CECIMO Statistical Toolbox

March 2016

cecimo

European Association of
the Machine Tool Industries

Table of content

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

Introduction

March started with good news for Europe. The seasonally adjusted GDP rose by 0.3% in the euro area and by 0.4% in the EU during the fourth quarter of 2015, compared with the previous quarter, and the momentum seen in the third quarter of 2015 continued. The year-on-year GDP rose by 1.6% in the euro area and by 1.8% in the EU in the fourth quarter of 2015, providing confirmation that the economy is slowly recovering and moving towards growth.

Companies keep hiring people. The number of people employed in the euro area rose by 0.3% and by 0.1% in the EU in the fourth quarter of 2015 compared with the previous three months. This corresponds to the trends in unemployment: the EU unemployment rate was 8.9% in January 2016, down from 9.0% in December 2015. This is the lowest rate recorded in the EU since May 2009.

On the other hand, such GDP growth rates would not be enough to generate the inflationary pressure needed to take prices up to 2%, the European Central Bank's (ECB) target. Despite a positive trend on the labour market, growth and inflation remain weak and unemployment remains painfully high in the euro area. This has generated a handful of speculations about the central banks' ability to drive the economy to stronger growth.

However, the ECB took the concerns raised about its potency seriously and presented a set of measures aimed at helping ordinary businesses and consumers as much as markets. On 10 March, it announced a series of measures designed to increase financing to the real economy. The ECB also lowered all of its key rates: the interest rate on the main refinancing operations of the Eurosystem was decreased by 5 basis points to 0.00%, the interest rate on the marginal lending facility was decreased by 5 basis points to 0.25%, and the interest rate on the deposit facility was decreased by 10 basis points to -0.40%. In addition, the ECB decided to expand its monthly purchases under the asset purchase programme to EUR 80 billion starting in April. Moreover, under a new corporate sector purchase programme, investment-grade euro-denominated bonds issued by non-bank corporations established in the euro area will be included in the list of assets that are eligible for regular purchases as part of the programme. Purchases are to start towards the end of the second quarter of 2016.

The ECB will hold an auction of their cash that will in effect involve central banks paying a fee to commercial banks to lend to businesses and households. Hopefully, these auctions will finally generate the real recovery badly needed by the eurozone. At the auctions, banks can bid for cash of the value of as much as 30 per cent of their loan book. They pay nothing on the four-year loans, which they will not have to pay back until 2020 at the earliest. But if the banks lend more, then the ECB will pay them up to 0.4 per cent interest on the lenders' loans. Paying private banks to lend money is exceptional. However it reflects well Milton Friedman's "helicopter money" idea. The basic principle is that if a central bank wants to raise inflation and output in an economy that is running substantially below potential, one of the most effective tools would be simply to give everyone direct money transfers – fly with the helicopter above the country and throw money from the sky. Nevertheless, while monetary policy can increase inflation, policymakers should keep in mind that for sustainable and stable growth the economy should be supported with adequate structural reforms and fiscal policies.

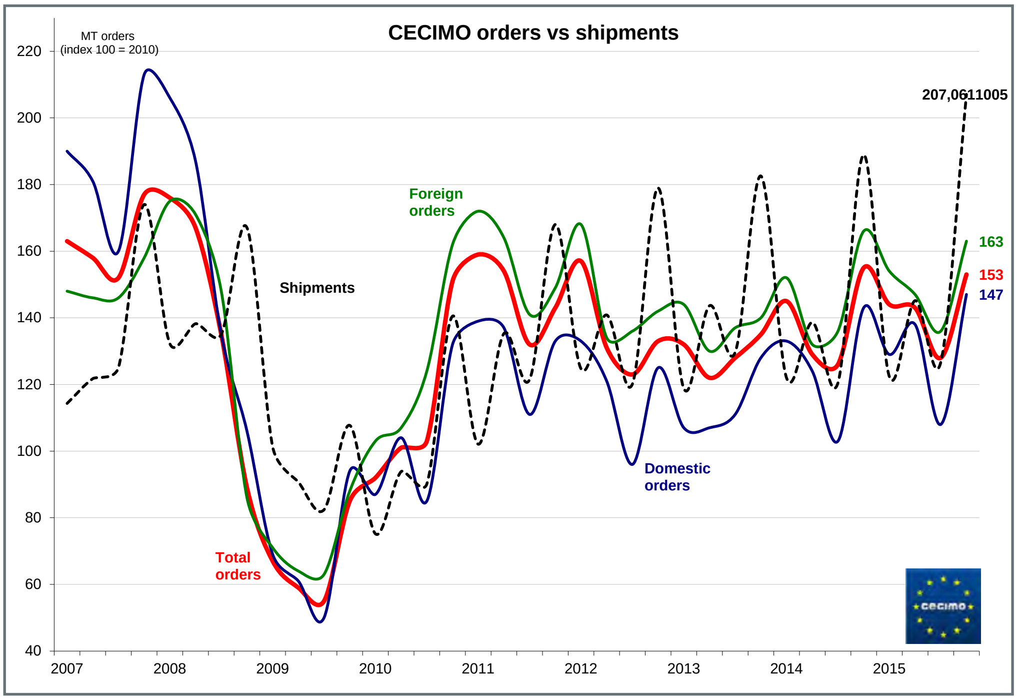
1. Data specific to the European machine tool market

1.1 CECIMO8 orders

In the last quarter of 2015, the European machine tool industry showed solid order intake and overcame the previous quarter's slump. The CECIMO8 total orders' index increased 19% compared with the previous quarter while showing almost stable levels in year-to-year comparison. The machine tool orders are dominantly driven by domestic markets despite several weaknesses present in European economy.

The CECIMO8 foreign orders' index increased 20% compared to the third quarter of 2015 and fell of 2% compared to the fourth quarter of 2014. The domestic orders index gained 36% and 2% compared to the levels of the previous quarter and the period of a year ago respectively. In conclusion, the growth of machine tool demand originates mostly from Europe.

Among CECIMO member countries, machine tool orders increased in Austria, Germany, France and the Czech Republic. The orders declined in the United Kingdom. The indexes of Italy, Switzerland and Spain showed a solid recovery from previous quarter while posting decreases on yearly basis due to relatively high base values.



1.2 Peter Meier's forecast

Overall situation:
There is evidence that the demand will continue to develop hesitantly in 2016. The consumption in the United States doesn't really gather way and the industrial production was, as expected, shrinking in the last few months. The manufacturing PMI is declining since June 2015 but the January and February values give hope that the bottom has now been reached. One can assume that the industrial production in the US will pass over the trough in the coming months, which will have a positive effect (with a further delay) on the demand for capital goods. The expected upswing, however, will highly depend on consumption growth. The

consumer sentiment in the US is already on a high since the beginning of 2015 which, up to now, has not yet been carried forward to consumption.

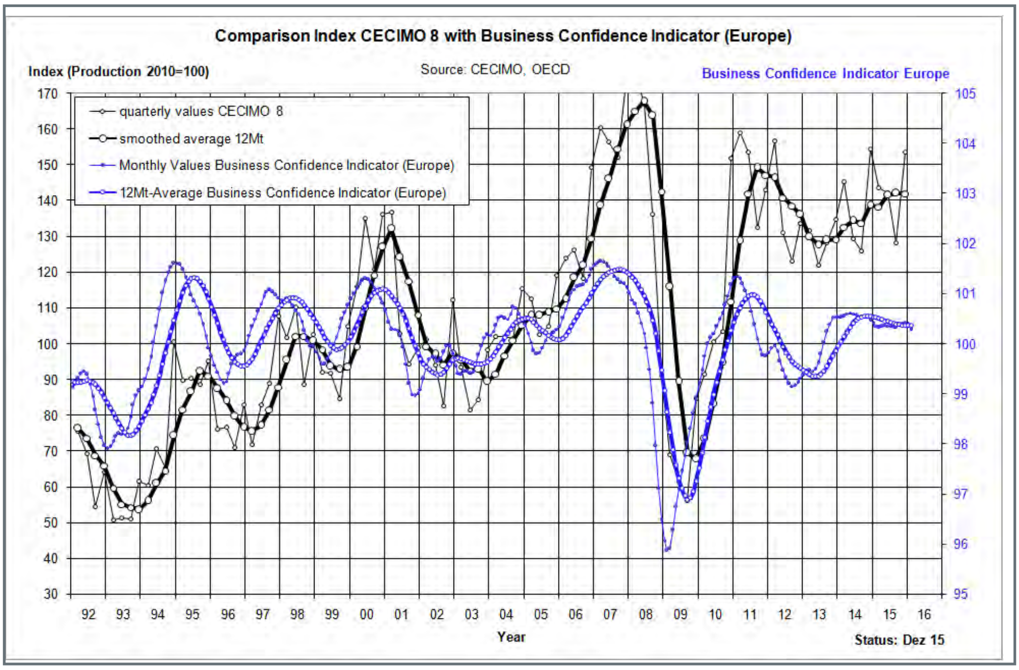
A big impetus from Asia cannot be expected. China is in the midst of structural change from an industrial into a service economy and this change is confusing. It usually triggers a crisis. Hopefully, the Chinese's significant consumption growth (about 10% per year) will absorb the shock. In Japan, industrial production is moving backward and consumption makes no headway.

For two years already, the consumer sentiment in Europe is expanding. In fact, by the end of 2015, consumption had slightly exceeded the level of 2007. This is mainly due to a recovery in the southern countries. However, industrial production is still far from the pre-crisis levels in Europe which makes free capacity available, and it inhibits the propensity to invest. For more than two years now, the business confidence is in expansionary territory but industry hasn't gained a significant momentum. After all, the leading indicators point slightly upwards, so it could lead to an upturn in the second half of 2016.

In early cyclical industries, such as textile machines or graphical machines, the demand is expected to revive significantly in spring / summer 2016. In late cyclical industries, such as machine tools or precision tools, the order volume in 2016 is likely to move in line with last year.

Business Confidence:
The 12Mt-average of the CECIMO order volume (thick black curve) moves sideways. Since the beginning of 2016 the Business Confidence Indicator (Europe) falls slightly back, but is still above the 100 mark, i.e. in the expanding area.

CECIMO 8 Forecast:
New orders in Q4 2015 were above expectations and hence compensated the loss of Q3. The latest economic indicators didn't change the forecast, a sign that we actually are in an economically quiet phase. The forecast points on sideways until mid-2016. Afterwards the demand is likely to grow.



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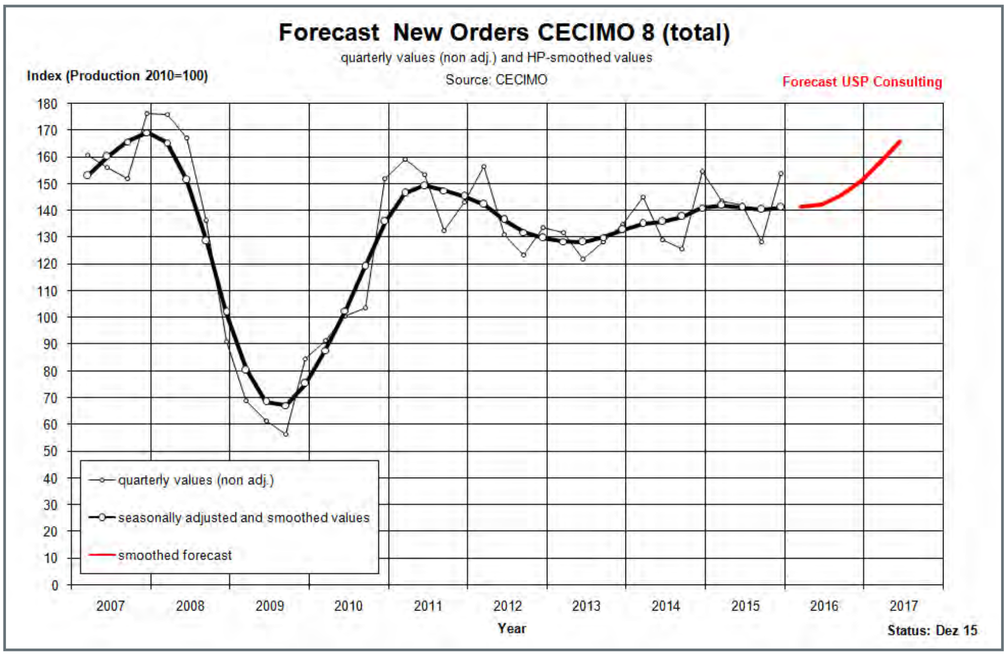
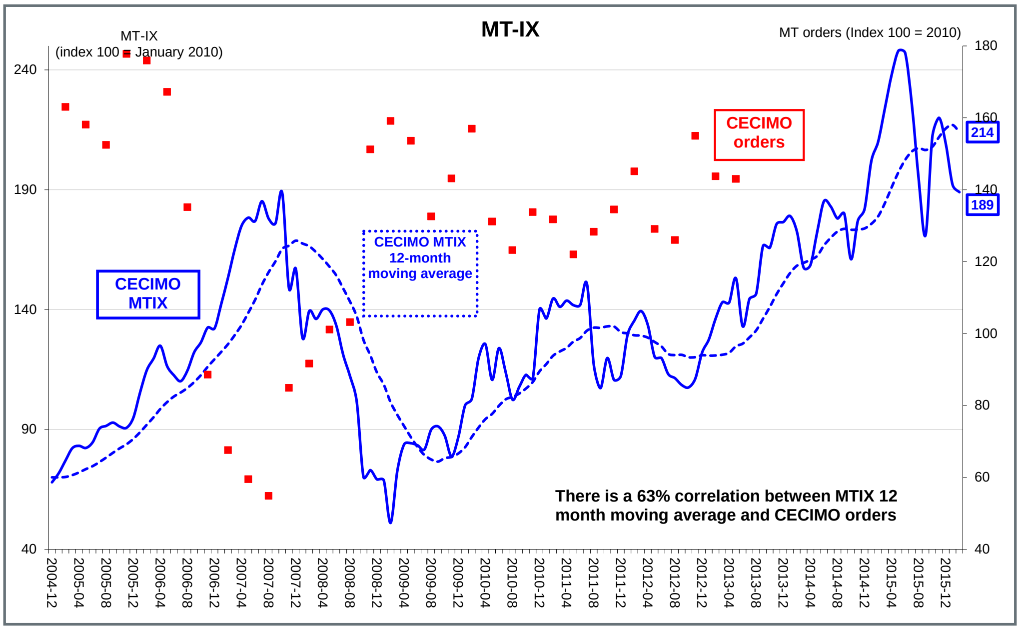


1.3 MT-IX ⓘ

In February, the MT-IX decreased by 1.6% and posted at 189 points. The index lost 3 points compared to January's value.

The market value of machine tool companies decreased in Brazil, Japan, Taiwan, the United Kingdom and the United States. The market capitalisation of companies increased in South Korea. In the euro area and Switzerland, the market capitalisation of machine tool companies booked more varied results.



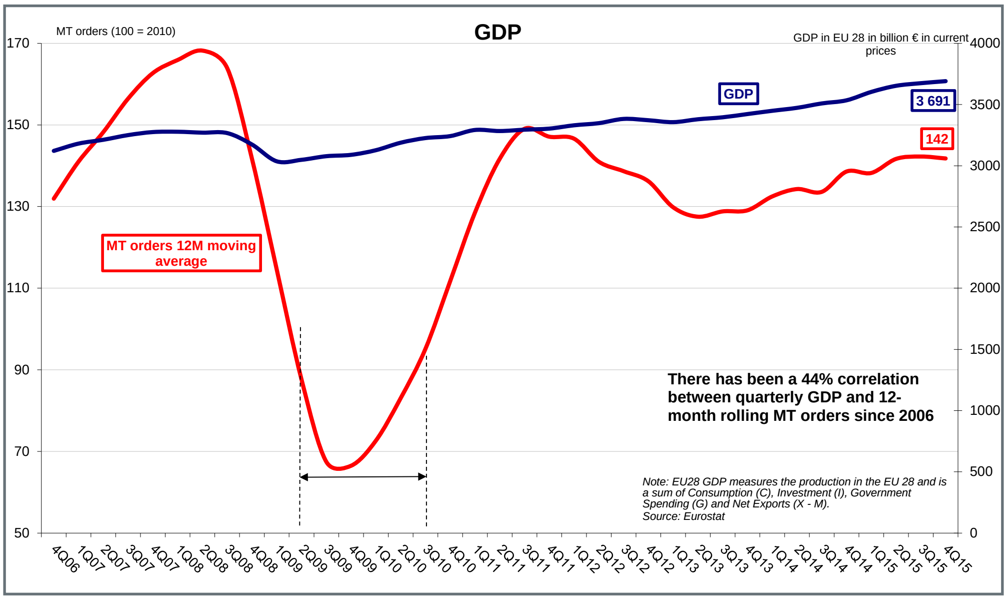
2. Macroeconomic data in relation with machine tool orders

2.1 GDP

The seasonally adjusted GDP rose by 0.3% in the euro area and by 0.4% in the EU28 during the fourth quarter of 2015, compared with the previous quarter, according to an estimate published by Eurostat, the statistical office of the European Union. In the third quarter of 2015, GDP also grew by 0.3% and 0.4% respectively. Compared with the same quarter of the previous year, the GDP rose by 1.6% in the euro area and by 1.8% in the EU28 in the fourth quarter of 2015, after 1.6% and 1.9% respectively in the previous quarter. Over the whole year 2015, GDP rose by 1.6% in the euro area and by 1.9% in the EU28, compared with 0.9% and 1.4% respectively in 2014.

Among Member States for which data are available for the fourth quarter of 2015, Sweden (+1.3%), Estonia (+1.2%), Poland and Romania (both +1.1%), Hungary and Slovakia (both +1.0%) recorded the highest growth compared with the previous quarter. Decreases were registered in Croatia (-0.5%) and Latvia (-0.3%) while GDP in the Czech Republic remained stable.

During the fourth quarter of 2015, GDP in the United States increased by 0.3% compared with the previous quarter (after +0.5% in the third quarter of 2015). Compared with the same quarter of the previous year, GDP grew by 1.9% (after +2.1% in the previous quarter).

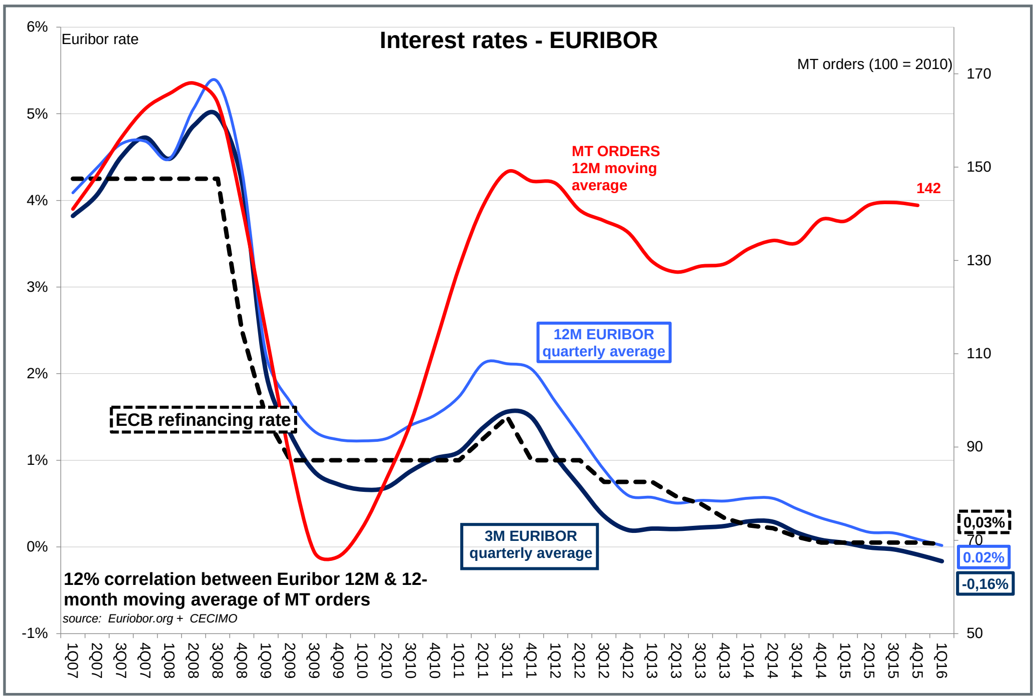


2.2 Interest rates – EURIBOR

The average 3-month Euribor and 12-month Euribor recorded respectively -0.18% and -0.01% in February 2016. Compared to January 2016, the average 3-month Euribor decreased by 3 percentage points and the average 12-month Euribor decreased by 5 percentage points. On 10 March, the European Central Bank took the crucial decision to lower the policy rates further. The Governing Council decided to lower the interest rate on the main refinancing operations of the Euro system by 5 basis points to 0.00% and the rate on the marginal lending facility by 5 basis points to 0.25%. The rate on the deposit facility was lowered by 10 basis points to -0.40%.

The decision was brought by continuously low inflation in the European Union. The Euro area has even slipped back to deflation, the area's annual inflation was -0.2% in February 2016, down from 0.3% in January 2016. Therefore the loose monetary policy will continue for still some time.

2.3 Industrial production index ⓘ



In January 2016 compared with December 2015, seasonally adjusted industrial production rose by 2.1% in the euro area and by 1.7% in the EU28, according to estimates from Eurostat. In December 2015 industrial production fell by 0.5% in the euro area and by 0.6 in the EU28.

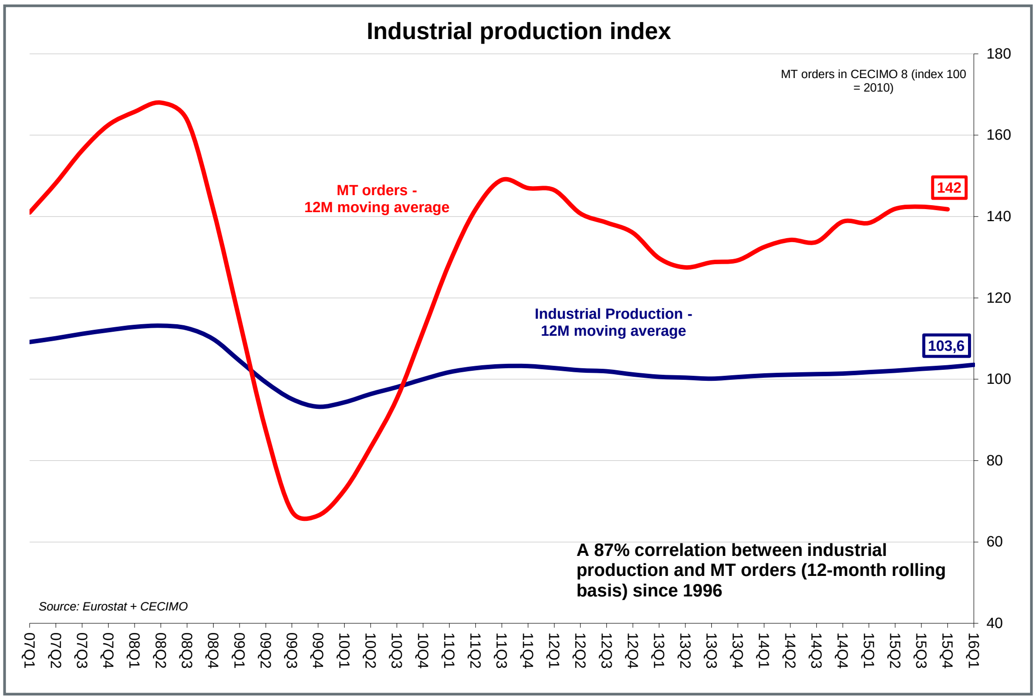
The increase of industrial production in the euro area is due to the production of capital goods rising by 3.9%, the production of energy and non-durable consumer goods both by 2.4%, the production of durable consumer goods by 1.3% and the production of intermediate goods by 0.9%. In the EU28, the increase is due to the production of capital goods rising by 3.3%, the production of energy by 2.0%, the production of non-durable consumer goods by 1.5%, and the production of intermediate goods and durable consumer goods both by 1.0%.

Among Member States for which data are available, the highest increases in industrial production were registered in Ireland (+12.7%), Estonia (+4.9%), Croatia (+3.2%) and Germany (+2.9%), and the largest decreases in Malta (-5.0%), Romania (-2.3%) and Finland (-2.1%).

In January 2016 compared with January 2015, industrial production increased by 2.8% in the euro area and by 2.5% in the EU28. The increase in the euro area is due to the production of non-durable consumer goods rising by 7.3%, the production of capital goods by 4.6%, the production of durable consumer goods by 3.2% and the production of intermediate goods by 1.9%, while the production of energy fell by 3.7%. In the EU28, the increase is due to the production of non-durable consumer goods rising by 5.3%, the production of capital goods by

4.7%, the production of durable consumer goods by 3.0% and the production of intermediate goods by 1.4%, while the production of energy fell by 2.7%.

In yearly comparison among Member States for which data are available, the highest increases in industrial production were registered in Ireland (+42.7%), Lithuania (+10.5%) and Croatia (+9.3%), and the largest decreases in Malta (-8.9%), the Netherlands (-3.9%) and Finland (-1.9%).



2.5 Capacity utilisation in the investments goods sector

In the European manufacturing sector, the estimated rate of capacity utilisation increased to 84.7% in the fourth quarter of 2015 from 84.2% in previous quarter. Capacity utilisation in the euro area increased to 81.90% in the first quarter of 2016 from 81.50% in the fourth quarter of 2015. Capacity utilisation in the Euro Area averaged 81.04 percent from 1985 until 2016, reaching an all-time high of 85.30% in the fourth quarter of 1989 and a record low of 69.60%in the third quarter of 2009.

At the same time, the share of managers assessing their current production capacity as 'more than sufficient' (in view of current order books and demand expectations) increased. 15.2% more managers estimated their production capacity sufficient compared to 13.3% in previous quarter. This confirms the cautious sentiment of European manufacturing managers in taking big investment decisions and forecasts also modest trend in machine tool orders.

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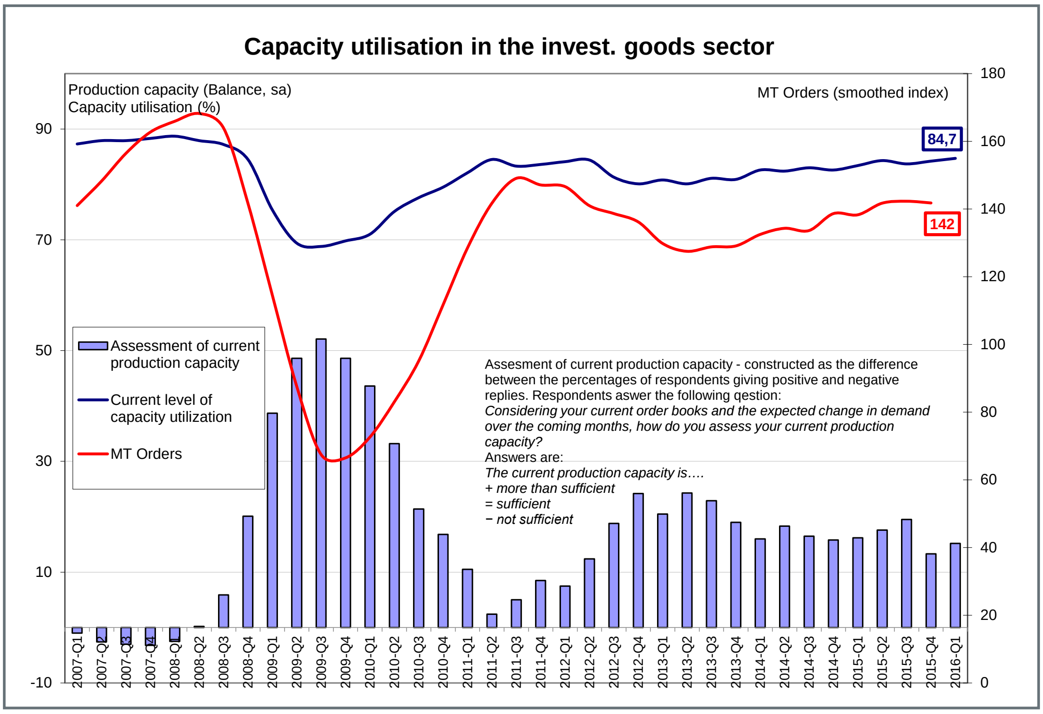
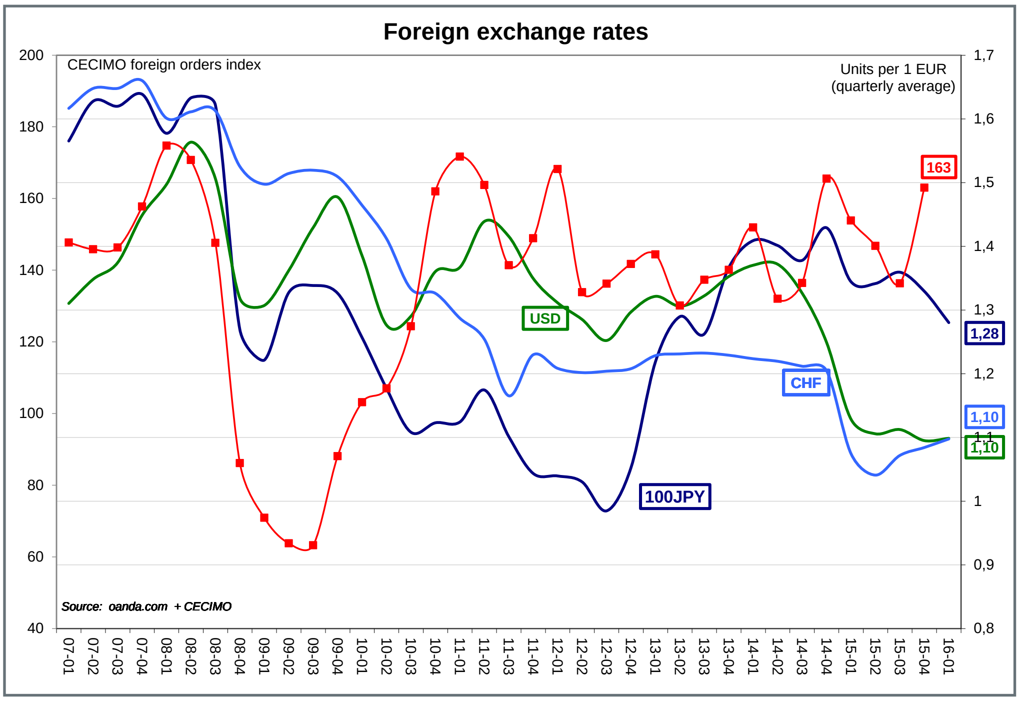


2.7 Foreign exchange rates

The effective exchange rate of the euro has appreciated over the last three months amid the increase in global uncertainty. 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 February at 1.2% above January's rate and 1.5% above its level one year earlier.

In bilateral terms, the picture is more varied. The average euro exchange rate depreciated against the US dollar by 2.2% and against the Swiss franc by 0.7% in January compared to previous month. At the same time, the euro appreciated against the Japanese yen by 1.1%.



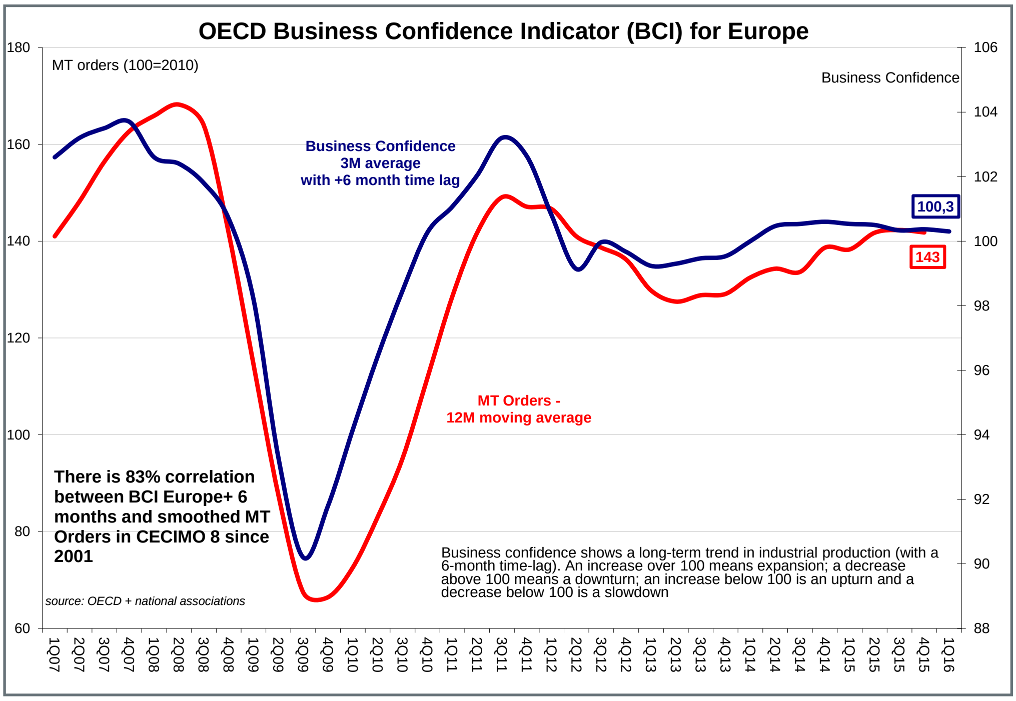
2.9 OECD Business Confidence Indicator (BCI) for Europe ⓘ

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

In Europe and in the euro area, BCIs point to easing growth while in France the outlook is for firming growth. The BCIs for Germany, Italy, Spain and the United Kingdom show a loss of growth momentum albeit from relatively high levels.

A stable growth momentum above long term average is anticipated in Japan. The growth is recovering in the United States.

India's BCI points to stabilising growth momentum. In China, Russia and Brazil, the BCIs show a loss in growth momentum under long term average.



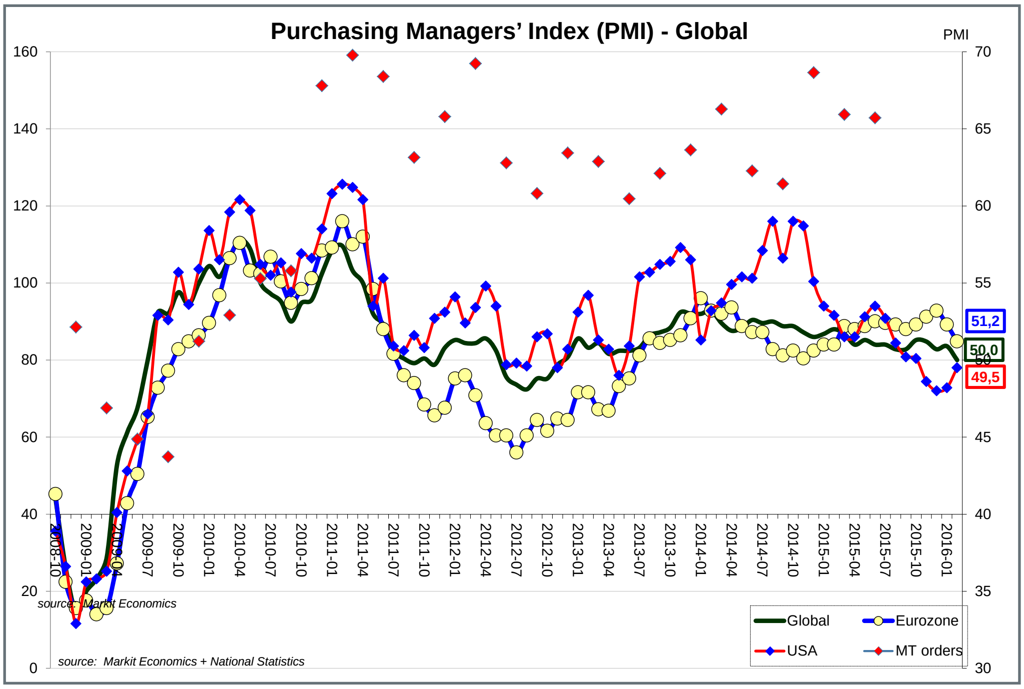
2.10 Purchasing Managers' Index (PMI) ⓘ

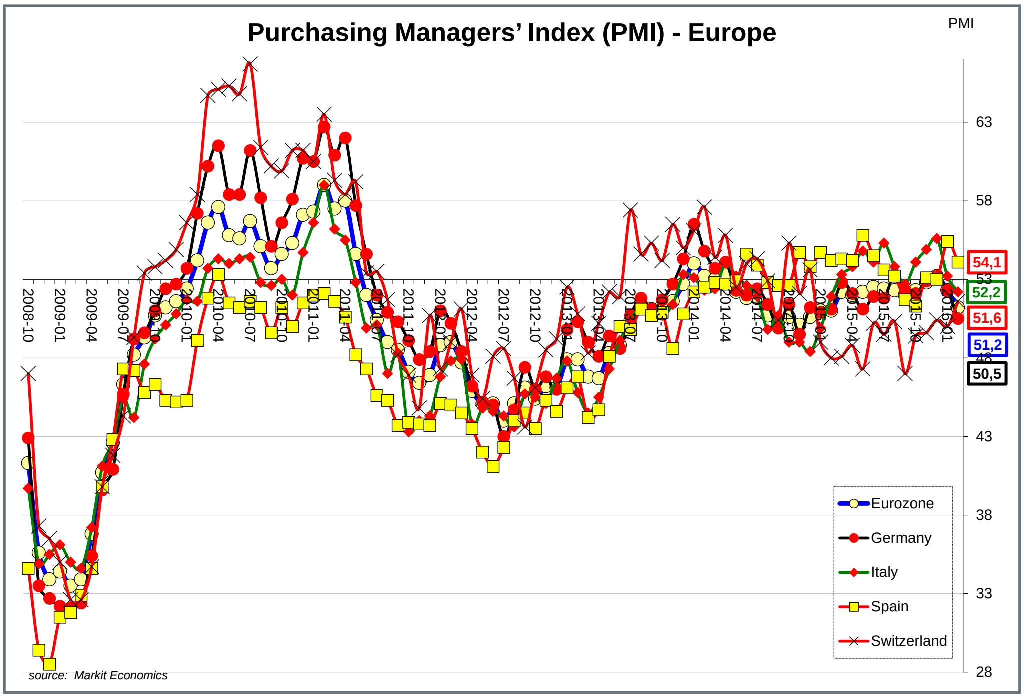
The world manufacturing sector growth stagnated in February as falling prices failed to stimulate new orders, pushing companies to trim their workforce. The global manufacturing PMI slipped to 50.0 last month, right on the level that separates growth from contraction, and down from 50.9 in January. Manufacturing output shrank in most of Asian countries. The sluggish demand and years of overexpansion fuelled by debt weighed on China's manufacturers, leaving many with large amounts of idle capacity and bringing down economic growth. The China PMI fell to 48.0 in February from January's 48.4. While still in expansionary zone, Japan's manufacturing saw the weakest growth in eight months, PMI fell to 50.1 in February from 52.3 in January. The US manufacturing activity contracted in February but at a slower pace than the previous month. Its PMI rose to 49.5 from 48.2 the month before.

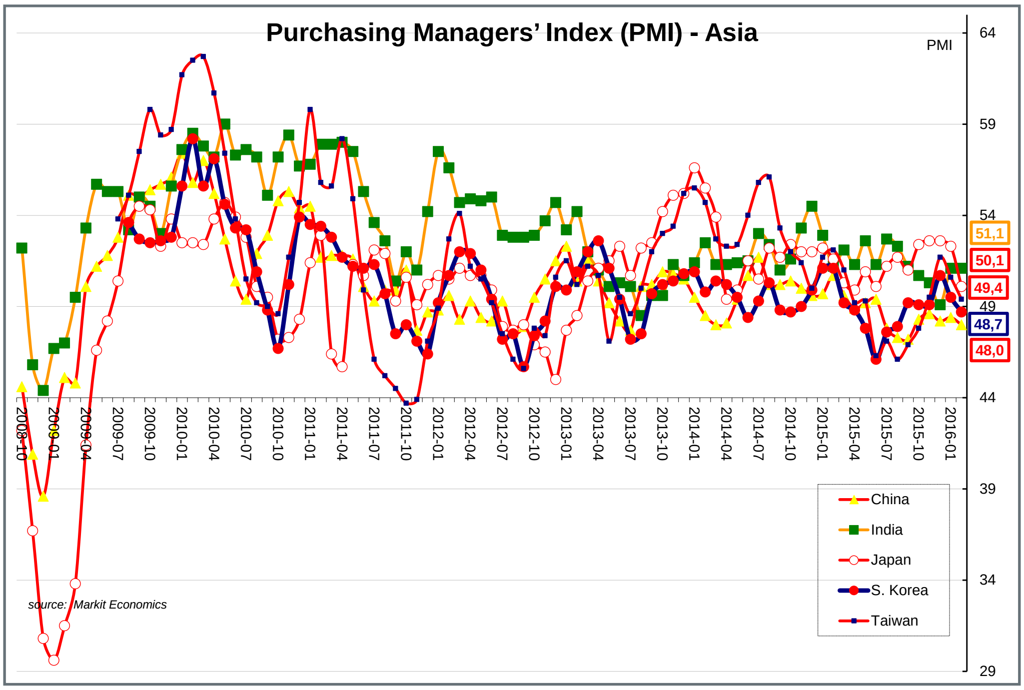
Manufacturing also expanded in the euro area, but at its weakest pace for a year, since low prices failed to stop the slowing of order growth. Manufacturing PMI for the euro area dropped to 51.2 from January's 52.3. Manufacturing growth in

Germany slowed further with the final PMI decreasing from January's 52.3 to a 15-month low of 50.5. In Italy, the manufacturing output rose at the slowest rate for over a year, reflecting further easing in the pace of expansion in new orders. Employment continued to increase, but the PMI recorded a point lower, 52.2.
In euro area, only Austria and France improved their outlook for manufacturing companies. The PMIs increased to 51.9 and 50.2 respectively.

"*With factory output in the eurozone showing the smallest rise for a year in February, concerns are growing that the region is facing yet another year of sluggish growth in 2016, or even another downturn. Lacklustre domestic demand is being compounded by a worsening global picture. Exports either fell or rose more slowly in all countries surveyed with the sole exception of Austria. For a region in desperate need of lower unemployment, the near-stalling of jobs growth in the manufacturing sector comes as disappointing news. Firms are cutting back on their hiring due to worries about the outlook*," commented Markit.




Purchasing Managers' Index (PMI) - Europe
PMI
63
58
43
38
33
28
54,1
52,2
51,6
51,2
50,5
Eurozone
Germany
Italy
Spain
Switzerland
source: Markit Economics


Purchasing Managers' Index (PMI) - Asia
PMI
64
59
54
49
44
39
34
29
51,1
50,1
49,4
48,7
48,0
China
India
Japan
S. Korea
Taiwan
source: Markit Economics

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 and 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

2.5 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

2.9 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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