

**BOT'S LEADING ECONOMIC INDEX**

Bank of Thailand  
[www.bot.or.th](http://www.bot.or.th)

**BOT'S CURRENT BUSINESS CYCLE  
INDICATORS SYSTEM (1)**

**Coincident indicators**

- Comprehensive measures of the overall economic performance
- Reflect the current state of the economy

**Coincident Economic Index (CEI)**

- A composite index of the coincident indicators
- A proxy indicator for the aggregate economic activity
- Used to establish the growth cycle chronology and as the reference series for the Leading Economic Index

### **BOT'S CURRENT BUSINESS CYCLE INDICATORS SYSTEM (2)**

#### **Leading indicators**

- Measures of (1) commitment to, (2) prime mover of, or (3) anticipation of future economic activity
- Consistently lead the CEI by several months

#### **Leading Economic Index (LEI)**

- A composite index of the leading indicators
- Provides early signal on the direction of the economy
- Among the early signs that an ongoing expansion may start to decelerate is a sustained decline in the LEI

### **OVERVIEW OF THE METHODOLOGY**

**Construction of the CEI and the LEI is based on the methodology first developed by the US National Bureau of Economic Research (NBER) and later by Foundation for International Business and Economic Research, Inc. (FIBER)**

- Also known as the Moore-Shiskin method
- The method is similar to the one currently used by the Conference Board

### **COMPOSITE INDEX CONSTRUCTION CONSISTS OF SIX DISTINCT STEPS**

- 1. Remove seasonal factors from each component series**
- 2. For nominal variables, deflate the series using appropriate seasonally-adjusted price deflators to reflect real activities**
- 3. Compute month-to-month symmetric percentage changes for each adjusted component**
- 4. Standardize the month-to-month changes using mean absolute deviation of the changes (to equalize the volatility of each component)**
- 5. The index's symmetric percentage change is then computed as the average of the components' standardized changes**
- 6. The level of the index is computed using the symmetric percentage change formula and rebased to average 100 in 1990**

### **SELECTION OF INDEX COMPONENTS**

#### **Economic significance**

- **Supported by economic theory**
- **Have broad coverage**

#### **Availability of data**

- **Monthly**
- **At least 10 year long**
- **Timely**
- **Reliable**

#### **Cyclical behavior**

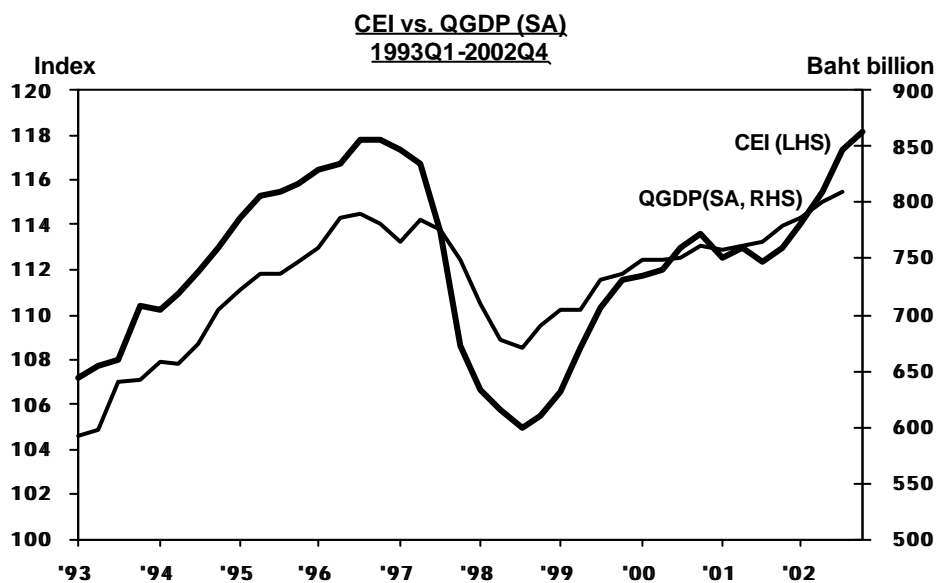
#### **For leading indicators, test of turning points of the variables against CEI**

- **Pair-wise Granger Causality Test**
- **Phase-average trend (Bry-Boschan) method**

### COMPONENTS OF THE COINCIDENT AND THE LEADING ECONOMIC INDICES

Coincident indicators (5)	Leading indicators (7)
<ul style="list-style-type: none"> <li>• Merchandise imports (BOP basis)</li> <li>• Debits to demand deposits</li> <li>• Volume sales of automobiles</li> <li>• Manufacturing Production Index (MPI)</li> <li>• Value added tax</li> </ul>	<ul style="list-style-type: none"> <li>• Newly permitted construction area</li> <li>• Authorized capital of newly registered companies</li> <li>• M2a</li> <li>• Merchandise exports (BOP basis)</li> <li>• Number of foreign tourists</li> <li>• Stock Exchange of Thailand (SET) Index</li> <li>• Inverse Index of Oman crude oil price</li> </ul>

### COINCIDENT ECONOMIC INDEX AS THE REFERENCE SERIES



### AVERAGE LEAD TIME OF LEADING INDICATORS TO CEI

Unit: month

Troughs	
Newly permitted construction area	3
Authorized capital of newly registered cos.	15
M2a	13
Merchandise exports	10
Number of foreign tourists	6
SET index	3
Inverse index of Oman oil price	2

Unit: month

Peaks	
Newly permitted construction area	4
Authorized capital of newly registered cos.	18
M2a	8
Merchandise exports	13
Number of foreign tourists	4
SET index	5
Inverse index of Oman oil price	4

### LEI LEADS CEI BY ABOUT 1-2 QUARTERS (1)

