

## **Meaning and Definition**

### **Business Cycle**

Business Cycle is waves of money and economic activity that forms a regular pattern, defined in terms of periods of expansion or recession. During expansions, the economy, measured by indicators like jobs, production, and sales, is growing in real terms, after excluding the effects of inflation. Recessions are periods when the economy is shrinking or contracting.

### **Business Cycle Index**

Business Cycle Index is the cycle component of economics variables, the basic facts of business cycle index, they can be used for forecasting the economy. The Index is particular model of the economy. Most economic series expand and contract with general business in Thailand. They do not, however, move in perfect unison with the cycle in overall activity. The composite indexes are essentially averages of separate data series that cover a broad range of the economy. As averages, they tend to smooth out a good part of the volatility of the individual series and are useful summary measures for business cycle analysis and forecasting.

The reason the leading index is called "leading" because the index shows cyclical turning points before those in aggregate economic activity. The main value of the leading index is in signaling that either the risk of a recession has increased or that a recession may be coming to an end.

### **Time Series Analysis**

An indispensable tool in monitoring current economic trends today, time series analysis is an indispensable element in monitoring and forecasting economic trends. This tool permits to adjust the economic time series for influences damaging the detection of the medium to long-term trend of a series. Such factors occurring in the original data may be seasonal influences, calendar influences or other irregular values which may be caused, for instance, by strikes. Consequently, most analytical methods aim at decomposing the observed time series data into components. These are the trend cycle component reflecting the medium to long-term "basic trend", a seasonal component and a calendar component through which seasonally and calendar adjusted values can be determined, and a residual component.

## **Turning Point**

The turning point is the dated that economy have been turn up or turn down activity, form recession to expansion or expansion to recession. Identifying turning points in the economy, is requires in two categories as the following:

A recession is a significant decline in activity spread across the economy, lasting more than a few months, visible in industrial production, employment, real income, and wholesale-retail sales. A recession begins just after the economy reaches a peak of activity and ends as the economy reaches its trough. Between trough and peak, the economy is in an expansion.

An expansion is the normal state of the economy, most recessions are brief and they have been rare in recent decades. Because a recession influences the economy broadly and is not confined to one sector, measures of economic activity.

### **Peak:**

A peak marks the end of an expansion and the beginning of a recession. The determination of a peak date is thus a determination that the expansion that began.

### **Trough:**

A trough date will mark the end of the recession. It will not issue any judgment about whether the economy has reached a trough until it makes its formal decision on this point. We waits for many months after an apparent trough to make its decision, because of data revisions and the possibility that the contraction would resume.

### **Duration of Cycle :**

In business cycle term, a cycle is the stage of phase, or space of time occurrence on past cycle, its consisting of more related phases. The length of business cycles were not similar, some cycle happened long duration but some cycle happened in short duration.

### **Phases :**

A phase is the kind of stage that forms a major part of a cycle. The "four-phases" of a cycle: expansion- recession-depression-recovery. Starting from the mean, a expansion is a rise which lasts until the peak is reached; a recession is the drop from the peak back to the mean; a depression is the slide from

the mean down to the trough; a recovery is the rise from the trough back up to the mean. From the mean, we then move up into another expansion or boom economy and thus the beginning of another four-phase cycle. In a sense, any cycle of whatever duration can be described as going through these four phases - otherwise the fluctuations cannot really be described as "cycles".

The chronology of turning points is given. The turning points chronologies are determined mainly by the statistical approach via the phase average trend (PAT) procedure. The composite leading indicators is based on the growth cycle approach and trend estimation is performed with the Phase-Average Trend method developed by the U.S. National Bureau of Economic Research.

**Business Cycle Index are divided into three categories:**

- A. Coincident Business Index is the business cycle run enclosed economic activity.
- B. Leading Business Index is the business cycle tending to turn down before the down cycle begins and to turn up before the expansionary cycle begins.
- C. Lagging Business Index is the business cycle follow changes in the business cycle.

**Thailand Coincident Index**

**Coincident index** is run in synchronism with the business cycle.

Coincident Indicators are as follows:

1. Domestic sale of passenger and commercial cars
2. Production of beer
3. Production of cement
4. Production of commercial vehicle
5. Production of motorcycles
6. Business taxes, Value added taxes and Specific business taxes
7. Import duties
8. Real import value (in Baht term)
9. Retail sale index

### **Thailand Short Leading Index**

Anticipated a business cycle by tending to turn down before the down cycle begins and to turn up before the expansionary cycle begins 3–5 months. These Primary Leading Economic Indicators are as follows:

1. Construction areas permitted in Bangkok metropolis
2. Number of foreign tourists
3. Stock exchange of Thailand index
4. Value of authorized capital of newly registered businesses
5. Real export value (in Baht term)
6. Narrow money

### **Thailand Medium-run Leading Index**

Anticipated a business cycle by tending to turn down before the down cycle begins and to turn up before the expansionary cycle begins 9 -11 months. These Primary Leading Economic Indicators are as follows:

1. Average interbank overnight lending rates, sign differential inverted
2. Construction areas permitted in Bangkok metropolis
3. Industrial Material Price Index, growth rate
4. Japan Leading Index, sign percentage inverted
5. USA Leading Index
6. Value of authorized capital of newly registered businesses
7. Broad money, growth rate