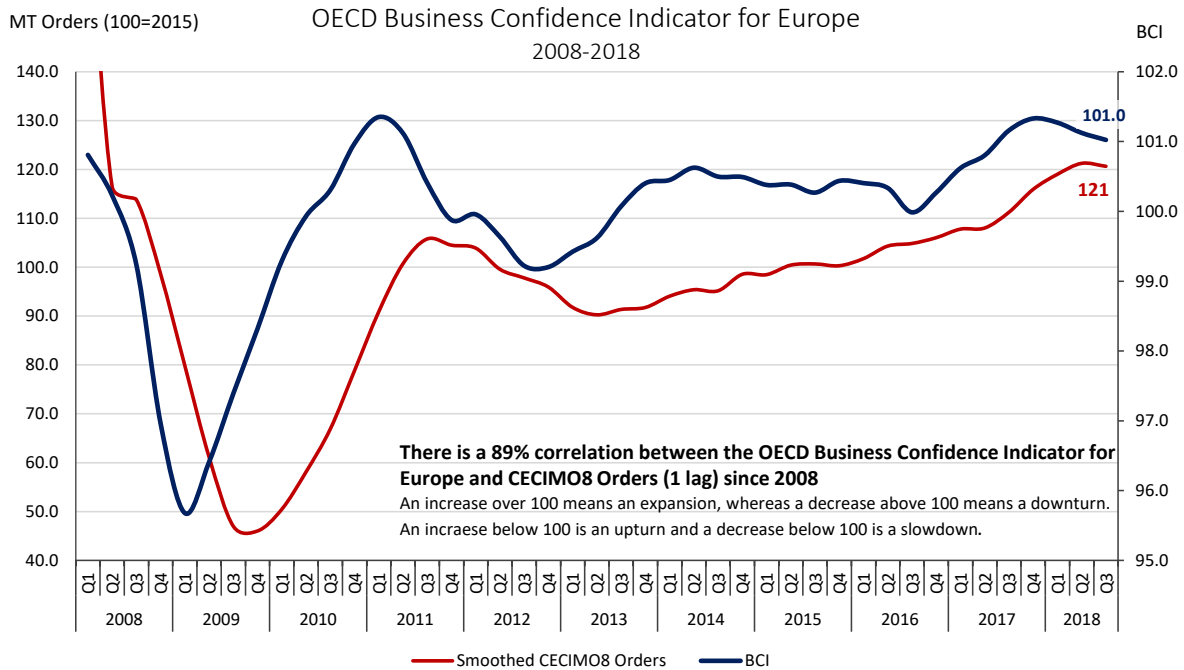


**Canada** hit a three-month high PMI. New orders and production improved moderately, but strong job creation, rising business investment in plant capacity marked a positive month for manufacturers.

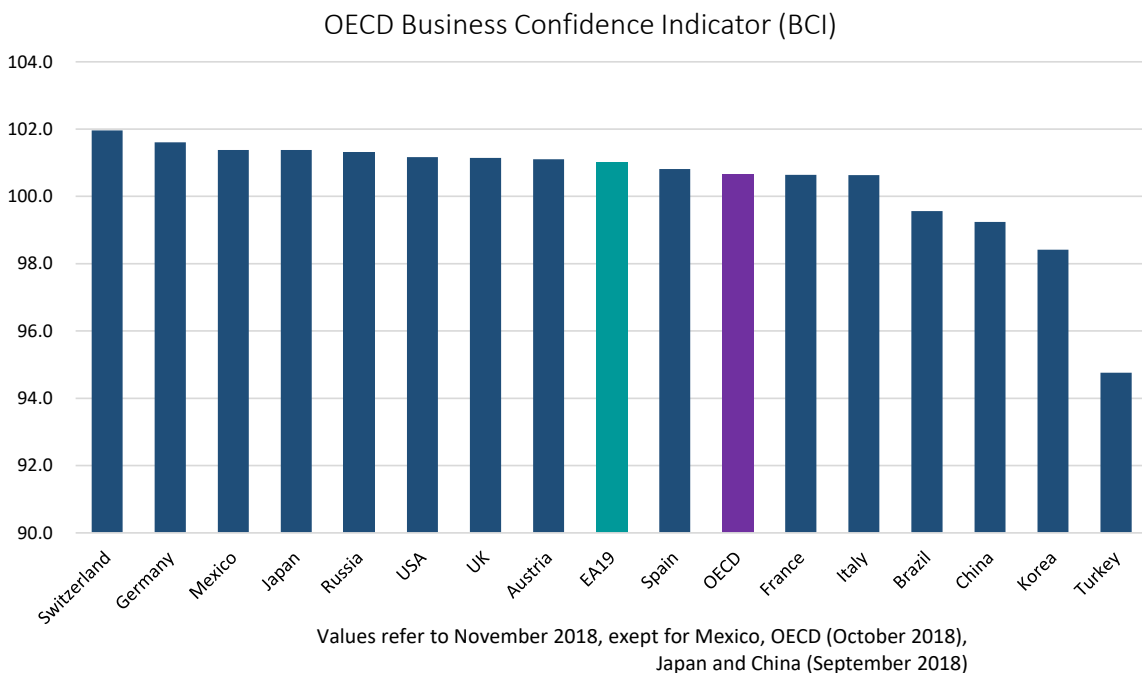
# 4.3 OECD Business Confidence Indicator (M)

OECD Business Confidence Indicator decreased very modestly from 101.1 to 101.0 – at its lowest level in the last five quarters.

- A lower BCI still above 100 suggests an upturn, but slightly slower.
- CECIMO8 Orders are likely to continue growing, at least in the next 2 quarters, but at a slower rate.



The highest Business Confidence was registered in Switzerland and Germany. Turkey and South Korea scored very low, which reflected on these countries' manufacturing activity as well.



# 5. General Indicators

## 5.1 GDP (M)

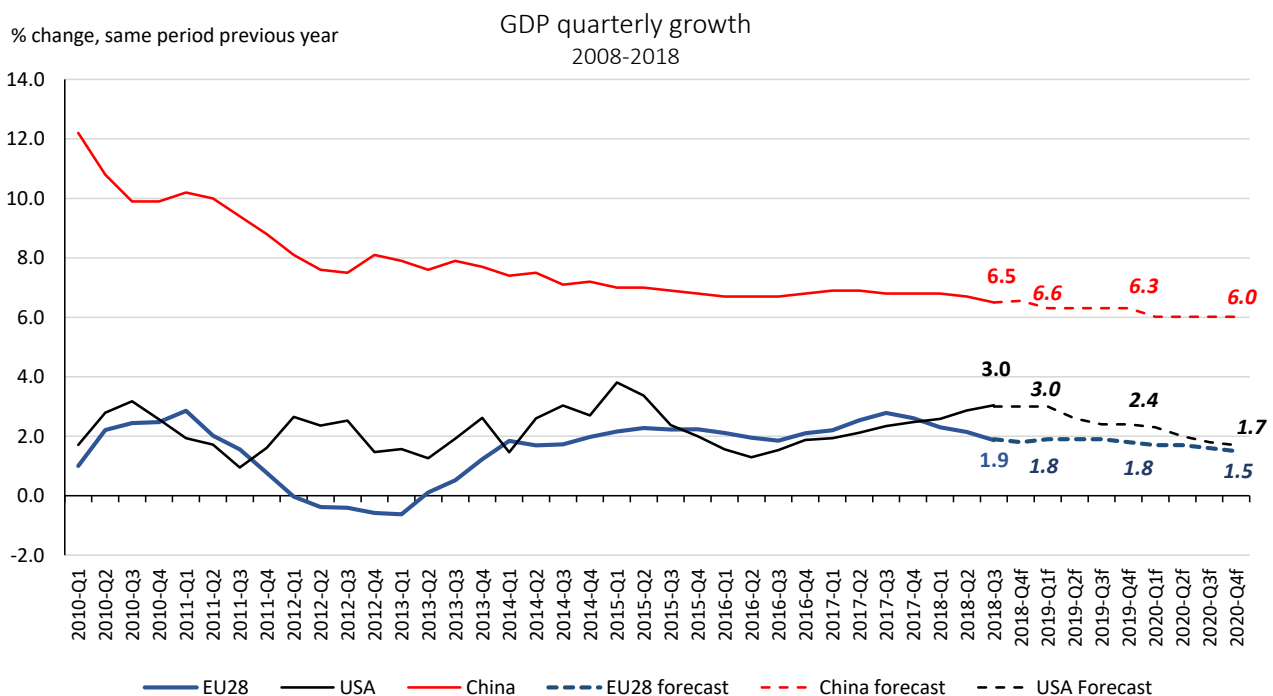
Year-to-year quarterly GDP growth, based on OECD:

- EU28 +1.9% in Q3 (weakened reflecting bottlenecks among car manufacturers)
- US +3% in Q3
- China +6.5% in Q3

GDP forecast, based on European Commission Autumn 2018 Economic Forecast. GDP growth to slow down across the 3 economies:

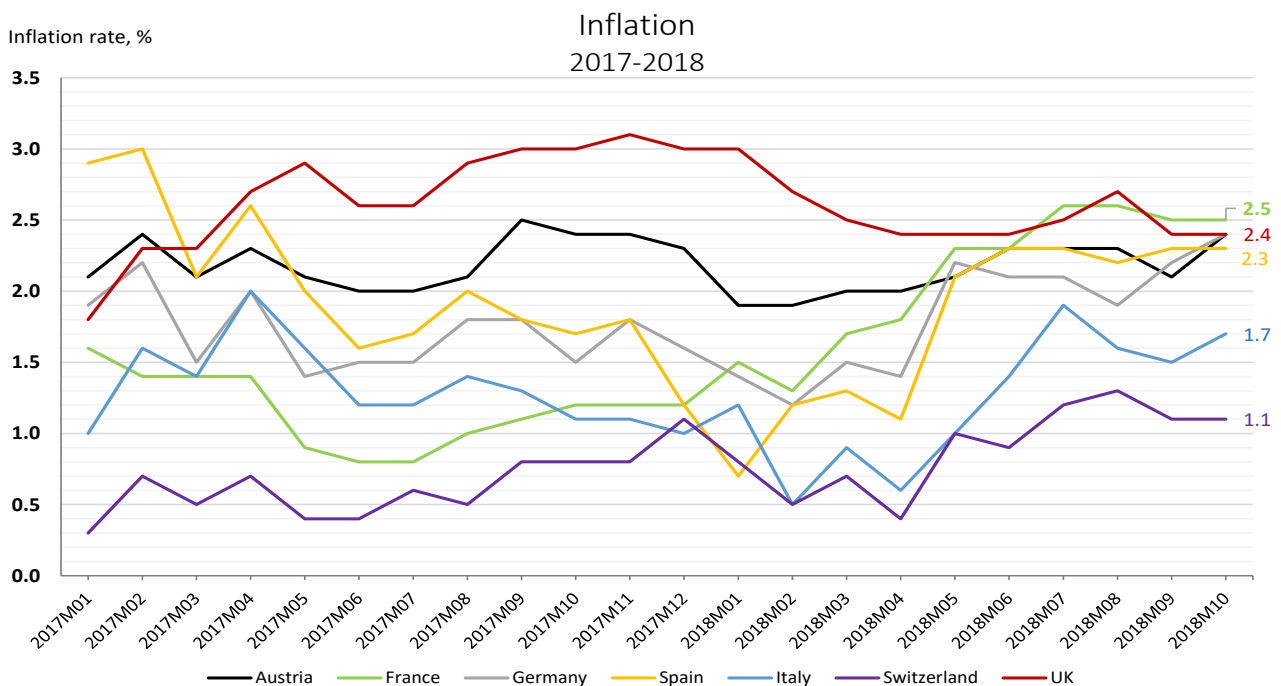
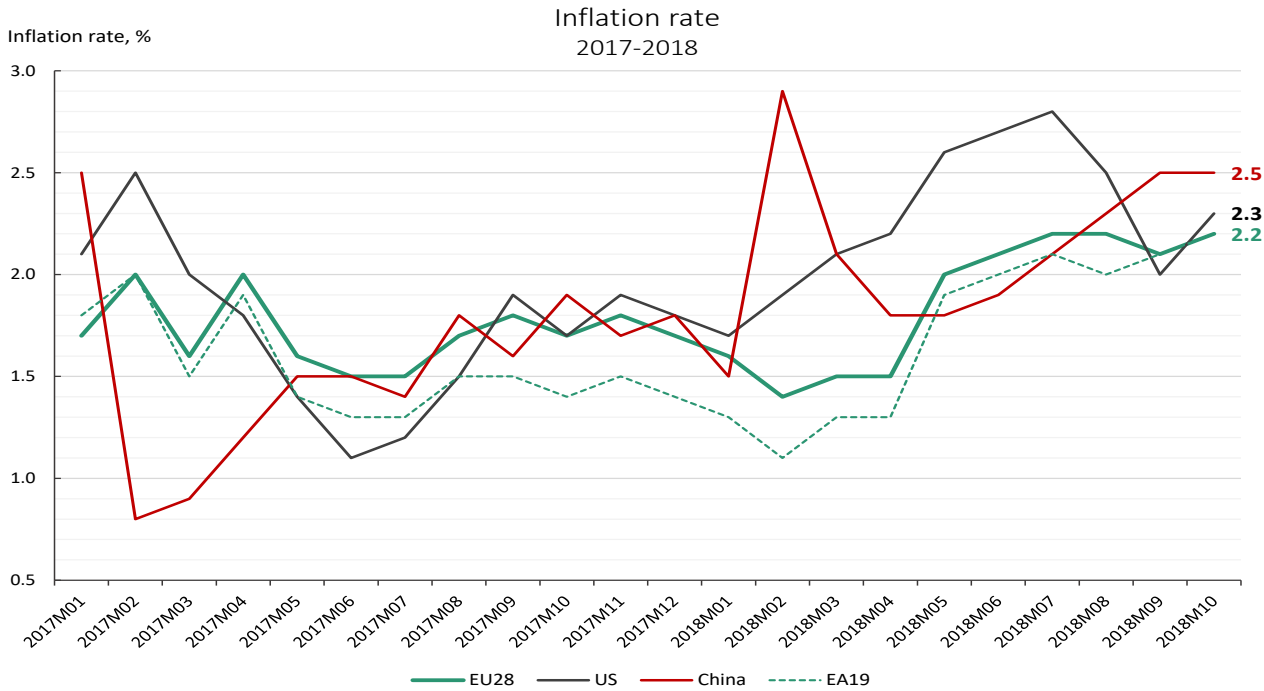
- EU +2.1% on average for 2018 to 1.9% in 2019 and 1.7% in 2020.
- US +2.9% on average for 2018 to 2.6% for 2019 and 2% for 2020.
- China +6.6% on average for 2018 to 6.3% for 2019 and 6% in 2020.

Note: GDP growth rates on the graph are quarterly, the forecasted values presented above are yearly averages.



## 5.2 Inflation (M)

HICP inflation in Eurozone to peak in the Q3 at 2.1%, partially due to olive prices rise, but stayed within the target of 2%. It is expected to decrease until the end of 2019 driven by downward sloping of oil prices.





### ECB & OECD Projections:

- HICP inflation (EZ) to average at 1.8% in 2018, bottom out at 1.6% in 2019, then pick up at 1.7% in 2020 and 1.8% in 2021.
- Food inflation relatively flat at 1.9% on average up to 2021.
- Wage growth to pick up noticeably 2.2% in 2018 to 2.7% in 2021.

Monthly Inflation (%) Q3 2018

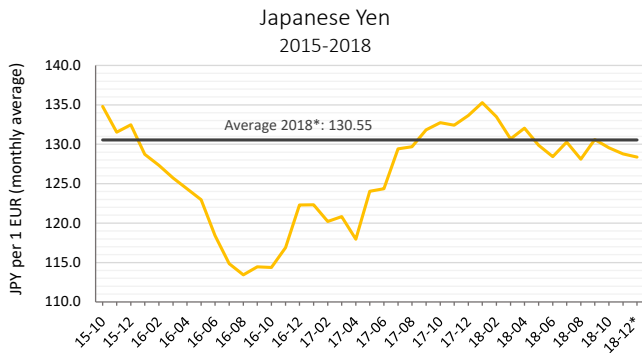
	Jul-18	Aug-18	Sep-18	Oct-18
Austria	2.30	2.30	2.10	2.40
France	2.60	2.60	2.50	2.50
Germany	2.10	1.90	2.20	2.40
Spain	2.30	2.20	2.30	2.30
Italy	1.90	1.60	1.50	1.70
Switzerland	1.20	1.30	1.10	1.10
UK	2.50	2.70	2.40	2.40

OECD Inflation Forecasts (%)

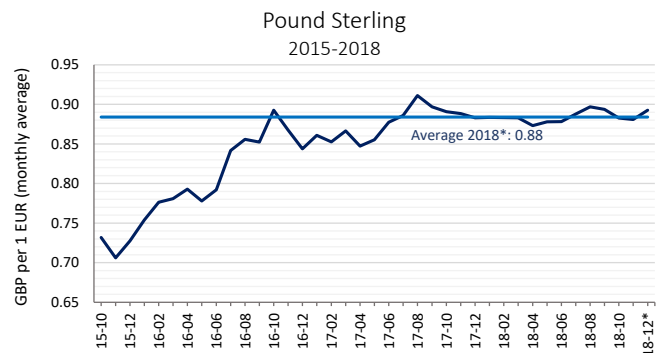
	2018	2019	2020
Austria	2.09	2.13	1.99
France	2.15	1.84	1.84
Germany	1.87	2.17	2.16
Spain	1.86	1.87	1.74
Italy	1.34	1.56	1.39
Switzerland	1.00	0.94	1.06
UK	2.50	2.25	2.07

## 5.3 Foreign Exchange Rates (M)

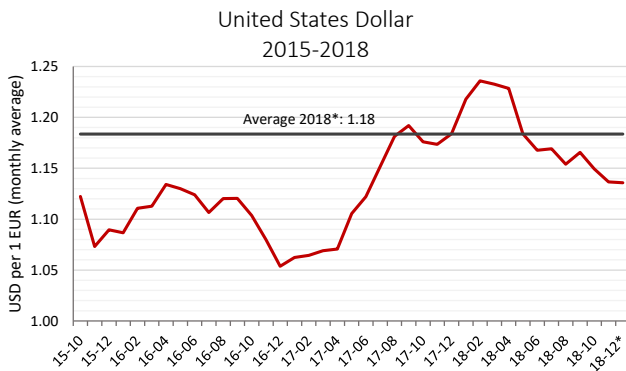
The single currency slipped lower after official data revealed a slowdown in the Eurozone economic growth in the third quarter. Eurozone is slowing down due to inflation raises and deterioration of global trade.



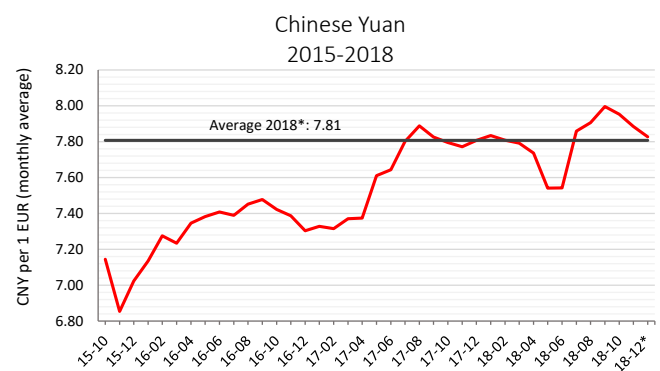
The Japanese Yen has been underperforming against the US Dollar, as it has found its services in surprisingly low demand. JPY/GBP relationship may become difficult due to 2-way volatility.



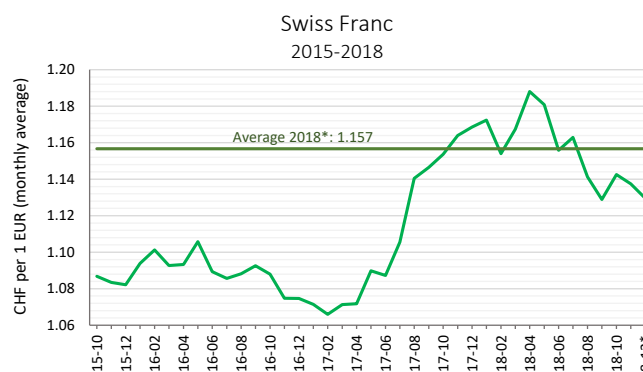
The Pound Sterling experiences a considerable upside against Euro and US Dollar, as a "No Deal" is increasingly unlikely.



US Dollar is still below the yearly average since April. Federal Reserve is expected to slow the pace of US interest rate hikes, marking the end of a three years of steady rate increases.



Chinese Yuan shows signs of weakness against the basket of currencies. Markets anticipate yuan's weakness against the Dollar and a slowdown of Chinese economy.



Swiss bankers foresee an opportunity as dollar and euro markets widen. This year, the Swiss franc strengthened by 3.5%, making its exports less competitive, but is still way below the yearly average.

# Glossary <sup>i</sup>

## 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.

## 2.3 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.

## 3.1 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.

## 3.2 Capacity Utilisation 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](http://ec.europa.eu/economy_finance/db_indicators/surveys/documents/userguide_en.pdf)

### **3.3 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>

### **3.4 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/>

The deposit facility rate is the one the banks receive for depositing money with the central bank overnight.

The so-called main refinancing rate, minimum bid rate or rate for the main refinancing operations (MROs) is the interest rate which banks do have to pay when they borrow money from the ECB for a period of one week.

### **4.2 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>

### 4.3 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>

# 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) / Eurozone (EZ)**

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

## **M / m (Toolbox headings)**

M = Macro-economic. non-caps (m) = microeconomic.

## **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

## **Fed**

Federal Reserve (System), the US 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



# cecimo

European Association of the Machine Tool Industries  
and related Manufacturing Technologies

## Member Associations

**Austria:** FMTI

Fachverband Metalltechnische Industrie  
[www.fmti.at](http://www.fmti.at)

**Belgium:** AGORIA

Federatie van de Technologische Industrie  
[www.agoria.be](http://www.agoria.be)

**Czech Republic:** SST

Svazu Strojírenské Technologie  
[www.sst.cz](http://www.sst.cz)

**Denmark:** The Manufacturing Industry  
a part of the Confederation of Danish  
Industry  
[ffi.di.dk](http://ffi.di.dk)

**Finland:** Technology Industries of Finland  
[www.teknologiateollisuus.fi](http://www.teknologiateollisuus.fi)

**France:** SYMOP

Syndicat des Entreprises de Technologies  
de Production  
[www.symop.com/fr](http://www.symop.com/fr)

**Germany:** VDW

Verein Deutscher  
Werkzeugmaschinenfabriken e.V.  
[www.vdw.de](http://www.vdw.de)

**Italy:** UCIMU

Associazione dei costruttori Italiani di  
macchine utensili robot e automazione  
[www.ucimu.it](http://www.ucimu.it)

**Netherlands:** FPT-VIMAG

Federatie Productie Technologie / Sectie  
VIMAG  
[www.fpt-vimag.nl](http://www.fpt-vimag.nl)

**Portugal:** AIMMAP

Associação dos Industriais Metalúrgicos,  
Metalomecânicos e Afins de Portugal  
[www.aimmap.pt](http://www.aimmap.pt)

**Spain:** AFM - Advanced Manufacturing  
Technologies

Asociación española de fabricantes  
de máquinas-herramienta, accesorios,  
componentes y herramientas  
[www.afm.es](http://www.afm.es)

**Sweden:** MTAS

Machine and Tool Association of Sweden  
[www.mtas.se](http://www.mtas.se)

**Switzerland:** SWISSMEM

Die Schweizer Maschinen-, Elektro- und  
Metall-Industrie  
[www.swissmem.ch](http://www.swissmem.ch)

**Turkey:** MIB

Makina Imalatçilari Birliği  
[www.mib.org.tr](http://www.mib.org.tr)

**United Kingdom:** MTA

The Manufacturing Technologies  
Association  
[www.mta.org.uk](http://www.mta.org.uk)

## CREDITS

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## cecimo

is the European Association of the Machine Tool Industries and related Manufacturing Technologies. We bring together 15 national associations of machine tool builders, which represent approximately 1500 industrial enterprises in Europe (EU + EFTA + Turkey), over 80% of which are SMEs. CECIMO covers 98% of the total machine tool production in Europe and about 39% worldwide. It accounts for more than 150,000 employees and a turnover of nearly €24 billion in 2015. More than three quarters of CECIMO production is shipped abroad, whereas half of it is exported outside Europe.

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