



European Association of the Machine Tool Industries

Where manufacturing begins

CECIMO Statistical Toolbox

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Introduction

(Glossary at the end of the document)

On January 1st, 2015 Lithuania became the 19th Member State to adopt the euro. The previous national currency – the litas – was phased out during a transitional two-week dual circulation period. The entire Baltic region is now in the euro area (neighbouring Latvia and Estonia have adopted the currency in 2014 and 2011 respectively), and 337 million Europeans share the same currency. It also completes a quarter-century transition from a communist economy to a full member of the single European economy. With GDP reaching to 34.6 billion euro in 2013, Lithuania is one of the smallest economies in Europe, but also among the most dynamic ones. The growth outlook is estimated to 3.1% for 2015.

On the global level, despite falling oil prices and the strong American performance, the International Monetary Fund keeps downgrading its economic growth outlook. Global growth is forecasted to rise moderately in 2015–16, from 3.3 percent in 2014 to 3.5 percent in 2015 and 3.7 percent in 2016, revised down by 0.3 percent for both years relative to the previous outlook.

Among advanced economies, we see the increasing divergence between the United States, on the one hand, and the euro area and Japan, on the other. In developing economies, growth is estimated to remain broadly stable, but under the previous forecast of 4.3 percent in 2015, and to increase to 4.7 percent in 2016. Emerging economies will be affected by two developments. First, China's investment is expected to moderate further and the authorities will probably put greater resources to reducing vulnerabilities created by the recent rapid credit and

investment growth. Secondly, Russia's economic outlook is weakened, the growth forecast was downgraded to –3.0 percent for 2015, as a result of sharply lower oil prices and increased geopolitical tensions.

The economic environment also leaves its marks on the machine tool orders' outlook. The latest Peter Meier's forecast points now to a slight drop in machine tool demand during the coming 12 months, instead of a moderate growth. Next to business confidence, the dynamics of manufacturing PMI suggest a declining factory activity in the world which should also hold back machine tools investment decisions.

To achieve greater transparency, the European Commission published a comprehensive package on TTIP's legal texts. It includes eight EU textual proposals that cover competition, food safety and animal and plant health, customs issues, technical barriers to trade, small and medium-sized enterprises and government-to-government dispute settlement. The Commission also published TTIP position papers explaining its approach on engineering, vehicles and sustainable development. Today, European machine tool companies must apply considerable modifications to their products intended for exports to meet different standards. TTIP can greatly improve market access by promoting regulatory convergence and encouraging cooperation between standard development organisations on both sides of the Atlantic.

1.2 Peter Meier's forecast

Overall situation:

The situation in the various military flashpoints has slightly calmed down but other uncertainties show up: Italy slipped back into recession, the signs of destabilization in Greece are increasing, Paris is not able to handle its budget and, after the unexpected drop in industrial production in August 2014, some experts see Germany on the brink of recession. The situation is similar to a ride through a haunted house: at each turn, a new ghost enters the stage. The only reassurance we have is the certainty that the car continues on fixed rails.

But how solid are these rails, really? How strong is the world economy's foundation?



Introduction

- The economic recovery in the US is progressing significantly. The defeat of the Democrats at the last midterm elections has no influence on the country's economic policy and growth.
- The growth rate of the Chinese economy fell back to 7.3 % in 2014, still a respectable number, and the government reports that from January to August, nearly 10 million new jobs were created. The wages of Chinese workers are expected to increase by 10 % in 2014, which means that the growth of the Chinese economy is mainly a growth of wages. The increased purchasing power will boost consumption and accelerate the transformation from export to domestic economy.
- There is still deflation in Japan. Exports benefit from a low exchange rate.
- In Europe, high unemployment and public deficits depress the consumer sentiment, but this is still better than in the Asian markets.

The world economy's basic situation has not changed much. Looking at the long-term consumption cycles, the US is still in an uptrend. Europe has just crossed the trough and could develop positively over time. In Asia, the consumption cycle has peaked, but the underlying high economic growth will more than offset the downward trend.

The various crises of 2014 have accelerated the course of industry cycles. These have now - earlier than expected - peaked in all world markets. This means that the industrial production and consequently the demand for capital goods will decrease. This process will begin sooner or later, depending on the industry sector and on economic sensitivity with very different effects. The good news: a possible decline or even a crisis will not last long, because it is an adaptation process.

Back to the haunted house: the next ghost probably already waits behind the door and the car we ride moans and groans under the burden of debt, but the rails are still intact; a derailment in the near future is unlikely.

Business Confidence:

The OECD Business Confidence Indicator for Europe still holds tight on the level of 100.6 while business confidence in the USA falls back. New orders for machine tools fell further back in Q3 after a steep fall in Q2.

CECIMO 8 Forecast:

Together with the accelerated course of industry cycles, based on the various crises of 2014, the latest business cycle indicators have considerably changed the prospects for 2015 compared to the last forecast. Instead of a moderate growth of the demand, the forecast now points on a slight fall-back in the coming 12 months. Stabilising emerging markets, including China, combined with the successful IMTS 2014 fair in Chicago affect foreign orders placed with European machine tool builders. CECIMO 8 foreign orders index increased 5% compared to the previous quarter and 1% compared to the third quarter of 2013. Domestic orders clearly reflect the declining business confidence, the index lost 20% and 11% compared to the levels of the previous quarter and the period of a year ago respectively.

The orders declined in Austria, Spain and the UK. The Czech machine tool industry shows good pace. Germany recorded a small increase in total orders compared to the previous quarter. The index of Italy and France also grew on yearly basis.

2.2 Interest rates – EURIBOR

The average 3-month Euribor recorded 0.08% and 12-month Euribor 0.33% in December. Compared to November, the average 3-month Euribor remained stable and 12-month Euribor decreased 1 percentage point.

Both the euro area and the larger EU have fallen into deflation, the consumer price index recorded -0.2% and -0.1% respectively down from 0.3% in November. This will increase the probability of introduction by the European Central Bank (ECB) of a quantitative easing program to a near-certainty. The program to buy government bonds of the zone's countries may exceed 1 trillion euros. By pumping money into the economy, the ECB hopes to increase loans to businesses and boost asset prices. It is quite clear that record-low interest rates have not spilled over to real economy to improve the access to finance.

See [glossary](#) for definitions



Introduction

2.3 Industrial production index

In November 2014 compared with October 2014, seasonally adjusted industrial production rose by 0.2% in both the euro area (EA18) and the EU28, according to estimates from Eurostat, the statistical office of the European Union. In October 2014, industrial production grew by 0.3% in the both zones.

The increase of 0.2% in industrial production in the euro area is due to the production of durable consumer goods rising by 1.9% and the production of intermediate goods by 0.3%, while the production of capital goods fell by 0.2% and energy by 0.9%. In the EU28, the increase is due to the production of durable consumer goods rising by 1.7% and the production of intermediate goods by 0.4%, while the production of capital goods fell by 0.1% and the production of energy by 1.0%.

The highest increases in industrial production were registered in Ireland (+4.6%), Hungary (+3.3%) and Croatia (+2.7%), and the largest decreases in Lithuania (-2.0%), Latvia (-1.7%) and Malta (-1.4%).

In November 2014 compared with November 2013, industrial production decreased by 0.4% in the euro area and by 0.1% in the EU28. The decrease in the euro area is due to the production of energy falling by 4.8%, the production of capital goods by 0.9% and the production of intermediate goods by 0.6%, while the production durable consumer goods rose by 0.4%. In the EU28, the decrease of 0.1% is due to the production of energy falling by 4.4% and the production of capital goods by 0.4%. The production of intermediate goods remained stable, while the production of durable consumer goods rose by 2.4%.

In yearly comparison the largest decreases in industrial production were registered in Sweden (-3.9%), the Netherlands (-3.5%), Slovakia (-3.3%) and France (-2.9%), and the highest increases in Ireland (+35.8%), Hungary (+5.8%), Estonia (+4.9%) and the Czech Republic (+4.7%).

See [glossary](#) for definitions

2.4 GFCF

Gross fixed capital formation decreased by 0.3% in the euro area and increased by 0.1% in the EU28 compared with the previous quarter during the third quarter of 2014, according to a second estimate published by Eurostat. In the second quarter of 2014, the GFCF declined grew by 0.7% in the euro area and by 0.3% in the EU28. Compared with the same quarter of the previous year, the seasonally adjusted GFCF was stable in the euro area and rose by 1.4% in the EU28 in the third quarter of 2014, after +0.9% and +2.4% respectively in the previous quarter.

During the third quarter of 2014, the United States' GFCF increased by 1.6% compared with the previous quarter (after +2.3% in the second quarter of 2014). Compared with the same quarter of the previous year, the GFCF grew by 4.4% (after +4.1% in the previous quarter).

Among Member States for which data are available for the third quarter of 2014, Luxemburg (+16.7%), Hungary (+3.0%) and Belgium (+2.4%) recorded the highest growth compared with the previous quarter. Estonia (-5.4%), Latvia (-2.4%) and Austria (-1.7%) registered decreases.

2.7 Foreign exchange rates

On 5 January 2015, 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 at 1.3% below its level at the beginning of December and 5.0% below its level one year earlier. Movements in exchange rates were largely related to developments in expectations about the future monetary policy, as well as to adjustments in market expectations deriving from the economic outlook for the euro area in relation with other major economies.

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 December, the euro appreciated against the Japanese yen by 1.9%. On the other hand, the euro depreciated against the US dollar by 1.3% and remained stable against the Swiss franc.

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2.8 Industrial employment

The number of persons employed increased by 0.2% in the EA18 and by 0.3% in the EU28 in the third quarter of 2014 compared with the previous quarter, according to national accounts estimates published by Eurostat. In the second quarter of 2014, employment increased by 0.3% in both zones. These figures are seasonally adjusted. Compared with the same quarter of the previous year, employment increased by 0.6% in the euro area and by 0.9% in the EU28 in the third quarter of 2014 (after +0.4% and +0.8% respectively in the second quarter of 2014).

Eurostat estimates that, in the third quarter of 2014, 226.9 million men and women were employed in the EU28, of which 148.2 million were in the euro area. These quarterly data on employment provide a picture of labour input consistent with the output and income measure of national accounts.

Among Member States for which data are available, Greece (+1.7%), Lithuania (+1.5%) and Portugal (+1.4%), registered the highest increases in the third quarter of 2014 compared with the previous quarter, while Latvia (-1.7%), Malta (-0.8%), Finland (-0.3%) and Estonia (-0.2%) recorded decreases.

3.1 OECD Business Confidence Indicator (BCI) for Europe

Business confidence indicators (BCIs), designed to anticipate turning points in economic activity relative to trend, show a slowing growth momentum for the OECD as a whole but with diverging patterns across most major economies. The growth loses momentum in the United States and Russia. The BCIs continue to point to growth below the long-time average in China and Brazil. The BCIs for Japan and India indicate positive and firming changes in the growth momentum.

The BCIs point to a stable growth momentum in Europe as a whole, and also in Germany, France and the United Kingdom. The growth is picking up in Italy albeit from relatively low levels.

See [glossary](#) for definitions

3.2 Purchasing Managers' Index (PMI)

The pace of global manufacturing growth eased to its weakest rate in over a year in December. The global PMI fell to 51.6 from November's 51.8, but has now held above the 50 mark that divides growth from contraction for more than two years. North America remained the prime driver of the expansion, as growth stayed relatively muted in both the euro area and Asia. China ended the year with the PMI falling to 49.6, in the contraction zone. The manufacturers in Singapore and South Korea struggled with weak demand. Manufacturing activity in Japan showed sustained growth, suggesting domestic demand continues to recover after the economy fell into a recession last year.

The growth rates of the euro area manufacturing for output, new orders and employment remained near stagnation. A final reading of a manufacturing PMI stood at 50.6 in December. While that's up from a 17-month low of 50.1 in November, it's below a flash estimate 50.8 and barely above the expansion-mark. The German manufacturing gauge rose to 51.2, signalling renewed expansion, after slipping to 49.5 in November. In France, activity has contracted since May, while the measure for Italy dipped to a 19-month low. Spain and the Netherlands reported improvements in performance.

"The crisis in Ukraine and a renewed lack of confidence in the ability of euro area policymakers to revive the region's economy appear to have been the main catalysts to fuel increased economic uncertainty, causing companies to grow more risk averse and pull back on expansion plans. Some promising signs of life persist, notably in Spain, the Netherlands and Ireland, where factory output is rising largely on the back of increased exports. It's a very different story in France, Italy, Austria and Greece, where falling order books are weighing on factory production. The ongoing weakness of German manufacturing also remains major source of concern, but there are signs that order book growth could be turning around, with inflows of new work edging higher for the first time in four months. We should hopefully see growth pick up in coming months. Lower costs, linked to falling oil prices, are helping manufacturers to reduce their selling prices, and the drop in fuel prices should also boost consumer spending," commented Markit.

See [glossary](#) for definitions

Introduction

↑ 4 MT-IX

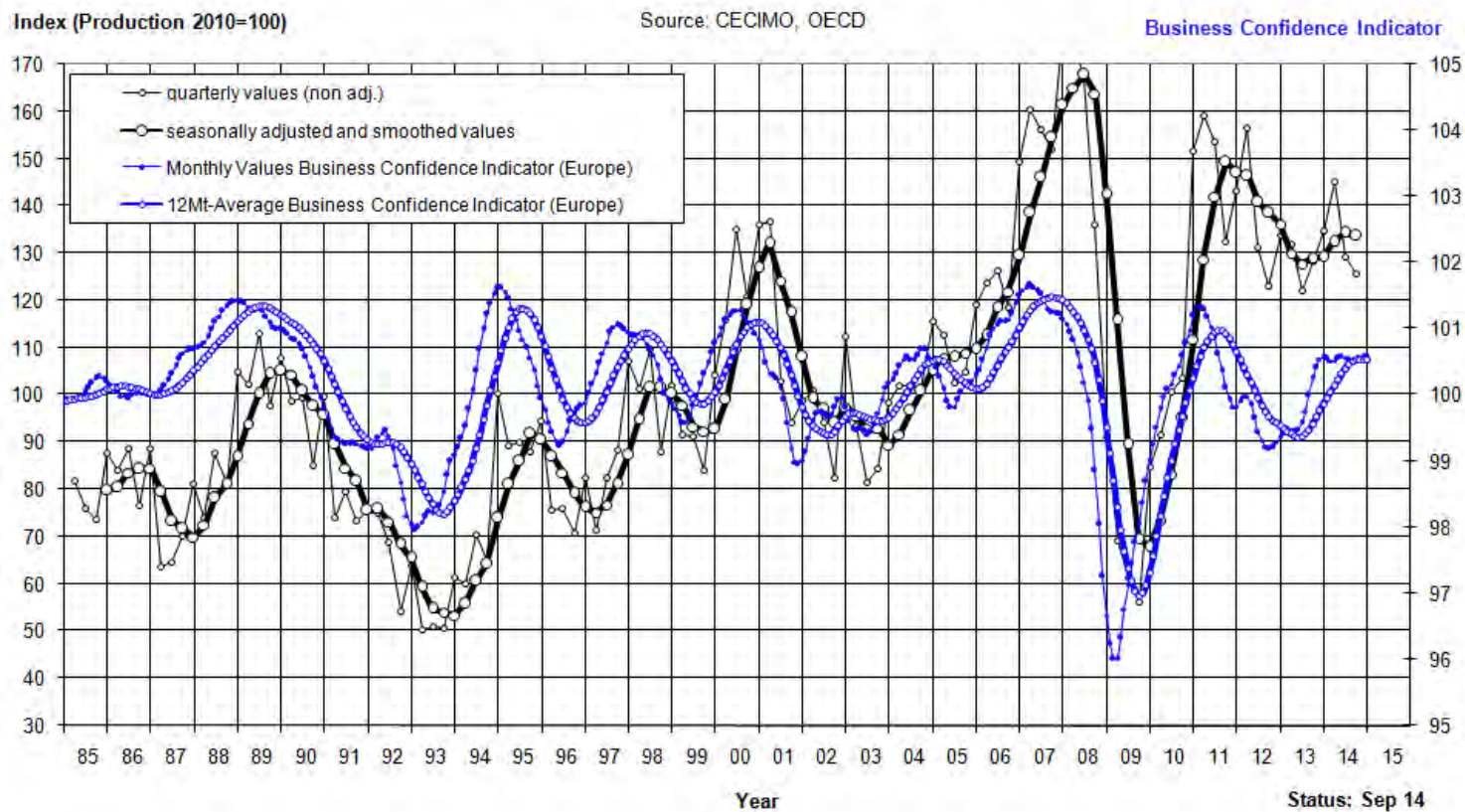
In December, the MT-IX increased 2.8%. The index gained 5 points compared to November's value, and posted at 182 points in December 2014.

The market value of machine tool companies decreased in South-Korea and Brazil. The machine tool builders in the US and Taiwan showed growing market capitalisation. Machine tool companies from Europe and Japan booked more varied results.

See [glossary](#) for definitions

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Comparison Index CECIMO 8 with Business Confidence Indicator (Europe)



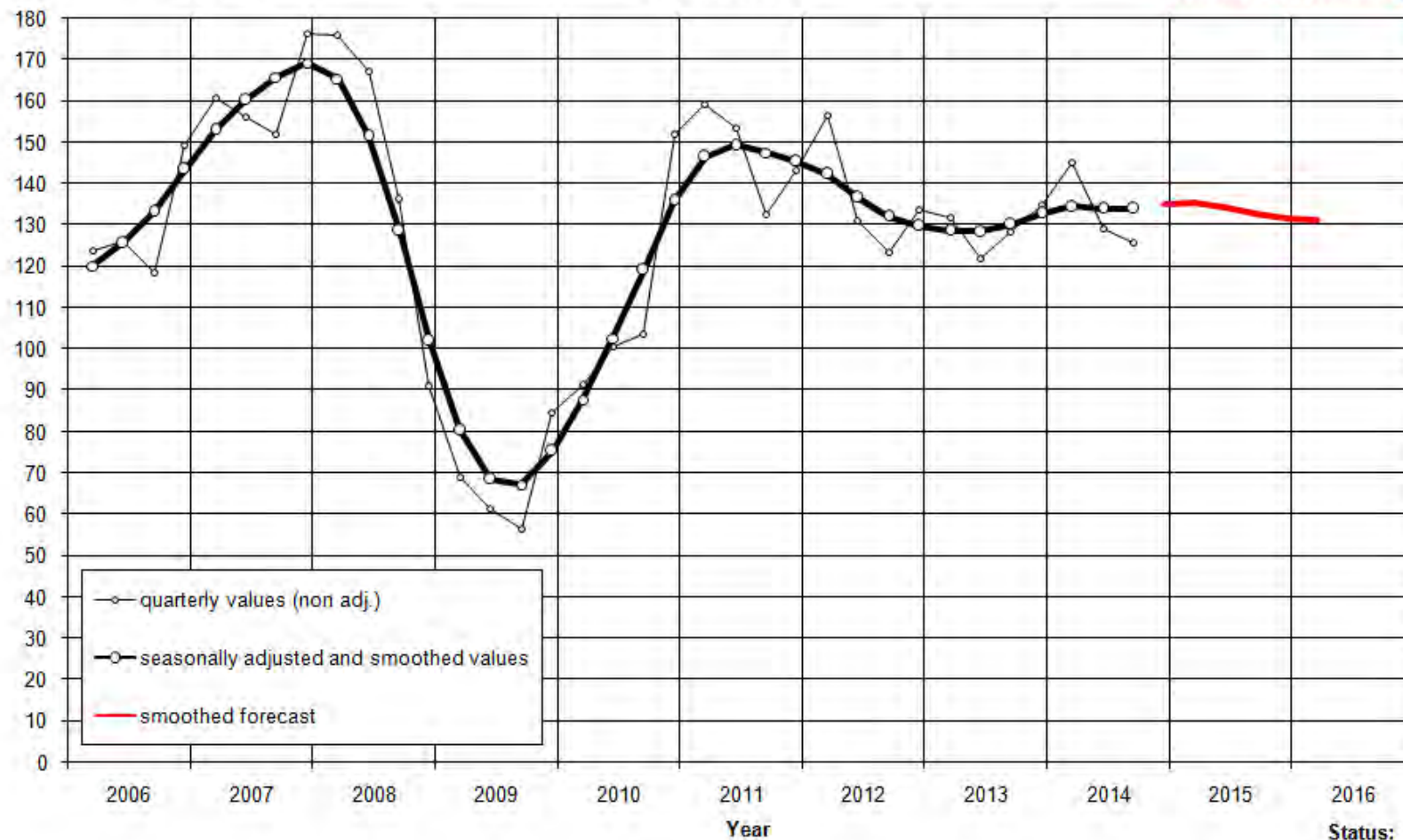
Forecast New Orders CECIMO 8 (total)

quarterly values (non adj.) and HP-smoothed values

Source: CECIMO

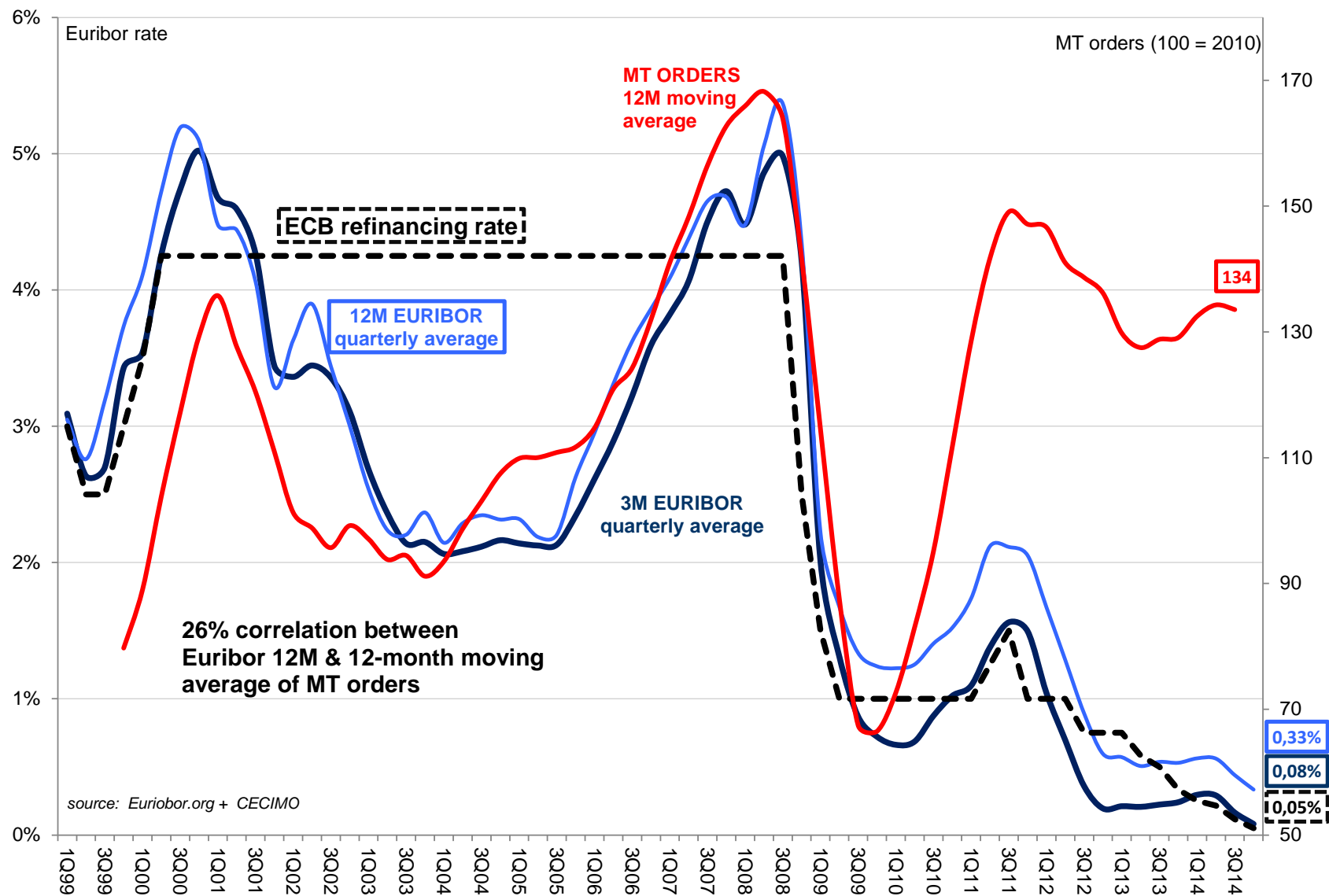
Forecast USP Consulting

Index (Production 2010=100)



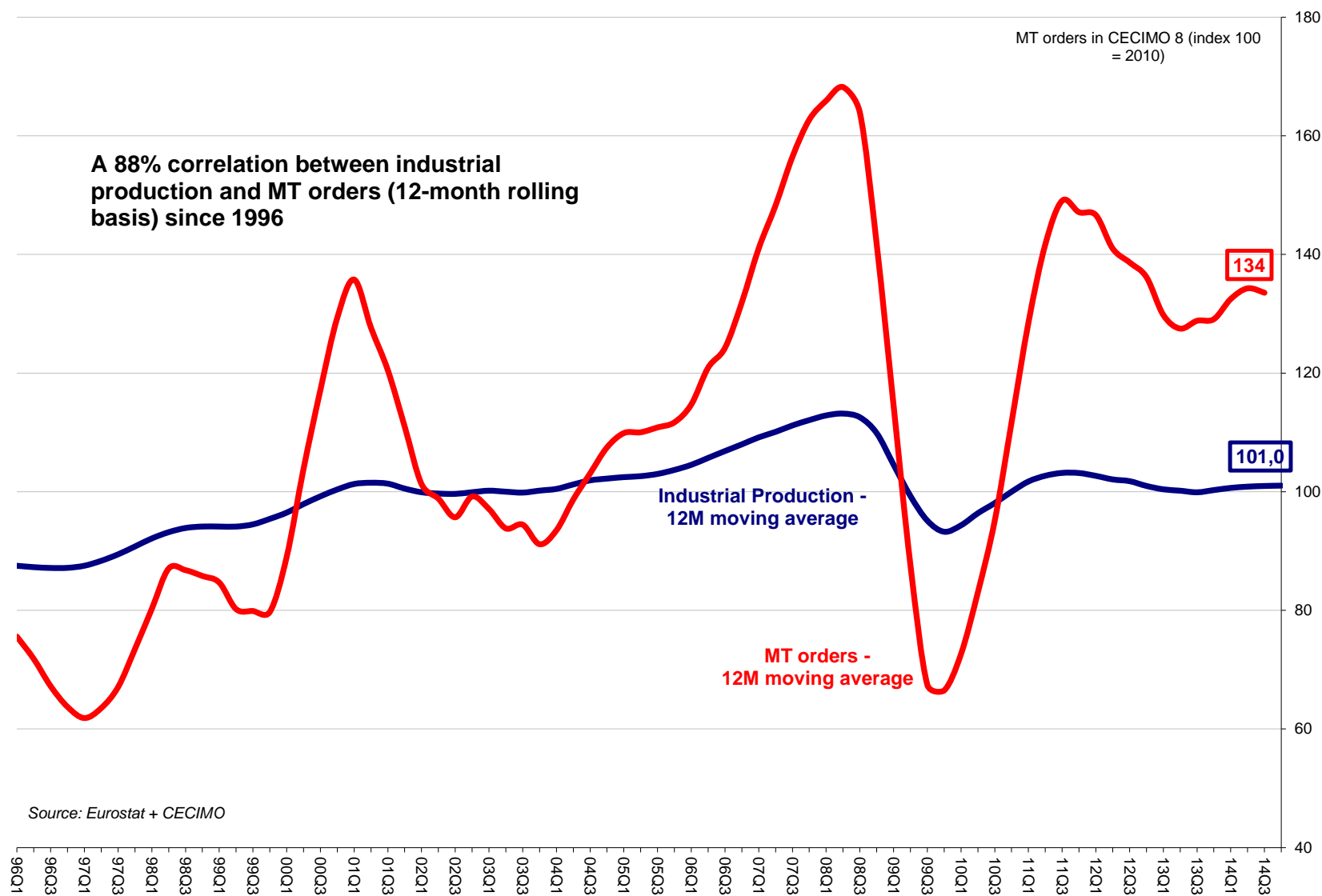
2.2 Interest rates - EURIBOR

see commentary [---->](#)



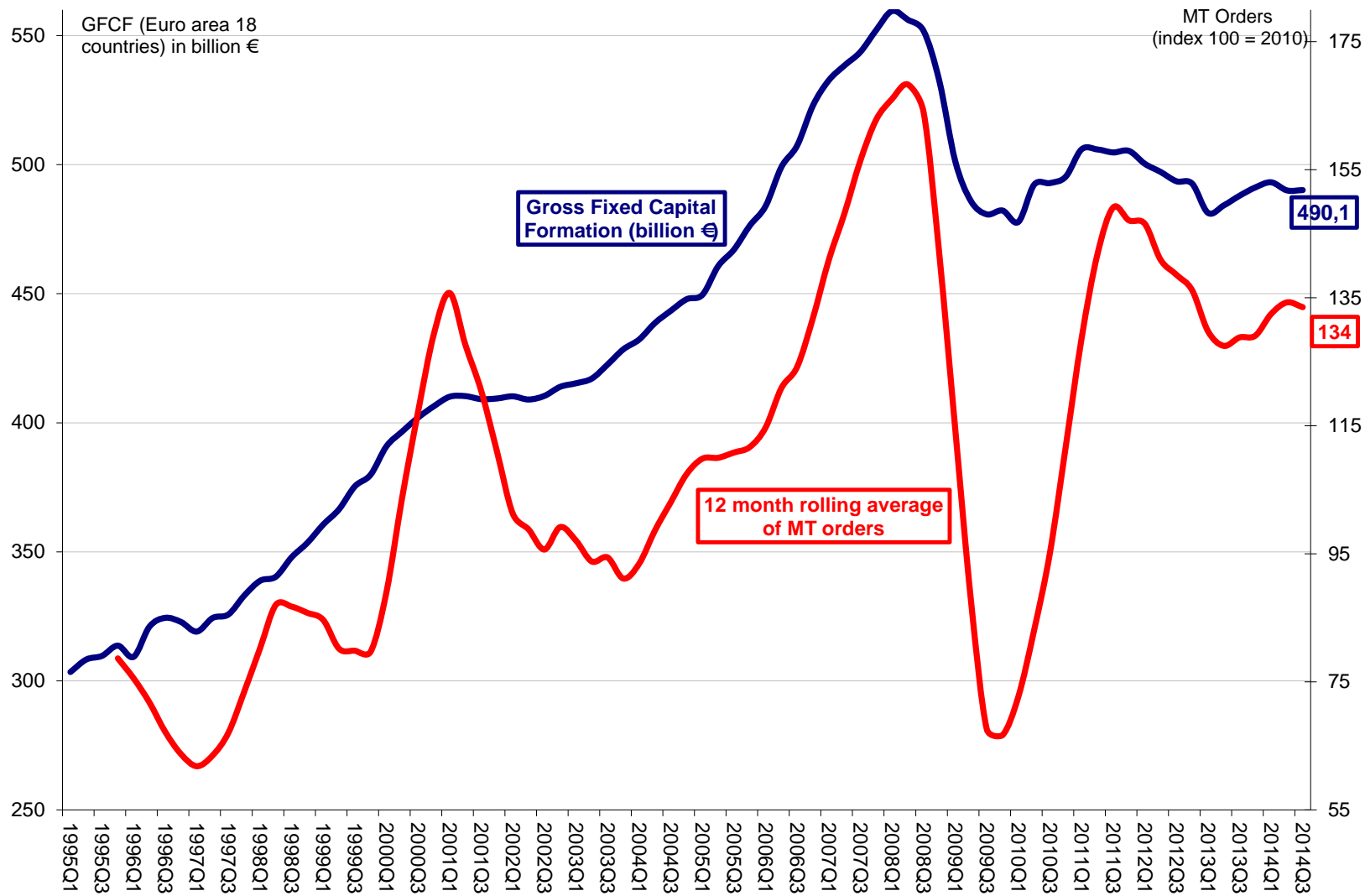
2.3 Industrial production index

see commentary [→](#)



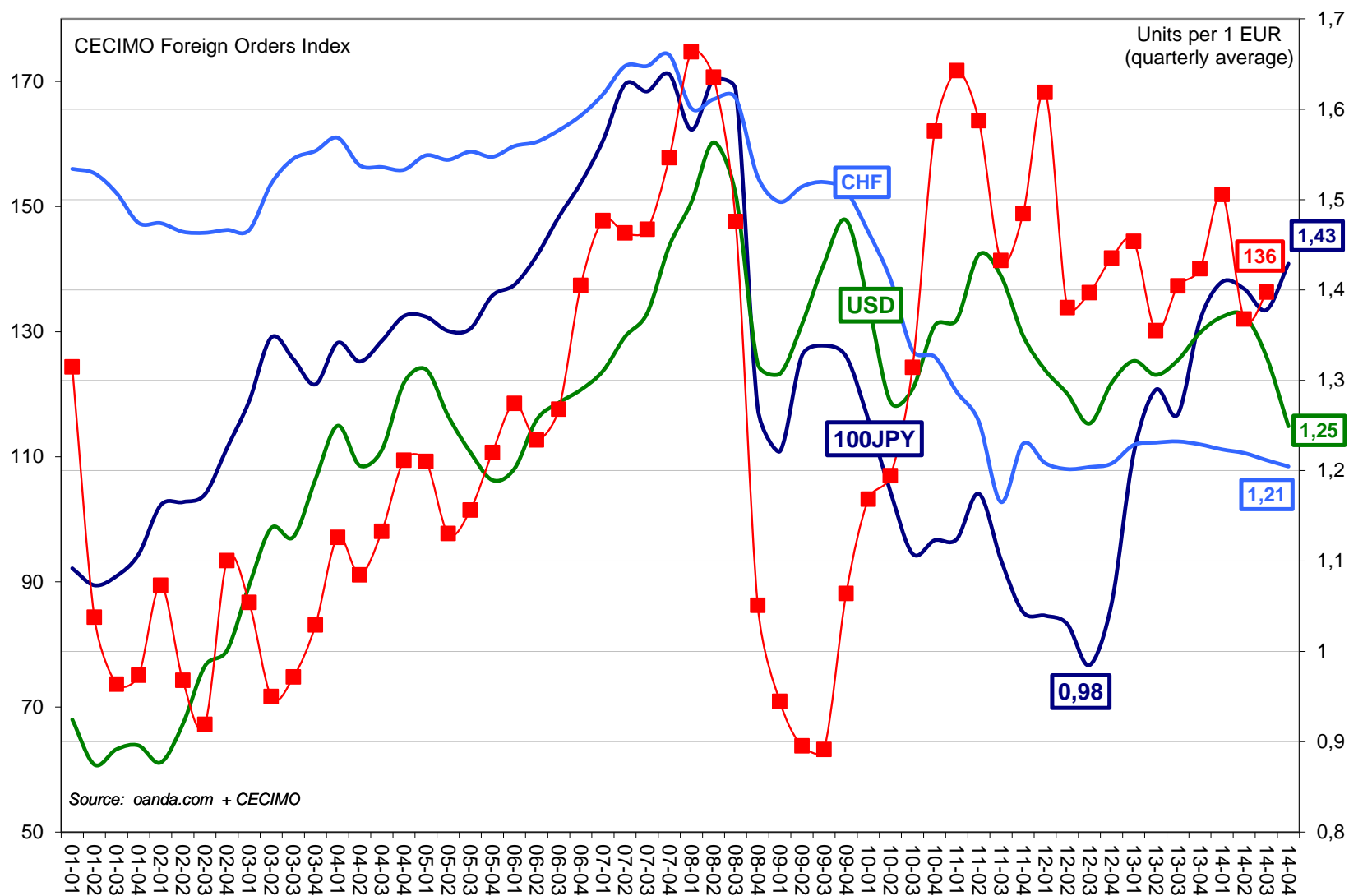
2.4 GFCF

see commentary [---->](#)



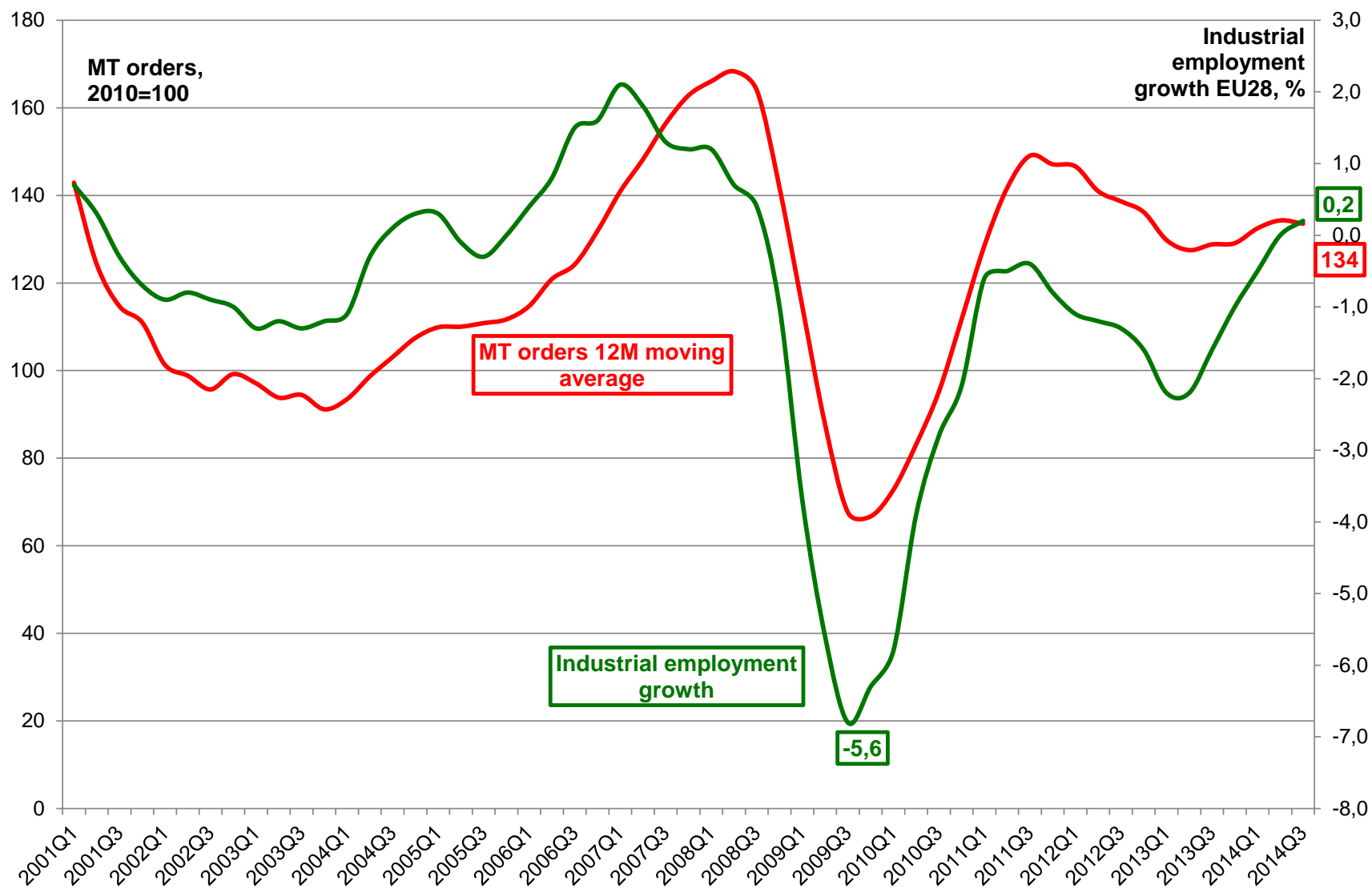
2.7 Foreign exchange rates

see commentary [---->](#)



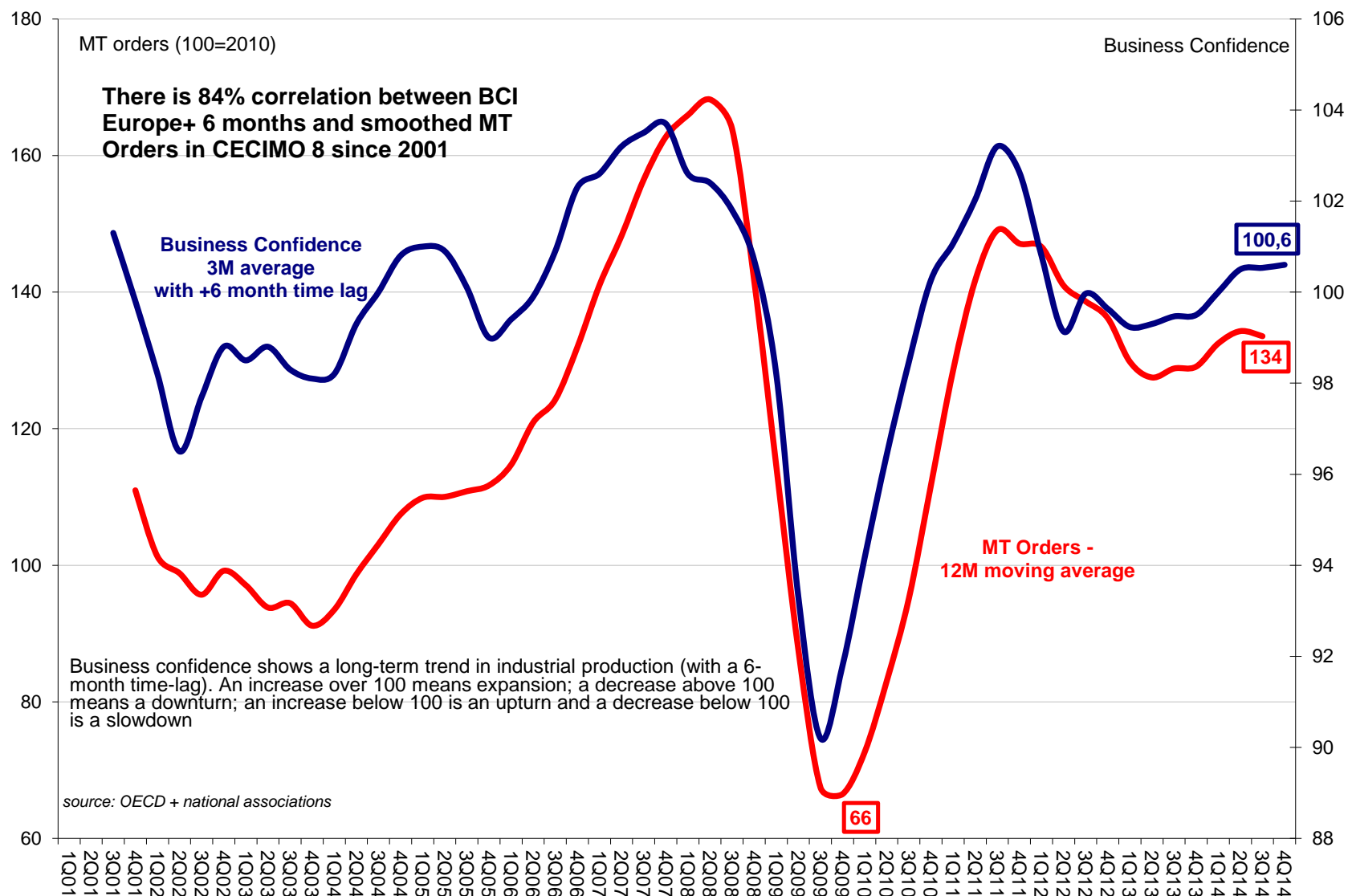
2.8 Industrial employment

see commentary [---->](#)



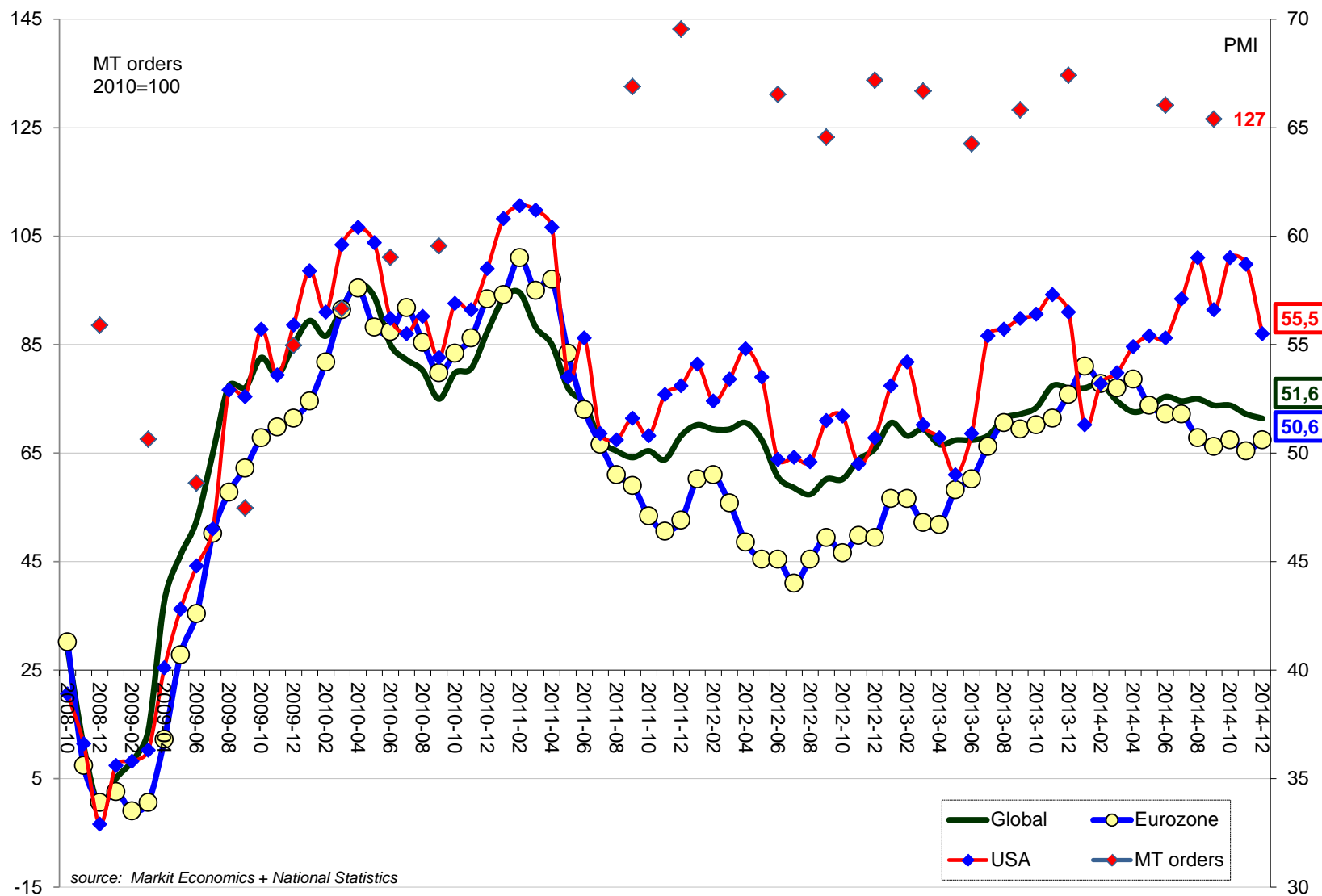
3.1 OECD Business Confidence Indicator (BCI) for Europe

see commentary [----](#)



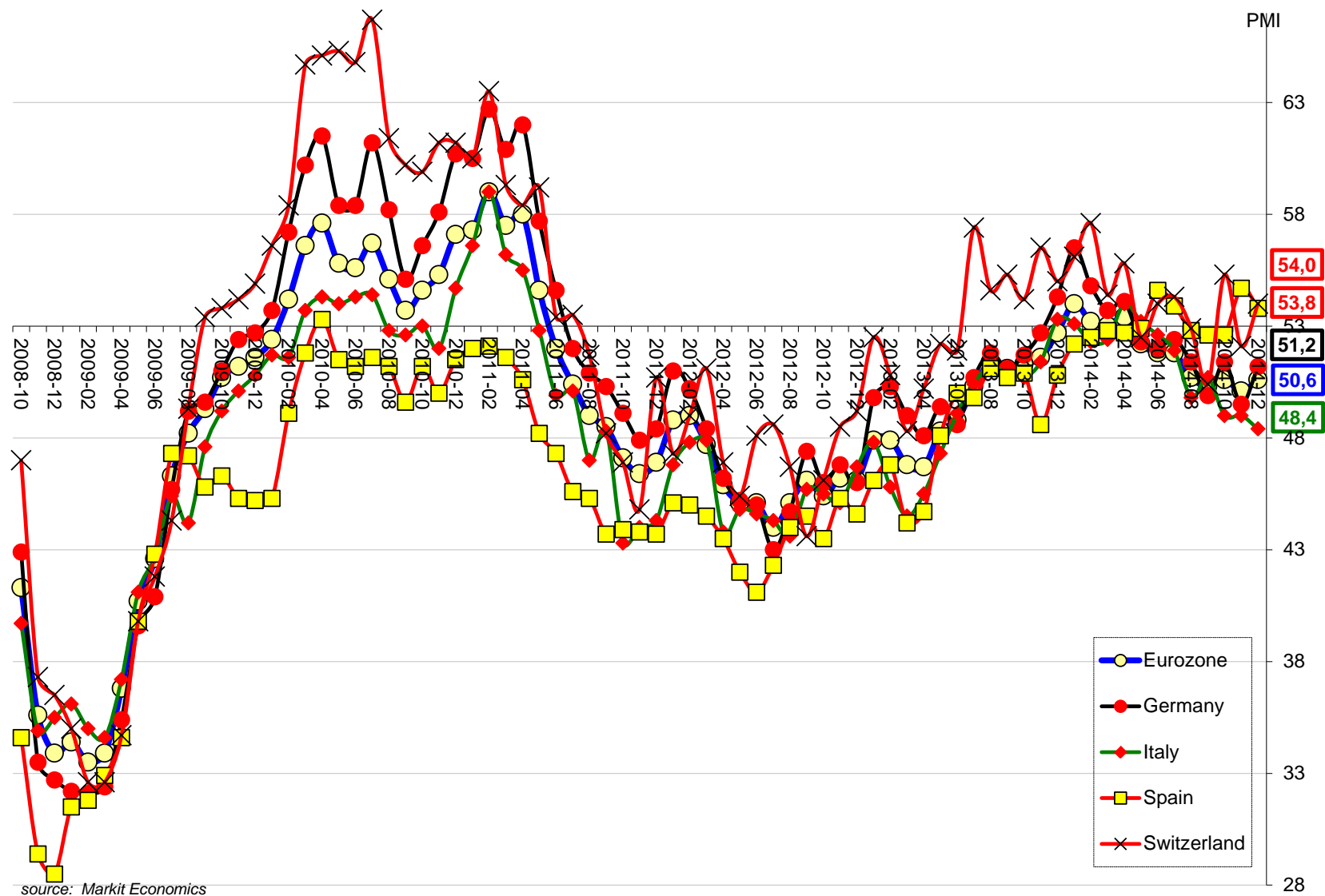
3.2 Purchasing Managers' Index (PMI) - Global

see commentary [---->](#)



3.2 Purchasing Managers' Index (PMI) - Europe

see commentary [----](#)

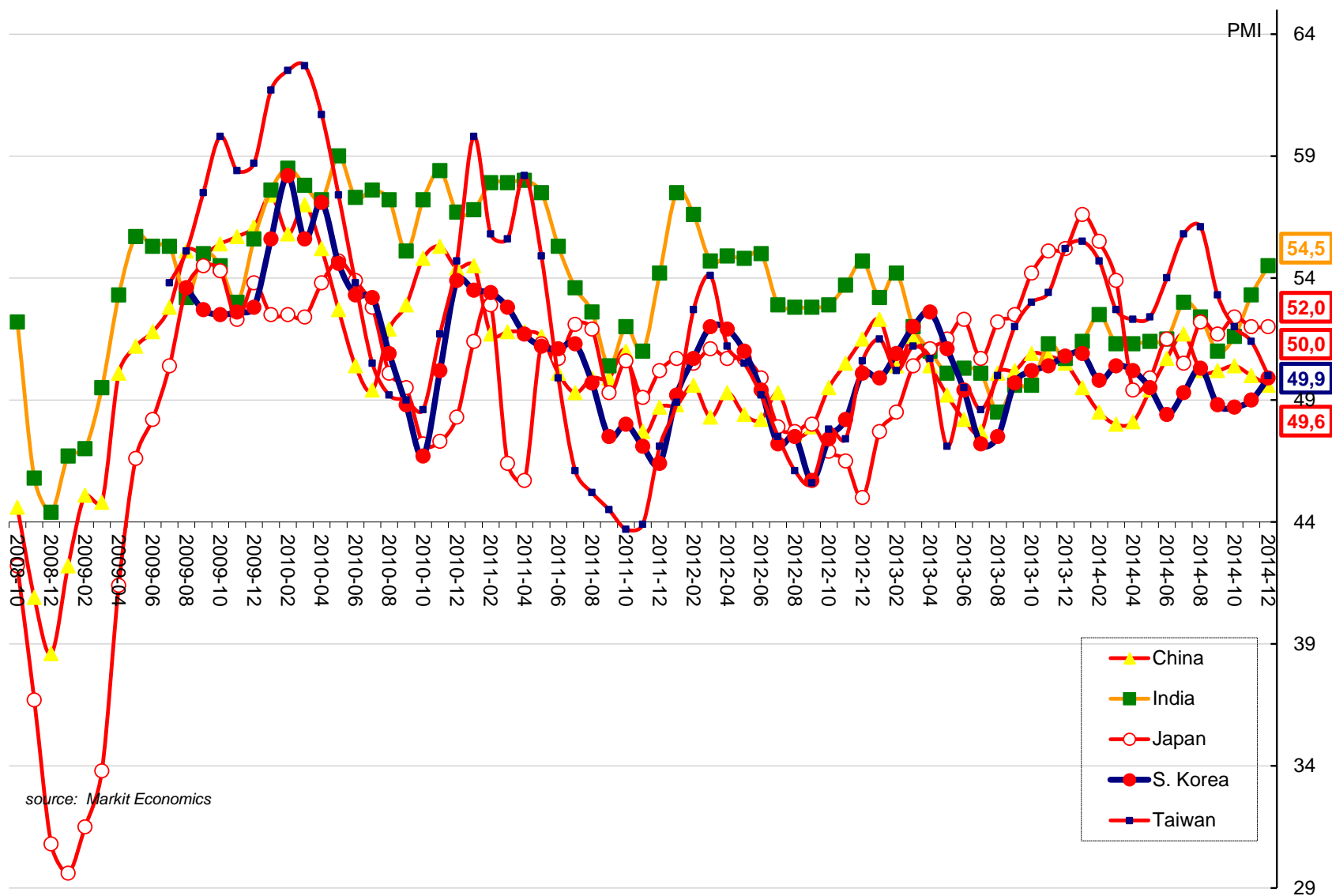


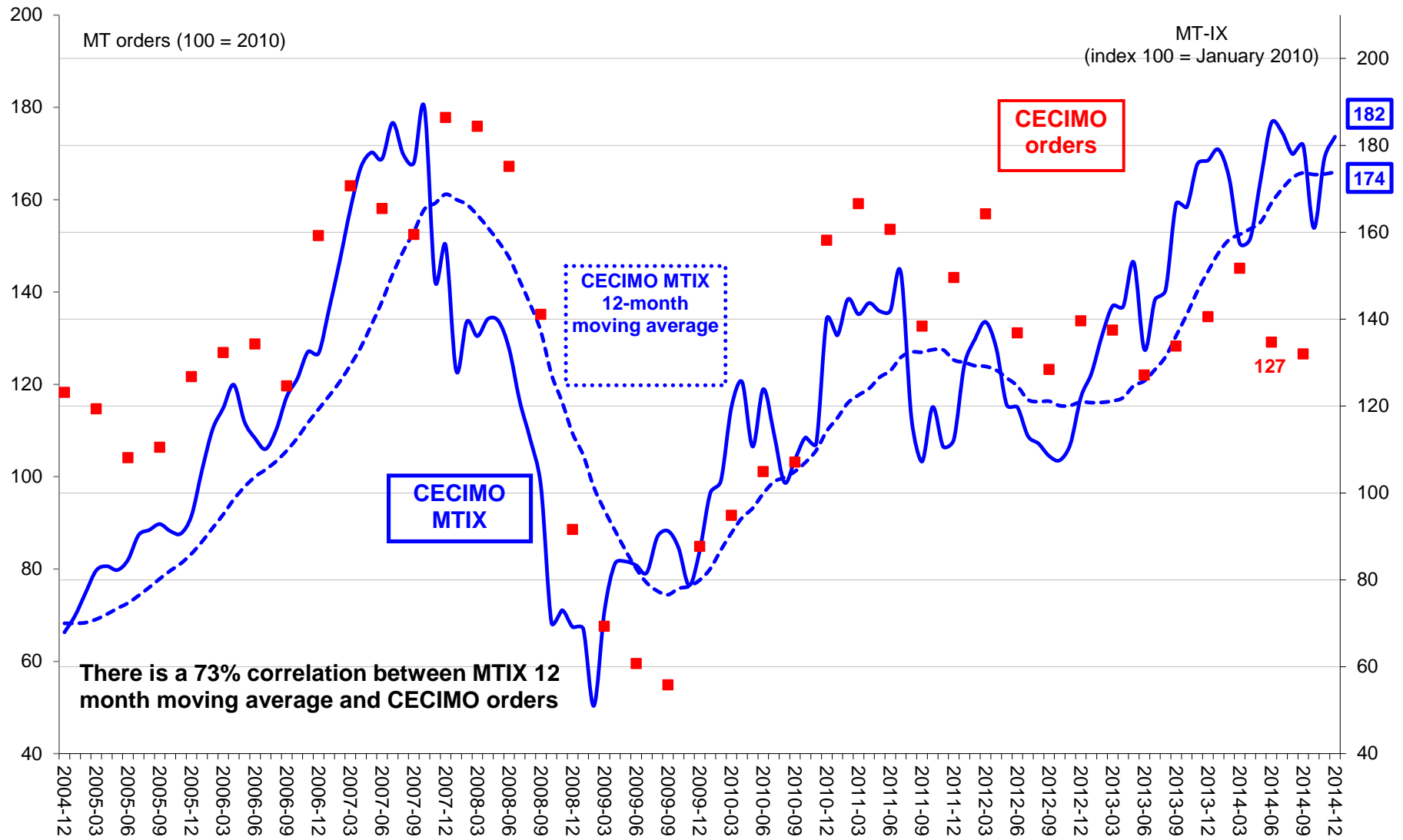
source: Markit Economics



3.2 Purchasing Managers' Index (PMI) - Asia

see commentary [----](#)





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 2005 = 100.

http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/is_esms.htm

3.1 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>

3.2 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>

4 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.