

# CECIMO Statistical Toolbox

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**cecimo**  
European Association of  
the Machine Tool Industries

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## Glossary

The items in grey are not available in this edition of the Statistical Toolbox.

# Introduction

Global growth is projected to strengthen in the course of 2015 and 2016, although it will remain modest compared to the pre-crisis period. The main factor causing the growth levels to remain low is a slowdown of activity in emerging markets, especially in China. The country is moving to a “new normal” of slower yet safer and more sustainable growth. The International Monetary Fund expects China’s growth to be 6.8 percent in 2015, down from 7.4 percent last year. However, fears that Chinese growth is weakening considerably more than forecasted, dragging down the global economy with it, are increasing.

The People’s Bank of China devalued the yuan earlier in August by lowering its official guidance interest rate. It also cut in the one-year benchmark bank lending rate by 25 basis points to 4.6% and reduced the reserve requirement ratio to 18.0% for most big banks. Despite the Chinese government’s attempts to smoothly rebalance the economy, the latest survey showed that Chinese manufacturing suffered in August the most important slowdown since the global financial crisis in 2009 - adding to other worrying clues about the country’s health, including its falling exports.

China is consuming over 40% of all machine tools in the world so its stance obviously has an influence on the outlook of European machine tool industry. In July CECIMO Business Climate Barometer results showed that the companies are somewhat less optimistic about future export opportunities than in the previous quarter. Nevertheless more machine tool builders expect their exports to grow than decline. In addition, their expectations about the business situation in general are highly positive following the broadly flat developments over the last quarter, matching the increases in the Economic Sentiment Indicator up to 104.0 in the euro area and 106.6 in the EU.

The economies in Asia are not the only source of uncertainty for entrepreneurs, Europe also offers causes for concern. After agreeing on the financial support program, securing the much-needed funds in the country’s third international bailout program, the Greece Prime Minister Alexis Tsipras resigned. . This opens the way to extraordinary elections, creating more uncertainty for companies and policy makers who already have serious doubts about Greece’s capacity to deliver the promised reforms and get its economy and banks back on track.

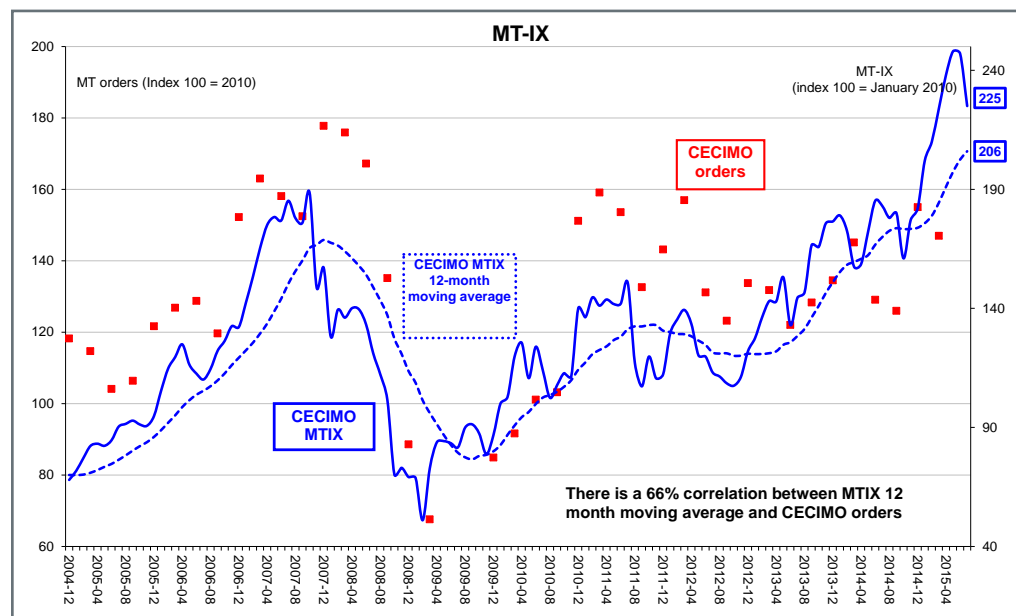
Taking into account the volatile world, European manufacturers have to look for sources to increase the production flexibility and create additional competitive advantage. One possible area to search for innovative solutions is the digitalisation of manufacturing. Next to the private sector, policymakers also recognise the central role of information technology to increase productivity and look for ways to capitalise on the next digital revolution. The European Commission has identified the completion of the Digital Single Market (DSM) as one of its 10 political priorities. The Internet of Consumers is a daily reality for billions of users while the ‘Industrial Internet’ will give the global economy a significant boost. The Industrial Internet could be the catalyst for a productivity surge, helping to wipe hundreds of billions euro of wasted time and resources by combining internet-connected machines, product diagnostics and software and analytics to make business operations more efficient, proactive, predictive and strategically automated. However, many companies remain to be convinced about the impact it represents. The Industrial Internet will create new business models, generate added-value beyond a company’s own production and supply chain, and exploit cooperation between companies. The collaboration between companies will raise questions about data-use rights. There will be need for the necessary smart standards but policymakers should be cautious about the results of possible overregulation.

# 1. Data specific to the European machine tool market

## ▼ 1.3 MT-IX

In July, the MT-IX decreased of 8.9%. The index lost 22 points compared to June's value, and posted at 225 points in July 2015.

The market value of machine tool companies decreased in South-Korea, Japan, the United States, Taiwan, Brazil and euro area countries. The market capitalisation of machine tool builders grew in the United Kingdom. Machine tool companies from Switzerland booked more varied results.



## ▲ 1.6 CECIMO Business Climate Barometer

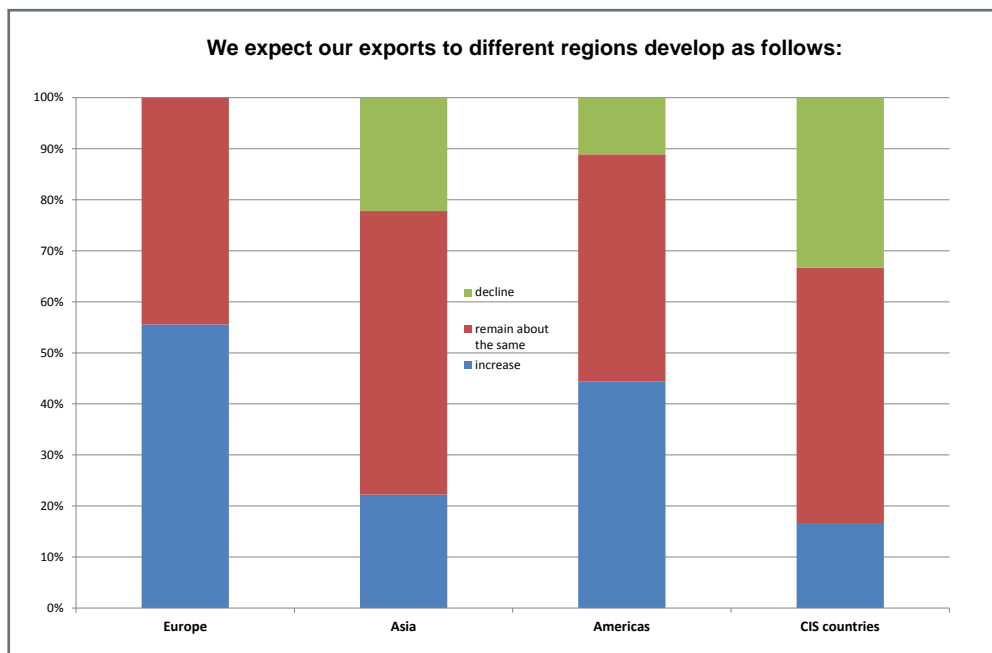
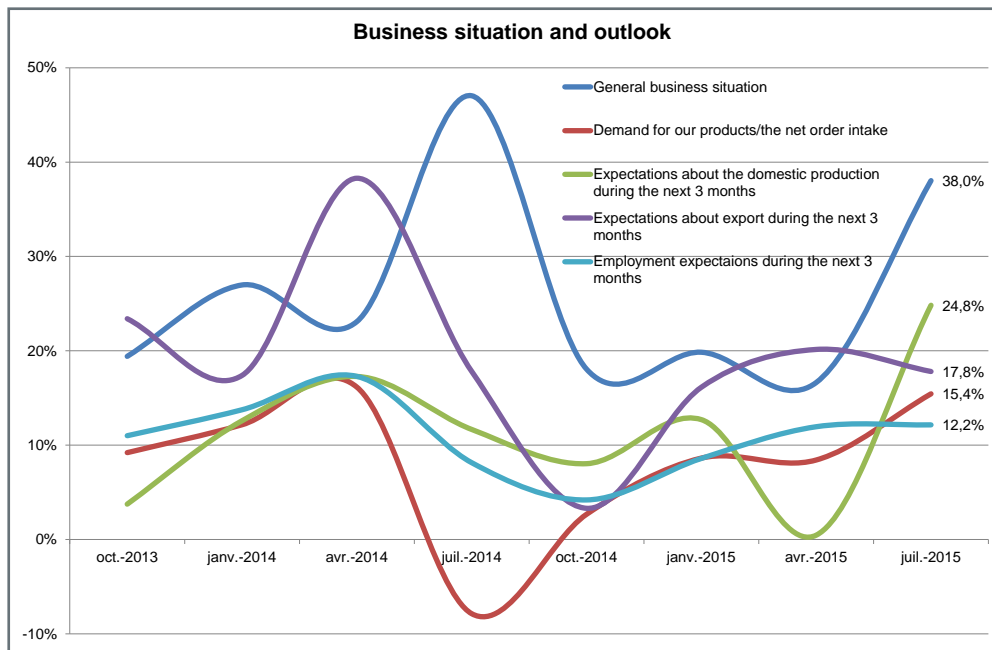
Despite turbulent times, July's CECIMO Business Climate Barometer confirms favourable times in the European machine tool industry. The survey included 62 machine tool companies in Europe and was distributed to the respondents between 15 July and 25 August 2015. The responses to questions in the CECIMO Business Climate Barometer are analysed as the difference ("net percentage") between the share of companies reporting increase and the share of companies reporting decrease in their business activities.

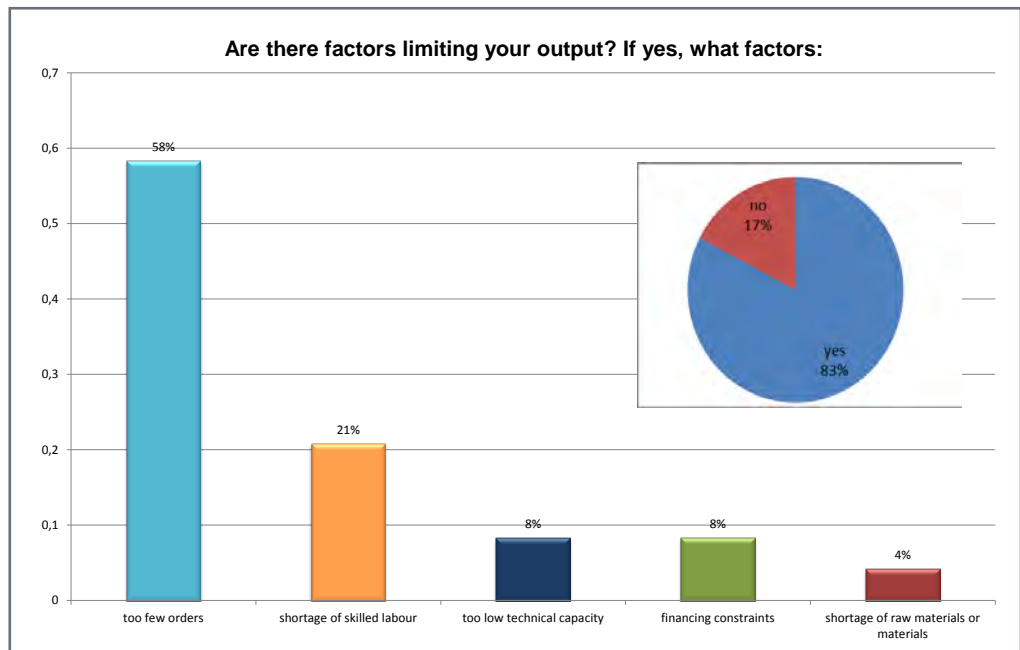
Satisfaction with the current situation increased considerably. The net percentage of companies reporting a good business situation grew to 38% in July from 17% in April 2015. Demand for machine tools and production volumes showed a positive trend. However, the companies were somewhat less optimistic about future export opportunities and the employment was expected to stabilise.

The resilience of European manufacturing to global headwinds makes the export outlook highly positive. The European machine tool exports to Americas were on high level during the first half of 2015 but the outlook points to the end of this era of extremely low interest. This has curbed to certain extent the positivism about future opportunities. Slowing economic growth in emerging economies and persisting

geopolitical tensions in Ukraine and Russia cut the export expectations towards Asia and the CIS countries.

In July, less respondents experienced limitations to their production compared to April, respectively 83% in July and 91% in previous period. The dominant restriction for businesses growth are market conditions eg; order intake. A shortage of skilled labour remains an important drag for machine tool production and, in the southern part of Europe, access to finance also curbs new investments.



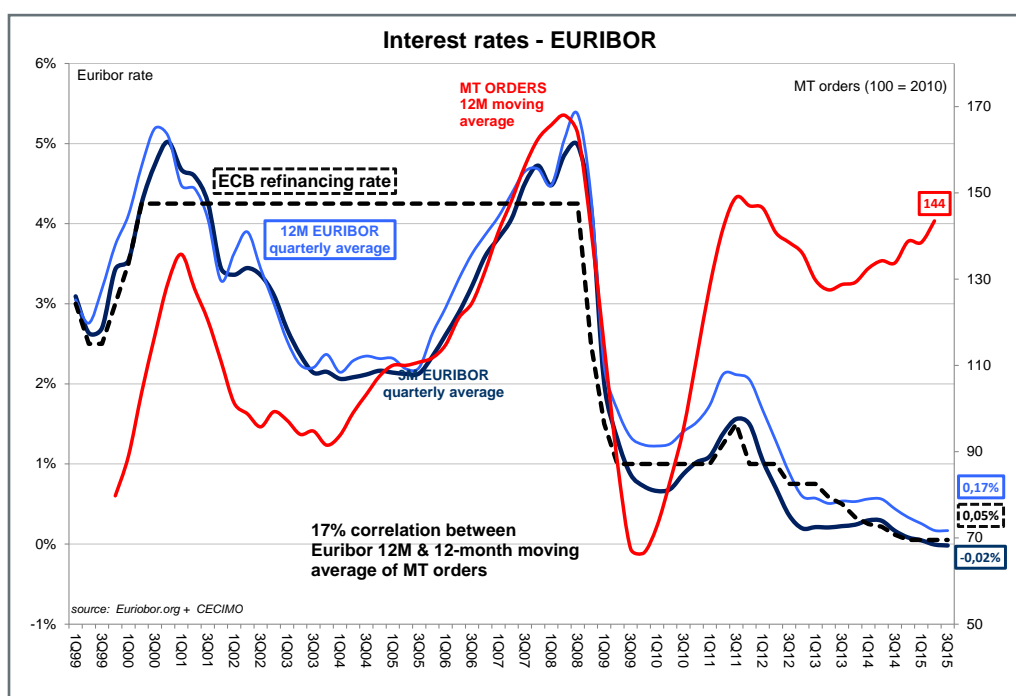


## 2. Macroeconomic data in relation with machine tool orders

### ▼ 2.2 Interest rates – EURIBOR

The average 3-month Euribor recorded -0.02% and 12-month Euribor 0.17% in June. Compared to May, the average 3-month Euribor decreased by 1 percentage point and 12-month Euribor increased by 1 percentage point.

Inflation bottomed out at the beginning of 2015 and has moved back into positive territory in recent months. However the prices remain low, annual consumer price inflation was 0.2% in July 2015, stable compared to June. Inflation is expected to keep its low but slowly growing levels at least until the end of the year.



## ▼ 2.3 Industrial production index i

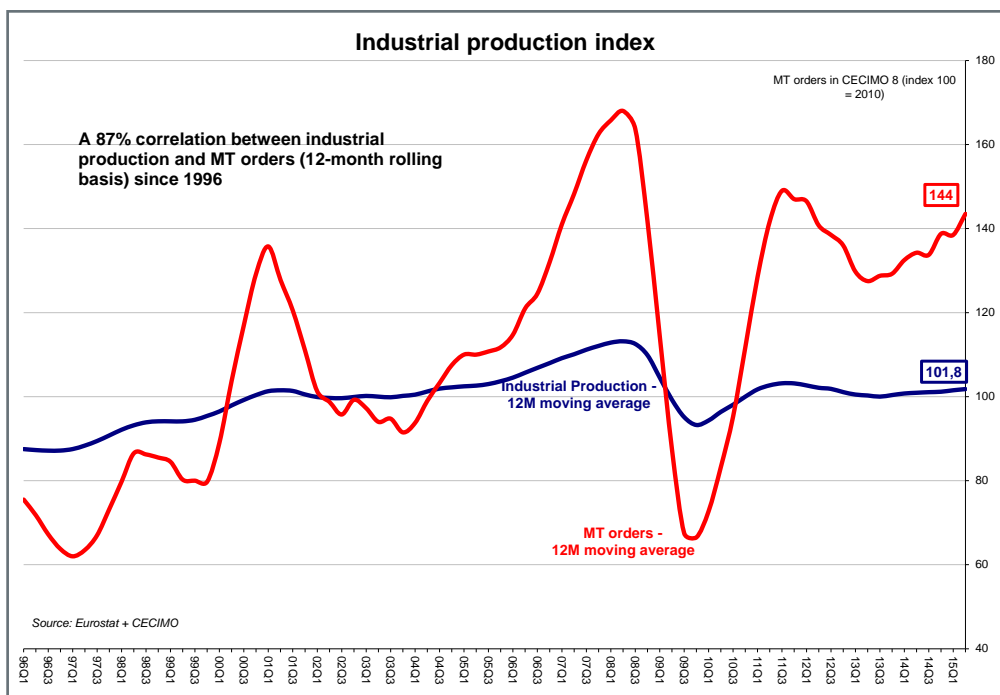
In June 2015 compared with May 2015, seasonally adjusted industrial production fell by 0.4% in the euro area (EA19) and by 0.2% in the EU28, according to estimates from Eurostat, the statistical office of the European Union. In May 2015 compared to April 2015, industrial production decreased by 0.2% and 0.1% respectively.

The decrease in industrial production in the euro area is due to the production of durable consumer goods falling by 2.0%, the production of capital goods by 1.8% and the production of intermediate goods by 0.5%, while the production of non-durable consumer goods remained stable. The production of energy rose by 3.2%. In the EU28, the decrease is due to the production of capital goods falling by 1.2%, the production of durable consumer goods by 0.4%, the production of non-durable consumer goods by 0.3% and the production of intermediate goods by 0.1%, while the production of energy rose by 1.5%.

Among Member States for which data are available, the highest increases were registered in Denmark (+4.2%), the Netherlands (+3.9%) and Slovakia (+1.4%), and the largest decreases in Croatia (-2.9%), Portugal (-2.1%) and Ireland (-2.0%).

In June 2015 compared with June 2014, industrial production increased by 1.2% in the euro area and by 1.7% in the EU28. The increase in industrial production in the euro area is due to the production of non-durable consumer goods rising by 2.5%, the production of capital goods by 1.7%, the production of intermediate goods by 0.2% and the production of durable consumer goods by 0.1%, while the production of energy remained stable. In the EU28, the increase is due to the production of capital goods rising by 2.4%, the production of durable consumer goods by 2.2%, the production of energy by 1.7%, the production of non-durable consumer goods by 1.5% and the production of intermediate goods by 0.8%.

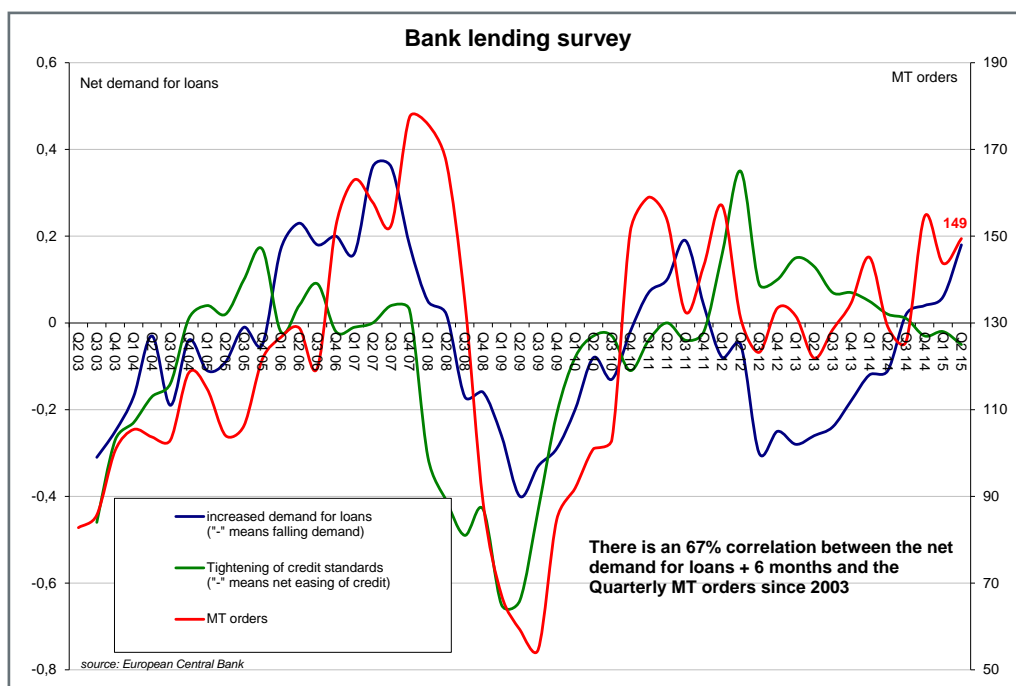
In yearly comparison, among Member States for which data are available, the highest increases in industrial production were registered in Ireland (+27.6%), Denmark (+7.6%), Lithuania (+6.9%) and Slovakia (+6.4%). Decreases were observed in Greece (-4.6%), Estonia (-3.4%), the Netherlands (-2.4%), Finland (-1.1%) and Italy (-0.3%).



## ▲ 2.6 Bank lending survey

In the second quarter of 2015, credit standards on loans to enterprises continued to ease, although at a slowing pace. Banks reported a continued net easing of credit standards on loans to enterprises in the second quarter of 2015 (-3%, after -10% in the previous quarter), which was stronger than expected in the previous survey round. Across firm size, credit standards were eased on loans to both large firms and small and medium-sized enterprises (SMEs). Banks continued to ease their terms and conditions on new loans across all categories. The net easing of credit standards on long-term loans recorded -3% compared to the -6% in previous quarter. The standards for short-term loans were eased with the net percentage at -4% from -10% in the previous quarter. Looking ahead to the third quarter of 2015, euro area banks expect no further net easing of credit standards on loans to enterprises.

Net demand for loans to enterprises (i.e. the difference between the sum of the percentages of banks reporting an increase and that of banks reporting a decline in demand) improved considerably. The net percentage of banks reporting an increase in demand was 13%, up from 1% in the previous quarter. While this was below banks' expectations, they expect a further considerable increase in demand for loans to enterprises in the third quarter of 2015. The general level of interest rates contributed the most to the increasing demand, while the financing needs for fixed investment contributed to an increase in the second quarter, after a negative contribution in the first quarter. Inventories and working capital needs also supported positively demand for loans.

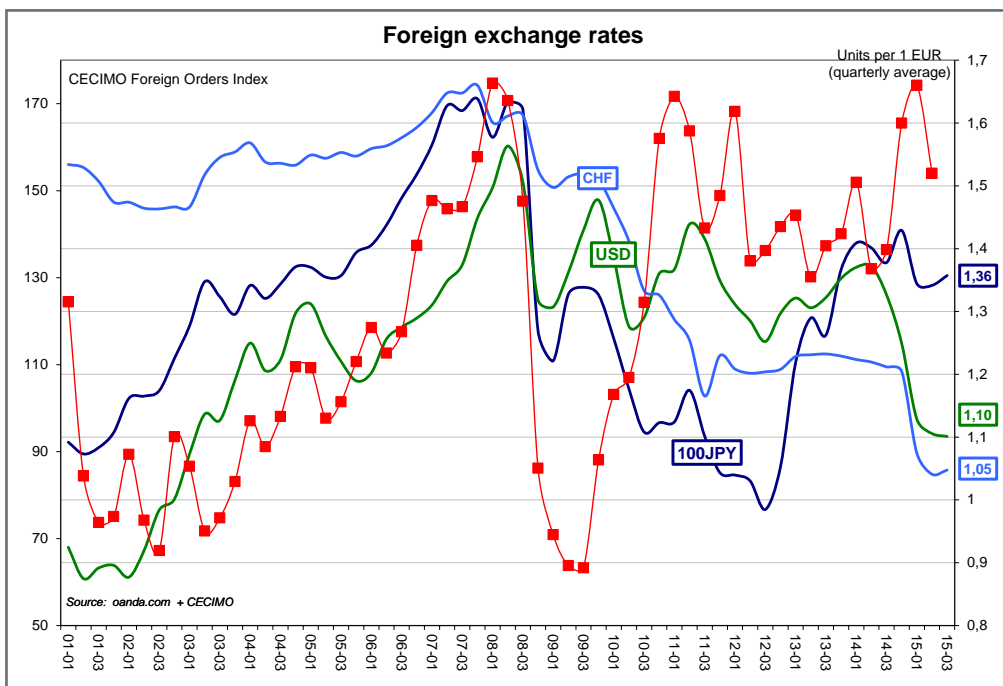




## ▼ 2.7 Foreign exchange rates

Between mid-April and early June, the euro exchange rate has been strengthening. Then, the nominal effective exchange rate of the euro, as measured against the currencies of 19 of the euro area's most important trading partners, stood in July 0.9% below June's and 8.4% below its level one year earlier. Movements in exchange rates were largely related to adjustments in market expectations deriving from the economic outlook for the euro area, especially the increased uncertainty triggered by developments in Greece.

However, the overall downward movement of the euro's effective exchange rate hides diverging patterns in the bilateral exchange rate of the euro vis-à-vis currencies outside the EU. In July, the exchange rate of the euro depreciated against the Japanese yen by 2.2%, the US dollar by 1.8% and appreciated against the Swiss franc by 0.3%.

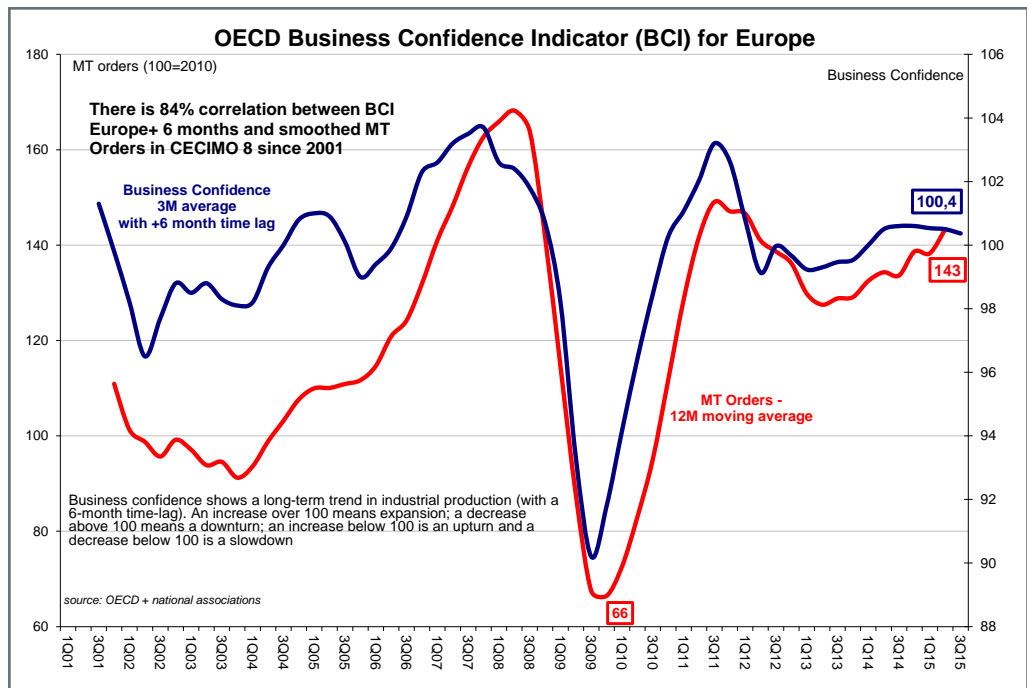


## ▬ 2.9 OECD Business Confidence Indicator (BCI) for Europe ⓘ

Business confidence indicators (BCIs), designed to anticipate turning points in economic activity relative to trend, point to stable growth in the OECD area as a whole.

A stable growth momentum is also expected in Europe and in the smaller euro area including Germany, Italy and Spain. In France, the BCI point to firming growth. The growth is easing in the United Kingdom while staying above the historical average.

On the other hand, BCIs point to growth easing below long-term trends in Brazil, India and Russia. The BCIs for Japan and China point to stable growth although in China it remains below long term trend. The BCI for the United States shows signs of a positive change in growth momentum.

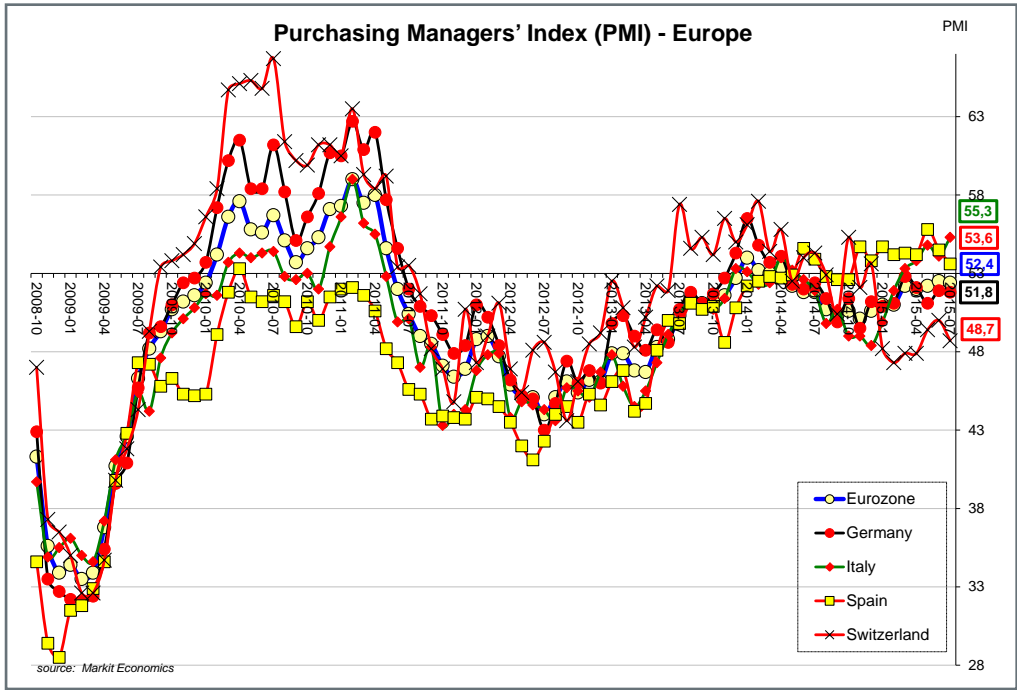
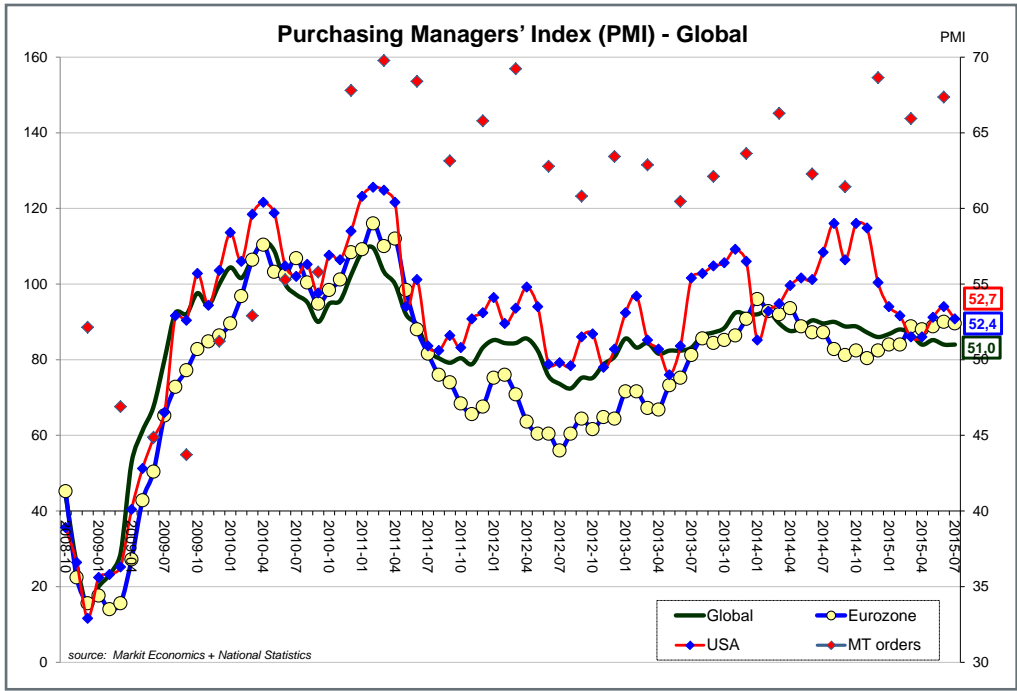


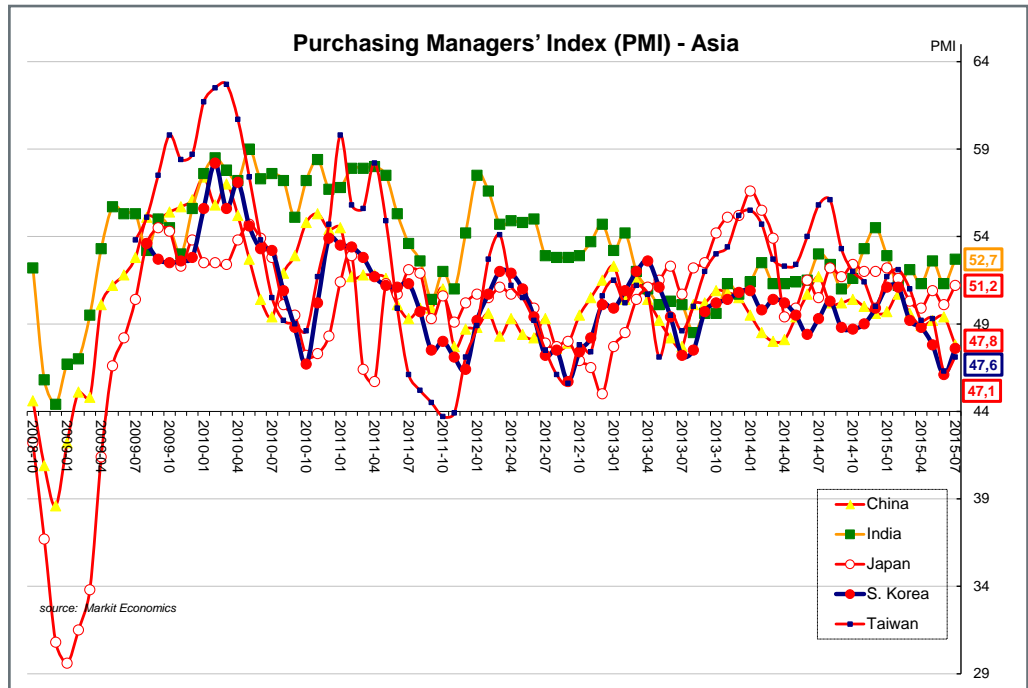
## ▼ 2.10 Purchasing Managers' Index (PMI) ⓘ

Global manufacturing activity remained weak in July, the PMI held steady at June's 51.0 matching April's near two-year low. New order growth also eased last month, with the sub index falling to 51.2 and predicting slow growth in the coming months. Chinese manufacturing conditions deteriorated to their weakest level in two years. The PMI shrank more than initially estimated, recording 47.8 in July compared to 49.4 in June. The PMIs of Taiwan and South Korea, both heavily reliant on Chinese demand, stayed below 50-mark indicating contraction and clouding hopes for a convincing global recovery in the second half of the year. On the brighter side, manufacturing activity in Japan and India picked up in July thanks to new orders. The manufacturing PMI of the United States dropped to a three-month low of 52.7.

European manufacturing activity showed positive signs in July. PMI recorded 52.4 down from 52.5 in June. The manufacturing sectors of the Netherlands, Spain and Italy all grew at a decent pace, with the latter at its fastest in over four years. French manufacturing declined after positive signs in June, while Germany registered only modest growth.

"The eurozone manufacturing economy showed encouraging resilience in the face of the Greek debt crisis in July. The PMI held close to its June level, which had been the highest for over a year, coming in ahead of the earlier flash estimate largely on the back of stronger than previously recorded growth in Germany. Despite holding up well on prior months, the overall rate of growth in the region as a whole remains only modest, pointing to industrial production growing at an annualised rate of around 2%. France slipped back into contraction – the only country besides Greece to see worsening business conditions in July – and lacklustre growth in Germany continues to act as a brake on the overall region," commented Markit.





## Glossary

### 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 and 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.

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

### 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. The division of production in construction between building construction and civil engineering is based on the classification of types of construction (CC). Statistical population: Production:

sections B, C, D of NACE (D353 excluded); Base period: Year 2010 = 100.  
[http://epp.eurostat.ec.europa.eu/cache/ITY\\_SDDS/EN/is\\_esms.htm](http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/is_esms.htm)

## 2.6 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>

## 2.9 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. 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. 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.

The standardised BCIs represent only the manufacturing sector. 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>

## 2.10 Purchasing Managers’ Index (PMI)

The Global Report on Manufacturing is compiled by Markit 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 and below 50.0 a decrease.

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

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