

# EXPLANATORY NOTES

## 1.0 INTRODUCTION

The publication of Malaysian Economic Indicators presents current economic information with the purpose of monitoring the economic situation of the country. It consists of Leading, Coincident and Lagging for Composite and Diffusion Indexes which published on the monthly basis.

## 2.0 OBJECTIVES

The main objectives of Malaysian Economic Indicators are to monitor Malaysian economic performance on a monthly basis and to assist the policy makers, investors, researchers as well as the public to assess the economic performance.

## 3.0 SOURCES OF DATA

Data for the compilation of Composite and Diffusion Indexes is obtained from the Department of Statistics Malaysia and the following agencies:

- i. Ministry of Housing and Local Government (MHLG);
- ii. Bank Negara Malaysia (BNM);
- iii. Road Transport Department (RTD);
- iv. Malaysian Investment Development Authority (MIDA);
- v. Employees Provident Fund (EPF);
- w. Companies Commission of Malaysia (SSM); and
- x. Bursa Malaysia.

## 4.0 METHODOLOGY

4.1 Selection of each component for the Composite Index is based on the guideline in the Business Cycle Indicators Handbook<sup>1</sup> namely:

- i. **Conformity to business cycle**  
The selected data series must conform to the business cycle.
- ii. **Consistent timing**  
The data series must exhibit a consistent timing pattern over time as leading, coincident or lagging indexes.
- iii. **Economic significance**  
The selected data series must significantly contribute to the economy.
- iv. **Statistical adequacy**  
Data must be collected and processed in a statistically reliable manner.
- v. **Smoothness**  
The month to month movements of the data series must not be too erratic.
- vi. **Promptness**  
The selected components must be timely, accurate and updated to contribute to the current analysis.

4.2 The selected time series data are seasonally adjusted to remove the seasonal influences of the data series.

<sup>1</sup> McGuckin R.H. et al. (2000) Business Cycle Indicators Handbook. The Conference Board, United States.

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4.3 The components contained in the Malaysian Economic Indicators are as follows:

Index	Components
Leading	<ul style="list-style-type: none"> <li>i. Real Money Supply, M1</li> <li>ii. Bursa Malaysia Industrial Index</li> <li>iii. Real Imports of Semi Conductors</li> <li>iv. Real Imports of Other Basic Precious &amp; Other Non-ferrous Metals</li> <li>v. Number of Housing Units Approved</li> <li>vi. Expected Sales Value, Manufacturing</li> <li>vii. Number of New Companies Registered</li> </ul>
Coincident	<ul style="list-style-type: none"> <li>i. Total Employment, Manufacturing</li> <li>ii. Real Salaries &amp; Wages, Manufacturing</li> <li>iii. Industrial Production Index</li> <li>iv. Real Contributions, EPF</li> <li>v. Capacity Utilisation, Manufacturing</li> <li>vi. Volume Index of Retail Trade</li> </ul>
Lagging	<ul style="list-style-type: none"> <li>i. Unit Labour Cost, Manufacturing</li> <li>ii. Number of Investment Projects Approved</li> <li>iii. Number of New Vehicles Registered</li> <li>iv. Exports of Natural Gas &amp; Crude Oil</li> <li>v. CPI for Services</li> </ul>

## 5.0 CONCEPTS AND DEFINITIONS

### 5.1 Composite Index

The Composite Index is the combination of individual indicators which measures the economic cycles behaviour. The advantage of Composite Index compared to individual analysis is the tendency to smooth out some of the volatility of the series. The Composite Index is generally more reliable in generating clear and consistent turning points than individual indicators. There are three types of Composite Index in the Malaysian Economic Indicators, i.e. leading, coincident and lagging indexes.

- i. Leading Index (LI)**  
The Leading Index measures anticipations of the overall economic activity on average of four to six months ahead.
- ii. Coincident Index (CI)**  
The Coincident Index is a comprehensive measure of the overall current economic performance.
- iii. Lagging Index (LG)**  
The Lagging Index is to validate the signal of the Leading and Coincident Indexes.

### 5.2 Diffusion Index

The Diffusion Index is a complement to the Composite Index. It is used to assist in making a decision especially in determining turning point of economic cycle.

The value of 100 for Diffusion Index implies that all components are increasing and the value of zero shows that all components are decreasing. For example, the Diffusion Index of 85 points for the LI shows that 85 per cent of LI components are increasing for that particular month.

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### 5.3 Business Cycle

Business cycle is a fluctuation of the aggregated economic activity such as production, income, employment, trade and etc. There are two main phases of business cycle namely expansion and recession phases.

The upward movement from trough to peak is defined as expansion phase meanwhile the downward movement from peak to trough is classified as recession phase. The phase of business cycle recession is determined by declining of the Coincident Composite Index for at least six months successively.

For example, Exhibit 1 shows that the peak of the fifth cycle of Coincident Index in January 2008 indicates the beginning of business cycle recession and the trough in March 2009 indicates the end of recession phase or the beginning of economic expansion phase.

#### Exhibit 1: Malaysian Business Cycles Reference Periods

Number Of Cycle	Reference Periods	Trough to Peak (Month)	Peak to Trough (Month)	Reference Periods	Full Cycle (Month)
First Cycle	Jul 74		7	Jul 74—Feb 75	
Second Cycle	Feb 75—Jan 85	119	12	Jan 85—Jan 86	131
Third Cycle	Jan 86—Dec 97	143	11	Dec 97—Nov 98	154
Fourth Cycle	Nov 98—Feb 01	27	12	Feb 01—Feb 02	39
Fifth Cycle	Feb 02—Jan 0'8	71	14	Jan 08—Mar 09	85
Sixth Cycle	Mar 09 - Feb 20	131	17	Feb 20—Jul 21	148
	<b>Average</b>	<b>98</b>	<b>12</b>	<b>Average</b>	<b>110</b>

### 5.4 Growth Cycle

The growth cycle is a fluctuation of the aggregated economic activity along its long term trend. The long term trend of the aggregated economic activity is estimated using the Hodrick Prescott Filter method on the Coincident Index. The growth cycle is generated through the deviation of the index from its long term trend.

The peak of growth cycle reflects the end of the upswing and the beginning of downswing phase of economic growth. Meanwhile trough for growth cycle indicates the end of downswing or the beginning of upswing phase of economic growth.

For example, Exhibit 2 shows that the peak point of the ninth cycle in April 2004 reflects that economy is entering the slow growth phase and the trough for growth cycle in November 2005 shows the beginning of a higher growth phase.

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### Exhibit 2: Malaysian Growth Cycles Reference Periods

Number of Cycle	Reference Periods	Trough to Peak (Month)	Peak to Trough (Month)	Reference Periods	Full Cycle (Month)
First Cycle	Feb 73—May 74	15	10	May 74—Mar 75	25
Second Cycle	Mar 75—Nov 76	20	8	Nov 76—Jul 77	28
Third Cycle	Jul 77—Jul 81	48	16	Jul 81—Nov 82	64
Fourth Cycle	Nov 82—Jan 85	26	24	Jan 85—Jan 87	50
Fifth Cycle	Jan 87—Oct 88	21	18	Oct 88—Apr 90	39
Six Cycle	Apr 90—Jan 92	21	12	Jan 92—Jan 93	33
Seventh Cycle	Jan 93—Jan 98	60	12	Jan 98—Jan 99	72
Eight Cycle	Jan 99—Aug 00	19	18	Aug 00—Feb 02	37
Ninth Cycle	Feb 02—Apr 04	26	19	Apr 04—Nov 05	45
Tenth Cycle	Nov 05—Jan 08	26	14	Jan 08—Mar 09	40
Eleventh Cycle	Mar 09—Jul 11	28	12	Jul 11—Jul 12	40
Twelfth Cycle	Jul 12—Mar 15	32	14	Mar 15—May 16	46
Thirteenth Cycle	May 16—Apr 19	35	12	Apr 19—Apr 20	47
	<b>Average</b>	<b>29</b>	<b>15</b>	<b>Average</b>	<b>44</b>

## 6.0 LIMITATION OF MALAYSIAN ECONOMIC INDICATORS

There are some limitations of the Malaysian Economic Indicators that users should be aware of:

- i. The Leading Index is unable to measure or predict the magnitude of any changes of economic activity. The index shows the direction of the economy in advance.
- ii. The Coincident Index does not represent the level of the current economic situation. Thus it should not be interpreted as the level of current monthly Gross Domestic Product (GDP).
- iii. The economic indicators are unable to take into account the internal or/and external shock to the economy.