

OECD CLI zone aggregation methodology

This document describes the zone aggregation methodology for the nine indicators in the OECD Composite Leading Indicator (CLI) framework. The described methodology is applied starting from July 2007.

Five indicators are calculated as weighted averages of the country indicators:

- the amplitude adjusted CLI
- the normalised CLI
- the trend of the reference series
- the original reference series
- the normalised reference series

The indicators for zones are calculated as chain linked indices with the following formula:

$$Z_t = Z_{t-1} \frac{\sum_i w_{i,B} \left(\frac{C_{i,t}}{C_{i,B}} \right)}{\sum_i w_{i,B} \left(\frac{C_{i,t-1}}{C_{i,B}} \right)}$$

- Z_t is the value of the final zone indicator in period t ,
- $w_{i,B}$ is the weight of country i from year B ,
- $C_{i,t}$ is the indicator from country i from period t ,
- $C_{i,B}$ is the average value of the indicator from country i from year B .

For the zone indicator between 1955 and 1975 the weights from 1975 have been used, after which the weights ($w_{i,B}$) and the base year values ($C_{i,B}$) are changed every five years. For example: in the period between 1976 and 1980 the weights from 1980 are used. Since we use the weights from the end of each five yearly period, in the most recent months the weights and the country components $C_{i,B}$ are not available. Therefore we use the weights and values from the last available complete five year segment. As a consequence the zone values in the last five years will be subject of minor revisions, when the weights and values from the segment end become available.

Weights are GDP PPP weights for each country. The source of the data is the [International Comparison Program](#) at World Bank, which integrates PPP data from the Eurostat-OECD PPP program and from a range of countries that are not members of the OECD or the European Union.

The chain-linked indicators are scaled to match the average level of the components in the OECD base year, which is year 2000 at the time when this document is written. Formally, this implies selecting Z_0 such that $Z_B = \sum_i w_{i,B} C_{i,B}$ where $B=2000$.

A zone aggregate is calculated if the overall weight of the available components is greater than 60%.

In order to preserve the relationship between different forms of the indicators, two indicators are composed from the series above:

- the trend restored CLI is calculated as the product of the amplitude adjusted CLI and the trend of the reference series,
- the ratio to trend of the reference series is calculated as the original reference series divided by its trend,

Finally the 12-month rate of change of the trend restored CLI and the reference series is derived from the corresponding level series.

The calculation schema of the indicators

