Third International Seminar on Early Warning and Business Cycle Indicators
17 – 19 November 2010
Moscow, Russian Federation

Outline of the *Handbook on Business Cycle Composite Indicators*

Statistics Netherlands
United Nations Statistics Divisions
Eurostat
The Conference board

Chapter 1: Introduction and definition

- Scope and target audience of handbook
- Step by step guide to construct composite indicator (see Handbook OECD and Conference Board)
- Quality assurance framework of composite indicators (see Handbook OECD)
- Indicators and Composite Indexes
- Identification of the target variables
- Composite indicators to measure cyclical movements
- Composite indicators to detect the occurrence of turning points
- Composite indicators to measure economic growth
- Classification of the Indicators: Leading; Coincident and Lagging
- Communication and dissemination

Chapter 2: Some historical and theoretical consideration on the construction of Business Cycle Composite Indicators

- Pre Burns and Mitchell Indicators
- The Burns and Mitchell approach
- Composite Indicators based on Econometrics and Time Series approach

Chapter 3: Data availability, frequency and adjustment techniques

- Unavailability of long time series: back casting exercises
- Unavailability of appropriate price indexes
- Problems related to the presence of outliers and of seasonal and calendar effects: Seasonal Adjustment
- Imputation of missing data (see handbook OECD)
- Lack of information at desired frequency: Multi-frequency models (MIDAS, Bridge Equations models, etc.)

Chapter 4: Variables selection techniques

- Large versus Small dataset based Indicators
- Classification of variables according to their leading/lagging properties
- Subjective identification of variables
- The use of Factor Analysis and Principal Component Analysis approach
- Other non parametric techniques (Partial Least Squared, etc)
- General to Specific approach to reduce the Variable Space

Chapter 5: Indicators to measure cyclical movements

- The choice of target variables
- The choice of the reference cycle (classical, growth or acceleration cycle)
- Filtering techniques to achieve noise minimization and a proper estimation of trend-cycle component
- Detrending methods: Parametric versus non parametric (univariate versus multivariate)

- Aggregation of individual signals: choice of the weights versus combining forecasts
- Multivariate detrending methods and filtering
- Some examples

Chapter 6: Indicators to detect turning points

- The choice of the reference variable
- The choice of reference cycle (classical, growth or acceleration cycle)
- Probit/Logit based models
- Non linear time series models: Markov Switching, Self Exciting Threshold Autoregressive
- Aggregation of individual signals: choice of the weights versus combining forecasts
- Multivariate non linear time series modelling
- Analysis of turning points
- The use of visualization tools: Some examples

Chapter 7: Indicators to measure economic growth[1]

- Identification of the target variables
- Regression based models
- Factor VAR based models (automatic leading Indicators ALI and automatic cointegrated leading Indicators ACRI)
- Some examples

Chapter 8: Validation of Business Cycle Composite Indicators

- Real Time out-of-sample forecasting simulation
- Use of lagging indicators to validate leading and coincident ones
- Sensitivity analysis (See OECD handbook)

Annex/Chapter 9: Global Inventory/Survey of Business Cycle Composite Indicators

Still to be included:

- Limitations of the composite indicator approach
- Issues facing NSO's on the production of composite indicators
- Issues to carry forwards as future agenda

[1] Optional chapter. Conclusion in this handbook depends on the products of the working group on Flash GDP.