

THE CONSTRUCTION OF THE TURKISH COMPOSITE LEADING INDICATOR

A CLI for Turkey has been developed by the joint work between the OECD Statistics Directorate and the General Directorate of Statistics of the Central Bank of the Republic of Turkey.

Reference chronology

Since the turning points of the Index of Industrial Production (IIP) are not too different from those for GDP, the cyclical component of the IIP is considered as a good proxy for the fluctuation of the overall economic activity. It is published monthly with a five week delay and measures the real sector of the economy. Therefore, the chronology of turning points from both GDP and IIP were used to determine the reference chronology, which is as follows:

Table 1: Reference Chronology of Turning Points

P(1)	Dec – 1987
T(2)	Apr – 1989
P	May – 1990
T	Nov –1991
P	Apr – 1993
T	May – 1994
P	Feb – 1998
T	Aug – 1999
P	Aug – 2000

Note 1: Peak

Note 2: Trough

Potential component series

As an initial work, a database is constructed with the aim to cover all the sectors that are significant in the economic activity. CBRT Business Tendency Survey (BTS) questions regarding the trend of the last and next three months are taken into consideration. The series that constitute this initial database are from the following

sectors: production, sales, investment, prices, exchange rates, financial indicators, foreign trade, balance of payments, tourism, labour, consolidated budget and central bank balance sheet.

After investigating the practical properties of the candidate series such as timeliness, frequency, availability of historical time series and absence of excessive revisions, some series are eliminated from the analysis. Other series are eliminated from the analysis because they are lagging or because their lead is too different from one turning point to the other.

As a result, the series given below are selected as potential component series

- CBRT BTS Question related to stocks of finished goods
- Production amount of durable goods (oven, television, refrigerator and washing machine)
- Production amount of electricity
- Capacity utilization rate
- Car sales
- CBRT BTS Question related to the amount of new orders received from domestic market
- Number of investment incentive certificates
- CBRT BTS Question related to investment expenditure
- CBRT BTS Question related to the volume of output
- Real effective exchange rate
- Interest rate on 3-month time deposits
- Interest rate on 6-month time deposits
- Interest rate on 12-month time deposits
- Discounted Treasury auctions interest rate
- Imports of intermediate goods
- CBRT BTS Question related to export possibilities
- CBRT BTS Question related to employment
- Employment.

Final CLI

Different combinations of series from the list above are evaluated in order to select the best composite leading indicator. The final CLI consists of the following series (All the variables used in this study are monthly) :

- Imports of intermediate goods
- Discounted Treasury auctions interest rate (inverted)
- Production amount of electricity
- CBRT BTS Question related to export possibilities over the next three months (optimistic -pessimistic)
- CBRT BTS Question related to employment (next 3 months, up - down)
- CBRT BTS Question related to new orders received from domestic market (next 3 months, up - down)
- CBRT BTS Question related to stocks of finished goods (above normal – below normal, inverted).

Figure 1: Cycles of the Reference Series and CLI

