THE OECD STANDARDISED BUSINESS CONFIDENCE INDICATORS (BCIs) AND CONSUMER CONFIDENCE INDICATORS (CCIs)

This document describes the methodology the OECD uses to compute the Standardised Confidence Indicators for both Business and Consumer Surveys. The OECD has implemented the standardisation process, for the OECD and BRIICS countries, in order to achieve comparability of confidence indicators across countries and business cycles phases, as shown by the OECD Business Cycle Clock.

In this respect, OECD Standardised Confidence indicators differ from the original confidence indicators, used as input in the standardisation process, in that the latter only average the underlying components but are not adjusted to match the fluctuations of other business cycle indicators, namely CLI and de-trended GDP, nor allow international comparisons.

The OECD Standardised Confidence Indicators can be used not only to monitor output growth (Business indicators) and the likely development of household consumption and saving (Consumer indicators) but also to assess the evolution of the international business cycle and anticipate approaching cyclical turning points in economic activity together.

Definition and computation of Standardised confidence indicators are in line with the Joint Harmonised EU programme of Business & Consumer Surveys.

STANDARDISATION PROCESS
The standardisation process entails three steps: period conversion, smoothing and amplitude-adjustment.

1. **Period conversion**
   Quarterly indicators are first converted to monthly frequency. Such a conversion is achieved through linear interpolation of quarterly series followed by an alignment to the most appropriate month of the quarter. Most series are aligned to the central month of the quarter, though quarterly series based on surveys conducted in a given month of the quarter are aligned to the month itself.

2. **Smoothing**
   In order to remove irregular roughness, seasonal adjusted series are smoothed by applying the Hodrick-Prescott filter. Fluctuations with periodicity below 6 month are cut-off, which corresponds to setting the multiplier lambda to 1. In so doing, we preserve the trend-cycle component of the time series.

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1 Business Confidence Indicators (BCI) average expected production, stocks and finished goods (inverted sign) whereas Consumer Confidence Indicators (CCI) average expectations on household financial situation, general economic situation, unemployment and savings. Suitable proxy are used in case of missing national confidence indicators (i.e. business situation for the business surveys). For a complete list of underlying indicators for each country, please visit the OECD Glossary page at http://www.oecd.org/std/leading-indicators/glossaryforoecdcompositeleadingindicators.htm
3. **Amplitude-adjustment**

Smoothed series are adjusted to match the amplitudes of the de-trended GDP. To do so we first normalise the series by subtracting the mean of the series and dividing with its mean absolute deviation, and then rescale them by adding 100 to the result.

**ZONE AGGREGATES**

While the Euro Area aggregate is provided by the European Commission\(^2\), the following aggregates are computed by the Secretariat:

- **Asian Major 5**, comprising China, India, Indonesia, Japan and Korea
- **G7**, comprising Canada, France, Germany, Italy, Japan, United Kingdom and United States.
- **OECD plus Major 6 non-member economies** (BRIICS)
- **OECD Europe**, and
- **OECD Total**

Based on national the standardised confidence indicators, zone aggregates for the business and consumer area are calculated as annually chain-linked Laspeyres indices using annual GDP as weight. A zone aggregate is calculated if the overall weight of the available components is greater than 75%. The following formula applies:

\[
Z_{a,t} = \frac{\sum_{i=1}^{n} w_{a-1,i} \left( \frac{C_{a,t,i}}{\bar{C}_{a-1,i}} \right)}{\sum_{i=1}^{n} w_{a-1,i} \left( \frac{C_{a,t-1,i}}{\bar{C}_{a-1,i}} \right)}
\]

where:
- \(Z_{a,t}\) is the value of the zone indicator in year \(a\) month \(t\)
- \(w_{i,a-1}\) is the weight of country \(i\) from year \(a-1\)
- \(C_{a,t,i}\) is the indicator for country \(i\) in year \(a\) month \(t\)
- \(\bar{C}_{a-1,i}\) is the average value of the indicator for country \(i\) in year \(a-1\)

Country weights \(\{w_{i,a-1}\}\) are the previous year’s gross domestic product (GDP) based on purchasing-power-parity (PPP) valuation, in billions of current international dollar. However, up until 1981 weights refer to the GDP PPP value in 1980. Country average values, \(\{\bar{C}_{a-1,i}\}\), are calculated as the average of the country’s indicator from the previous year. The linking point is February of each year.

Weights data are sourced from the International Monetary Fund’s World Economic Outlook (WEO) database and are updated twice a year, in October and April\(^3\).

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\(^3\) To consult the weights for each confidence indicator please see the following two documents:
1. weights for BCIs
2. weights for CCIs
The chain-linked indicators are scaled to match the average level of the components in the OECD base year, which is year 2010. Formally, this implies selecting $Z_0$ such that $Z_B = \sum w_i,B C_{i,B}$ where $B=2010$.

DATA ACCESSIBILITY

The OECD Standardised Business & Consumer Confidence Indicators are computed once a month at the same release date of the OECD CLIs. They are freely available online at the OECD Data warehouse (OECD.Stat) under the *Monthly Economic Indicators* theme, as well as on the OECD Data Portal.