

# Steel PMI

## Steel-user PMI data as a leading indicator of steel production

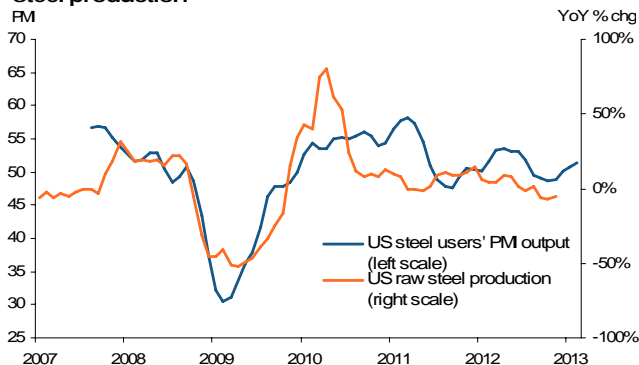
- **Steel PMI acts as an advance tracker of steel production across regions**
- **Latest data points to modest growth in US and Asia but fall in European output**

An insight into future steel production can be gleaned from surveys of how busy steel-using companies are, looking at their production, order book and warehouse inventory trends. In this respect, PMI data from Markit's worldwide surveys of steel-intensive manufacturers act as a useful leading indicator of steel production, available up to six months before comparable data from other sources for the US, Europe and Asia.

### US comparisons

The US Steel PMI Output Index, available from June 2007 onwards, has a coincident correlation with the annual rate of growth of raw steel production compiled by the Federal Reserve of 0.67. With a two-month lead applied to the PMI series, this rises to 0.72. The PMI is also available several weeks before the Fed data are published, extending the leading indicator value of the PMI.

US Steel PMI Output Index (with 2 month lead) v US raw steel production



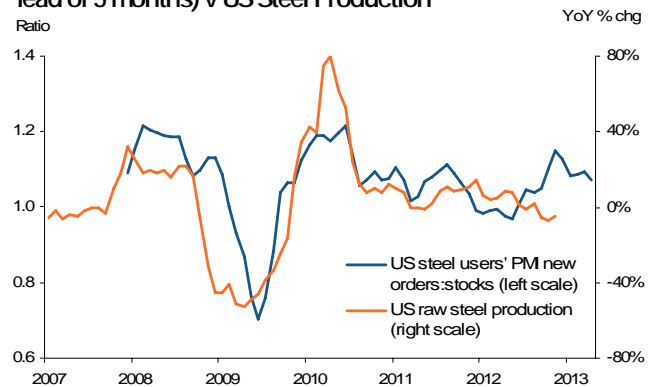
Sources: Markit, Federal Reserve via EcoWin.

The US Steel PMI Output Index rose to a seven-month high in December, although remained consistent with accelerating but still only moderate growth of steel production.

An even longer insight can be gained by looking at the relationship between steel-users' new orders and their stocks of purchases. A combination of high new orders and low stocks of purchases points to rising demand for steel as a raw material (and therefore higher production) in coming months. Conversely, a combination of low new orders and high stocks suggests a weakening demand and production trend.

The US new orders:stocks of purchases ratio exhibits the highest correlations against production data with five months' lead applied to the former, and points to an easing in the rate of steel production growth after the initial acceleration signalled at the turn of the year.

US Steel PMI New Orders:Stocks of Purchases Ratio (with lead of 5 months) v US Steel Production

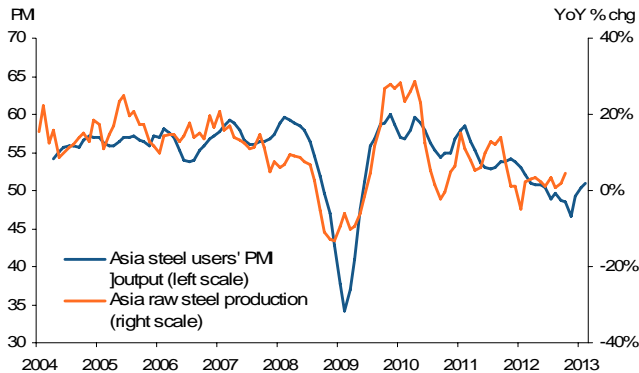


Sources: Markit, World Steel Association via EcoWin.

### Asia comparisons

For Asia, the respective Steel PMI Output Index has a coincident correlation coefficient of 0.75 versus World Steel Association data covering Asian crude steel production. With a two-month lead applied to the PMI series, the correlation rises to 0.79.

### Asia Steel PMI Output Index (with 2 month lead) v Asia Steel Production

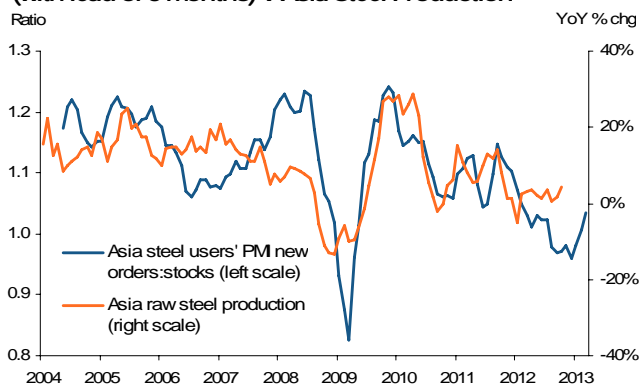


Sources: Markit, World Steel Association via EcoWin.

In December, the Asia Steel PMI Output Index posted its highest reading for 11 months. Similar to the situation for the US, however, it pointed to just a slight pace of expansion overall.

Looking at the PMI new orders:stocks of purchases ratio for Asia, the highest correlations against production data are achieved with a three-month lead applied to the former. The ratio has moved into positive territory in the past two months, although remains consistent with broadly stable levels of steel production.

### Asia Steel PMI New Orders:Stocks of Purchases Index (with lead of 3 months) v Asia Steel Production

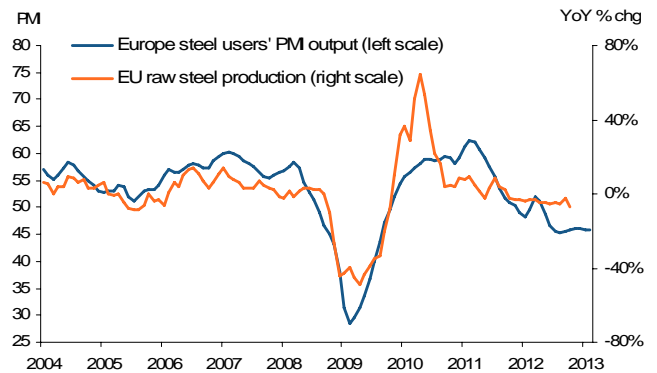


Sources: Markit, World Steel Association via EcoWin.

## Europe comparisons

The Europe Steel PMI Output Index has a coincident correlation with EU raw steel production data collected by the World Steel Association of 0.75. This rises to 0.79 with a two-month lead applied.

### Europe Steel PMI Output Index (with 2 month lead) v EU Steel Production



Sources: Markit, World Steel Association via EcoWin.

The Europe Steel PMI Output Index indicated declining production for the tenth month running in December. The rate of contraction remained unchanged from November's solid pace, as the region continued to considerably underperform the US and Asia.

The PMI new orders:stocks of purchases ratio for Europe has the highest correlation (0.89) with steel production data with a six-month lead applied to the former. A recent improvement in the ratio is consistent with a broadly stable annual rate of growth in production.

### Europe Steel PMI New Orders:Stocks of Purchases Index (with 6 month lead) v EU Steel Production



Sources: Markit, World Steel Association via EcoWin.

For further information on PMI data, please contact [economics@markit.com](mailto:economics@markit.com).

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