OECD Composite Leading Indicators: methodology and practice

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Seville – September 2009

Outline

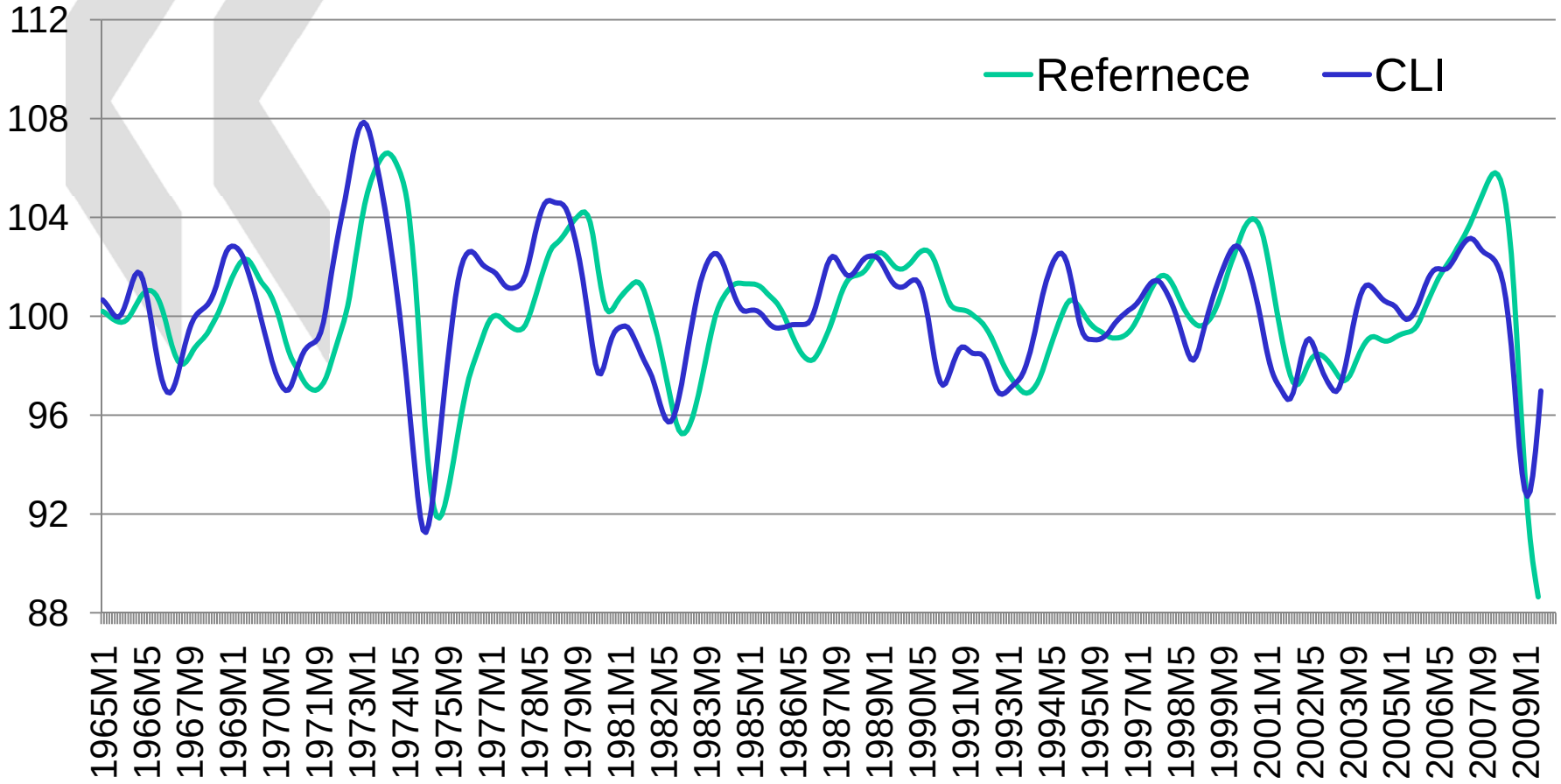
- The OECD CLI – main characteristics
- The building blocks
- Quality and performance
- The production system
- Forecasting with the CLIs

Main characteristics of the CLI system

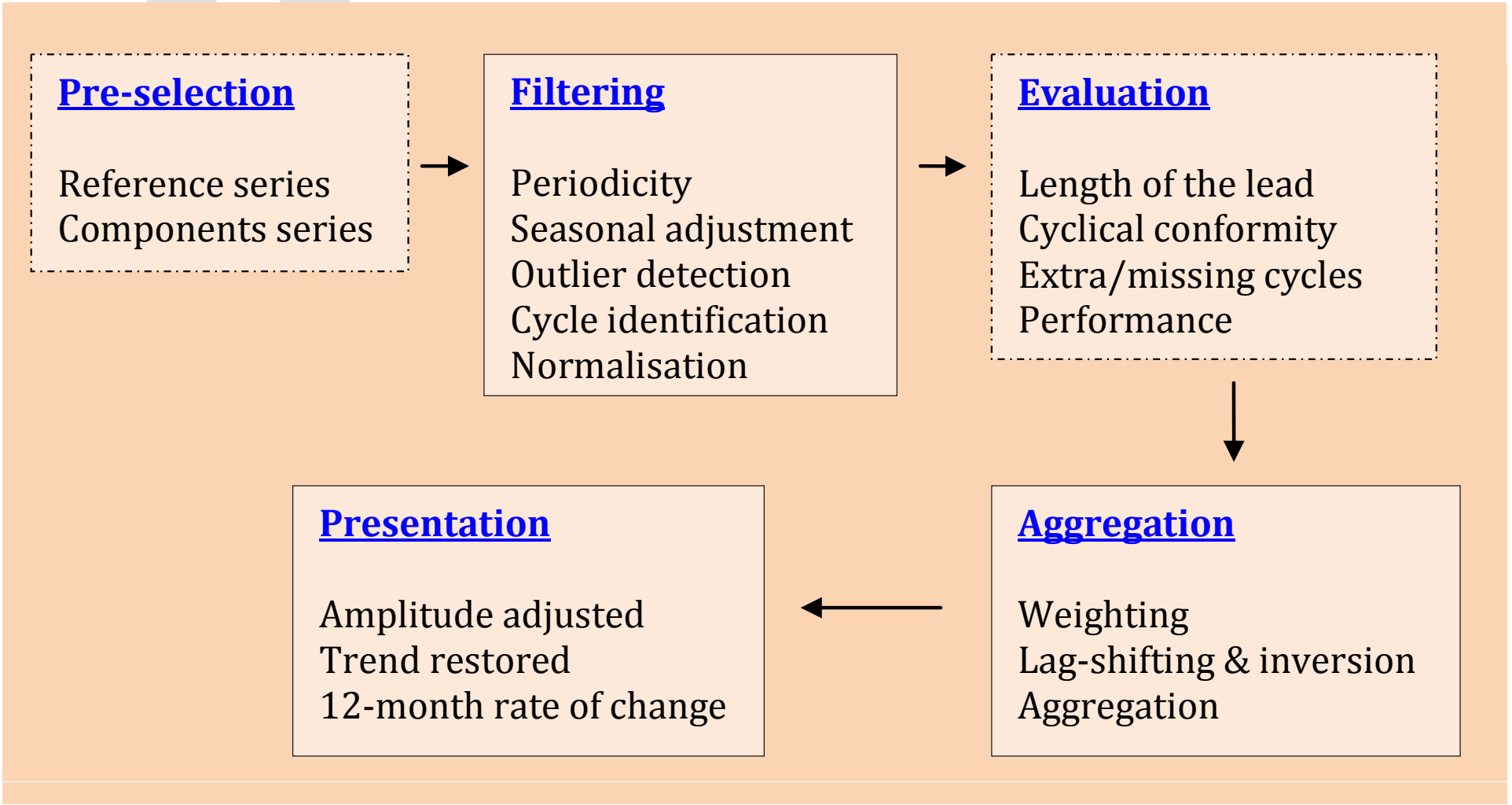
- The goals:
  - Draw a broad brush picture of the economic (production) outlook
  - Serve as benchmark
- As a consequence:
  - Focus on turning-points
  - Robust, non-parametric, non-optimizing

The CLI for OECD

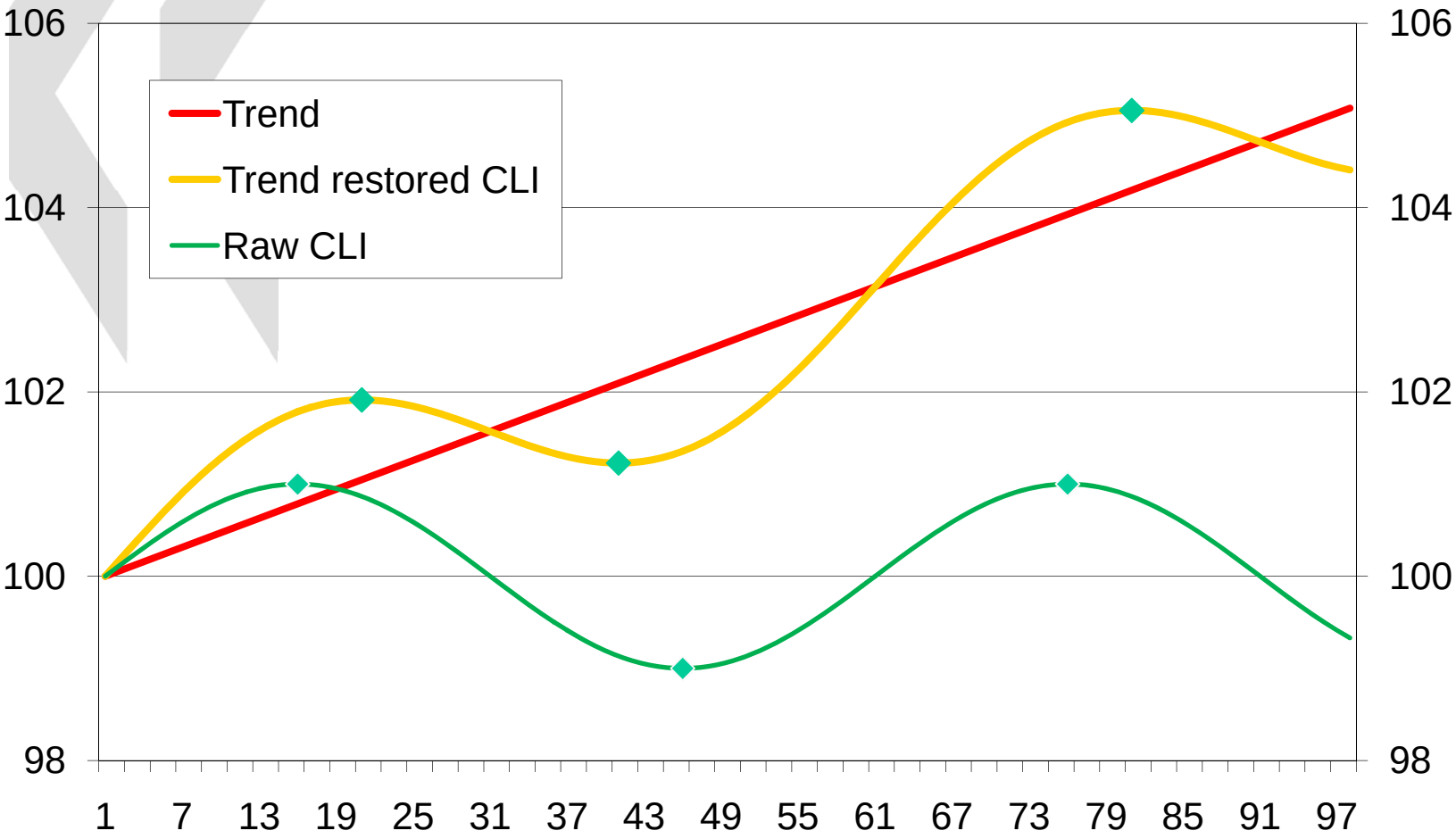
(Jul 2009)



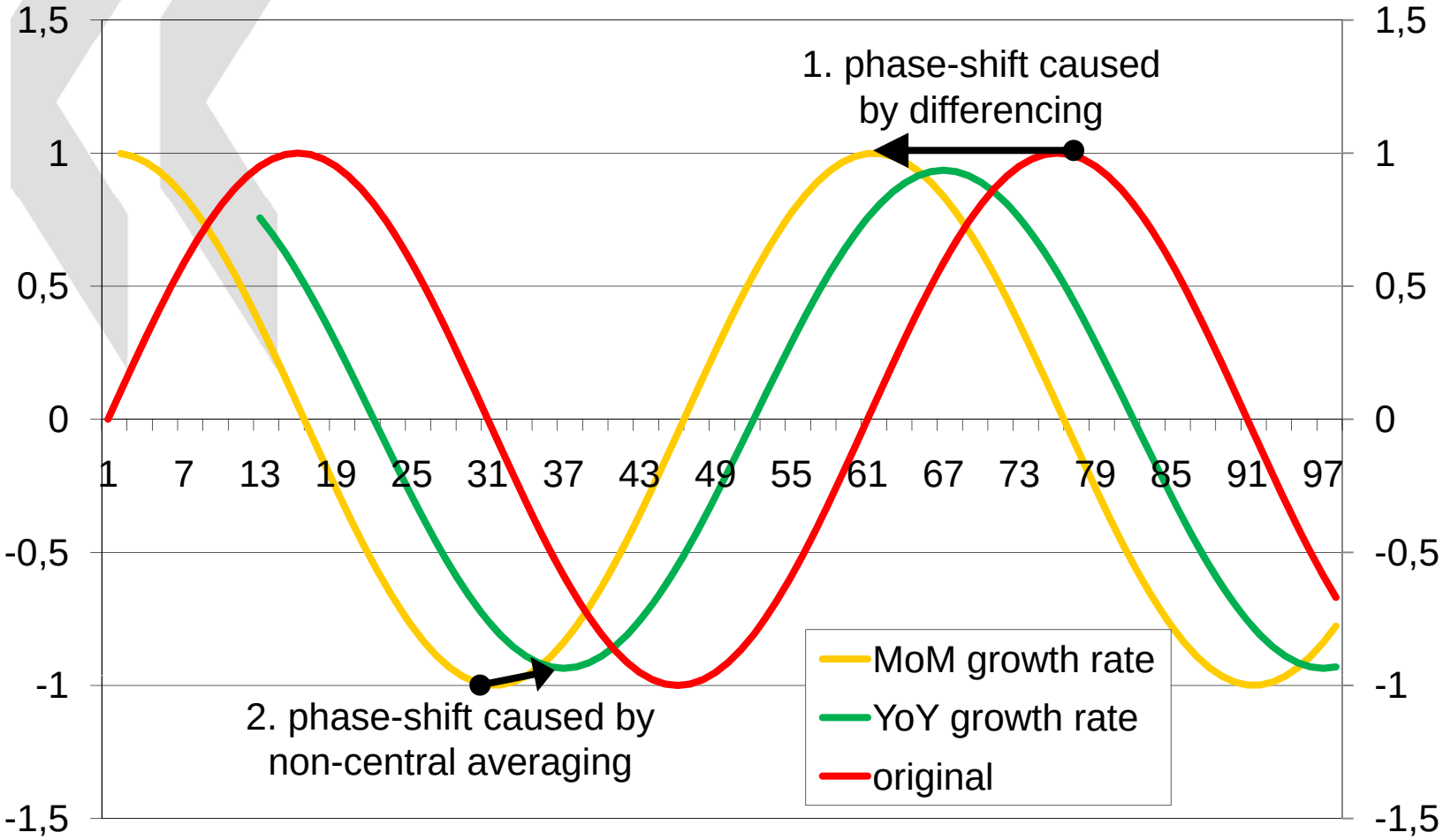
Building blocks



Trend restored vs. original CLI



Raw CLI vs. the YoY growth rate



Quality and performance

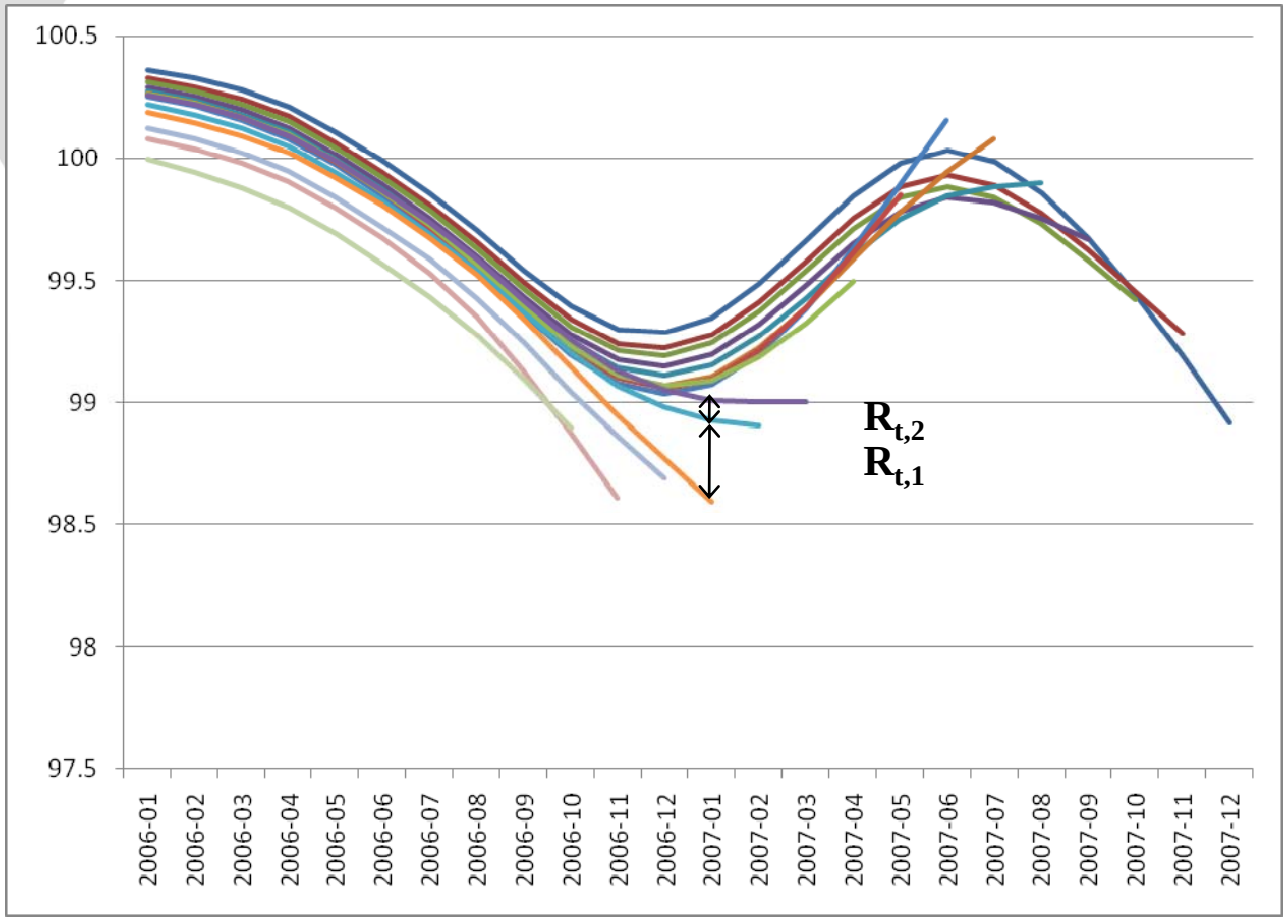
- Turning-point correspondence:
  - Missing and extra turning points
  - Average lead, and lead stability
  - Peak lead, and cross correlation at peak lead
- Revision characteristics
  - Revision size
  - Bias
  - Signal stability

Turning point correspondence

Country	Starting date	Quality statistics						Action needed
	New CLI	Total	Miss	Extra	Mean Lead	Peak Lead (correl)	St.Dev. Lead	
Brazil	1978	15	1	4	2.43	3 (0.53)	5.26	I
Canada	1956	20	2	5	7.61	7 (0.781)	2.95	OK
China	1983	11	3	5	3.38	4 (0.674)	4.15	R
Germany	1961	22	4	8	6.00	6 (0.752)	4.22	I
France	1962	20	3	8	6.12	8 (0.734)	5.26	I
United Kingdom	1957	19	4	6	7.67	11 (0.719)	5.42	I
India	1994	7	0	0	4.43	3 (0.796)	5.53	OK
Italy	1973	19	3	3	5.38	7 (0.764)	5.28	I
Japan	1959	21	7	5	7.43	6 (0.815)	4.66	R
Russia	1994	7	2	2	3.20	5 (0.809)	3.87	OK
United States	1955	23	5	5	4.33	6 (0.827)	2.69	OK
South Africa	1975	14	4	3	5.60	7 (0.806)	4.78	I

Revision patterns

An illustration: The HP filtered Business Climate Indicator (USA)

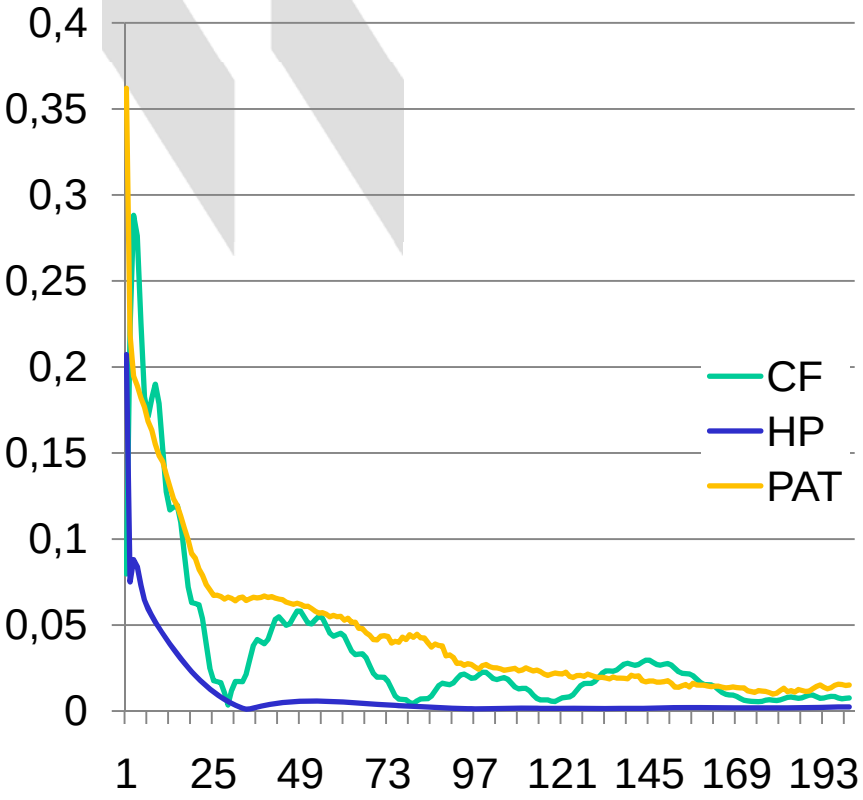


Overall revision size

(Net New Orders USA)

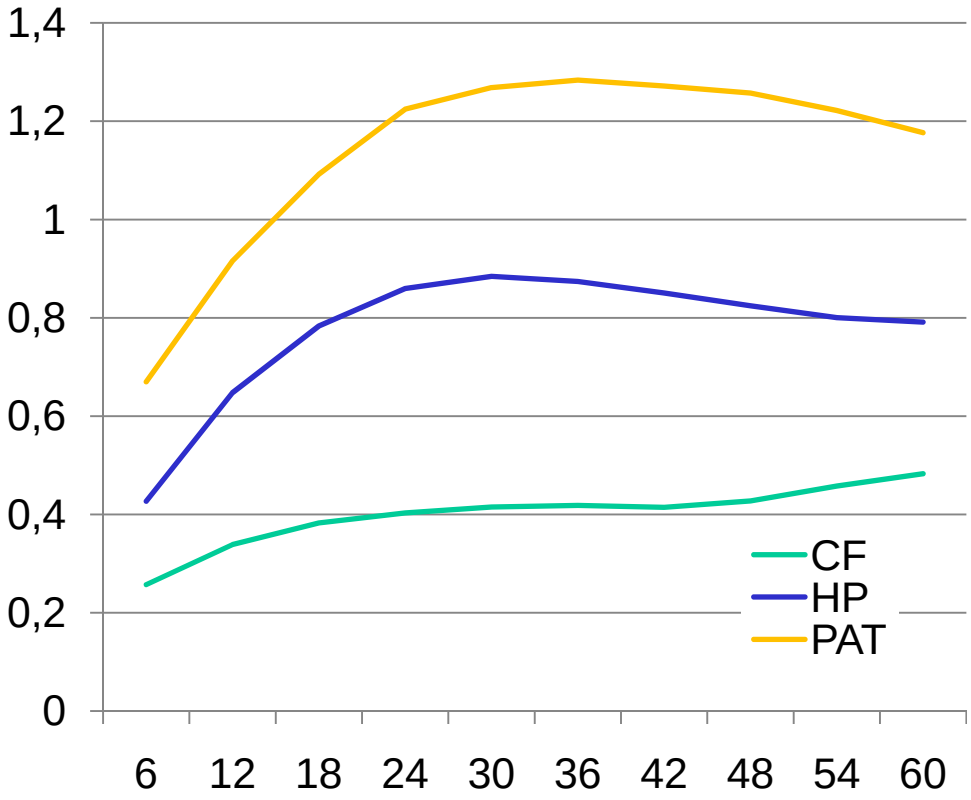
Mean absolute revision

HP smallest revisions



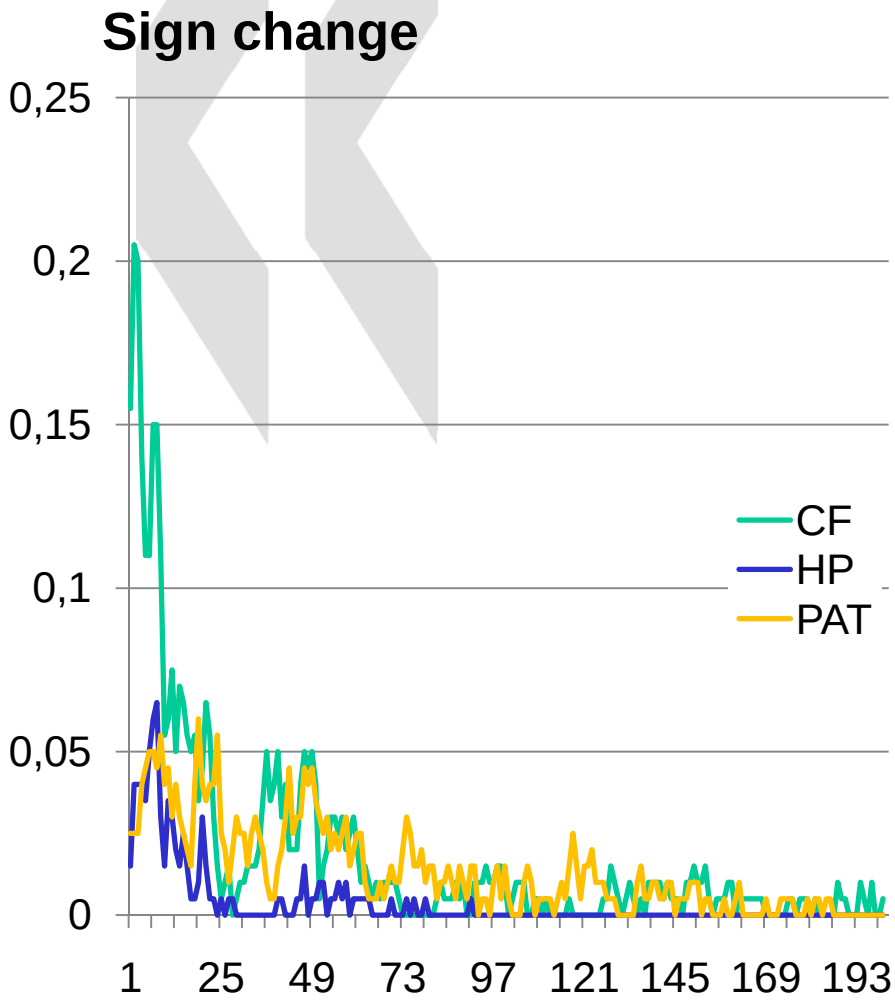
Cumulated absolute revisions

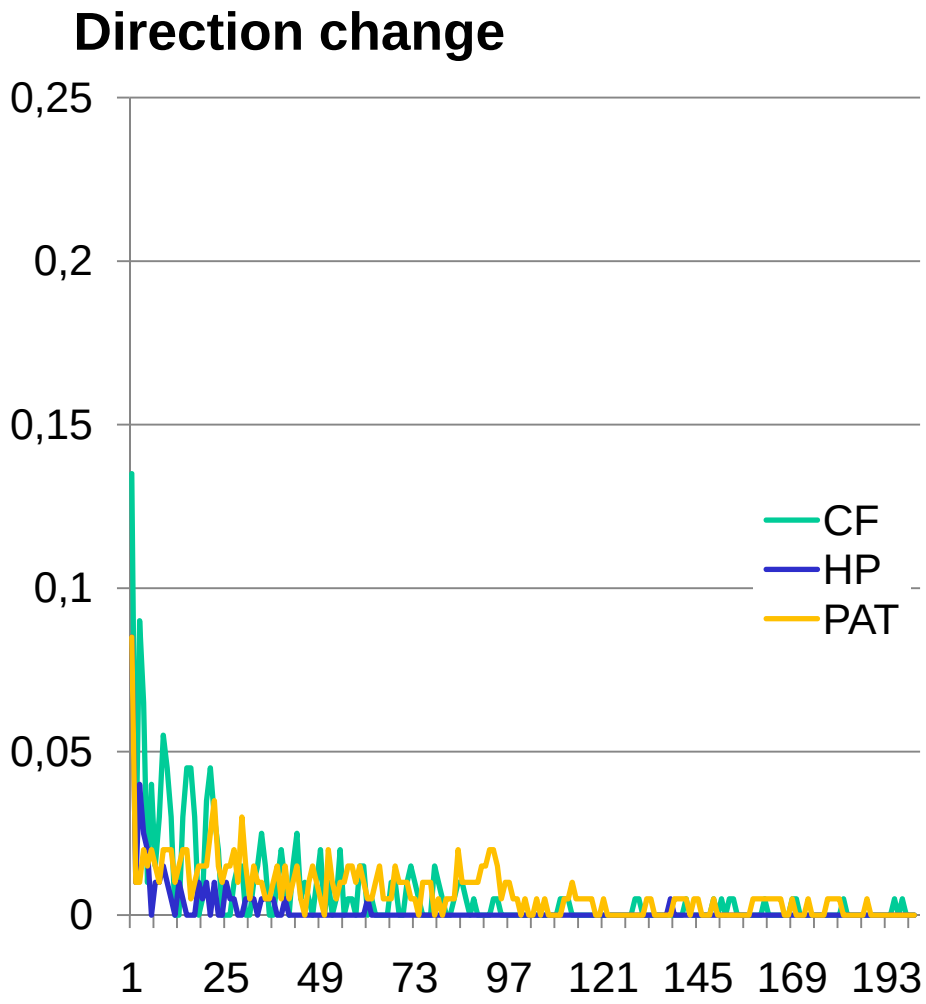
CF smallest cumulated revision



Revision to Cyclical Signal

(Net New Orders USA)



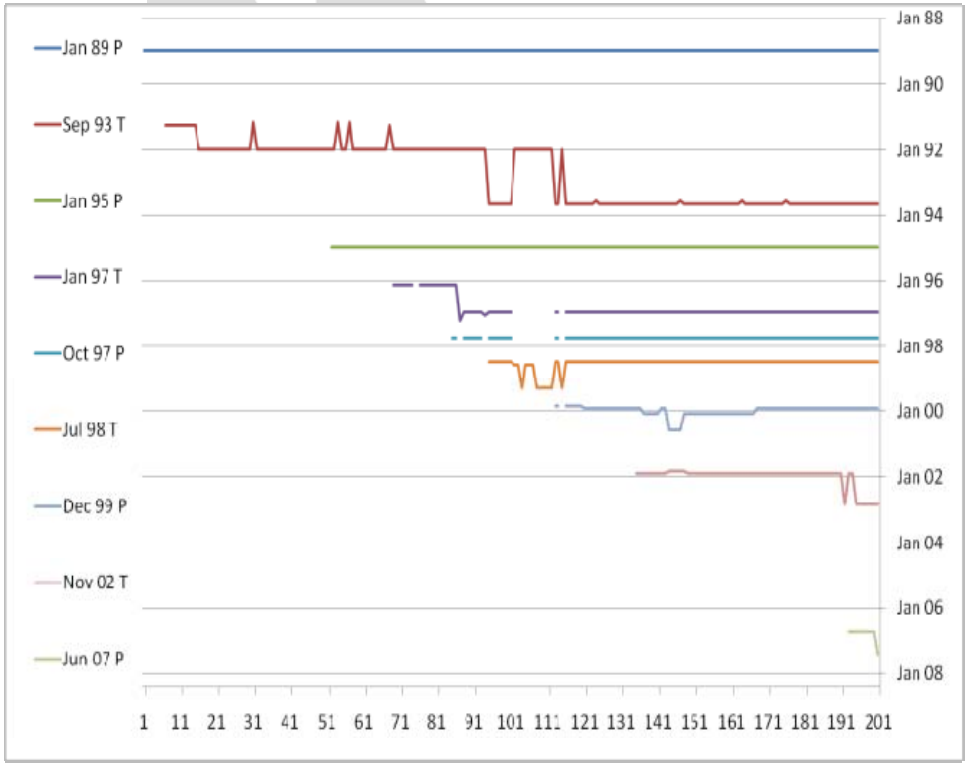


Turning-point estimation history

(Net New Orders USA)

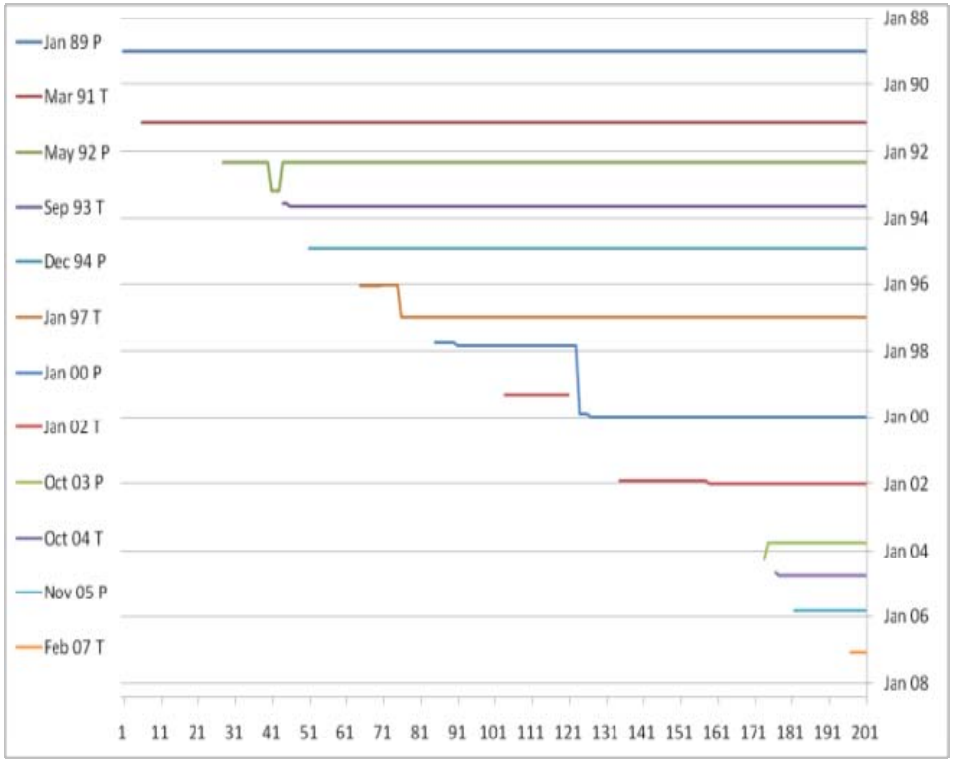
PAT

TP estimates often change

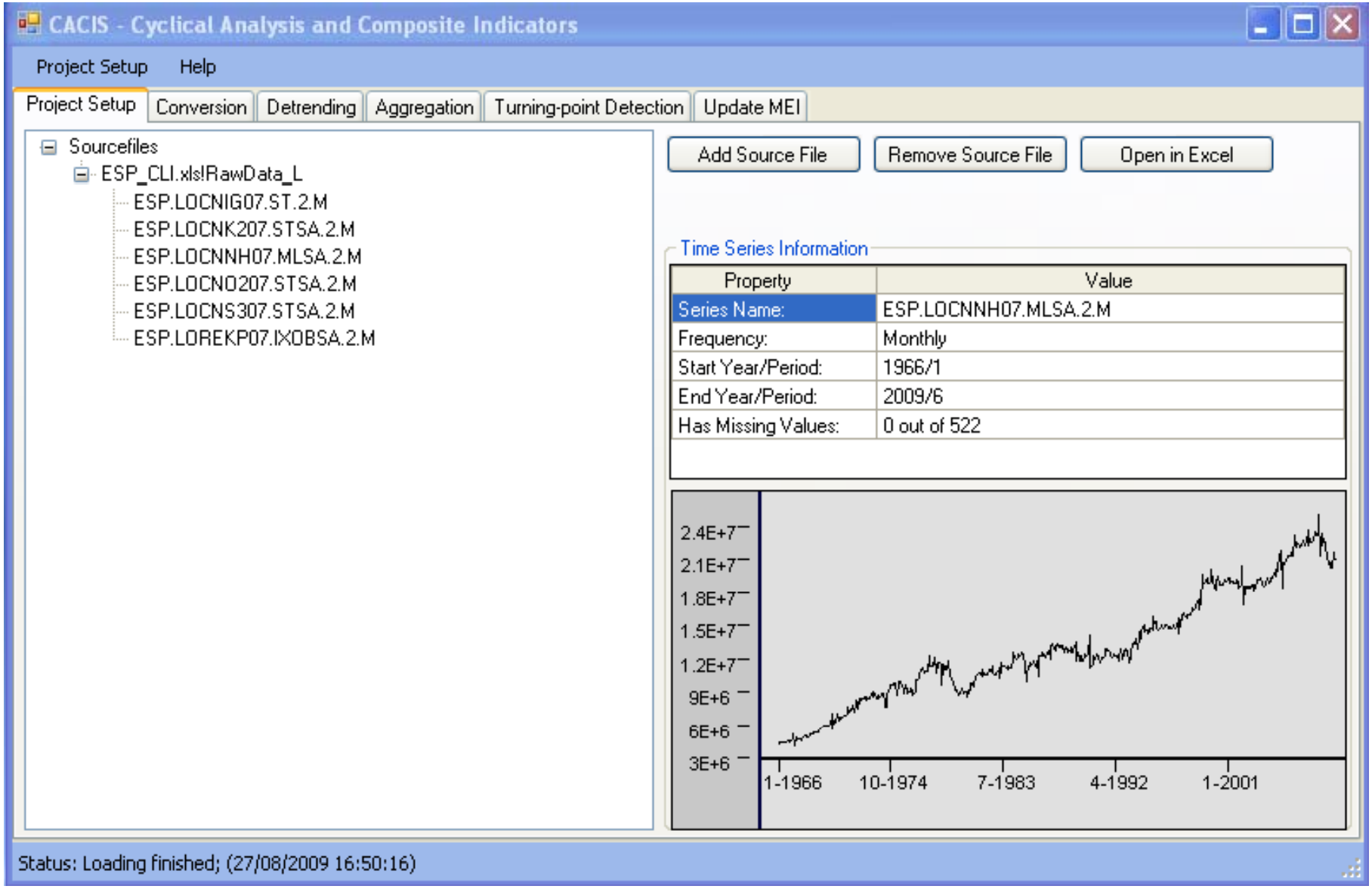


HP

Fewer large jumps,
no oscillations



The CACIS Software



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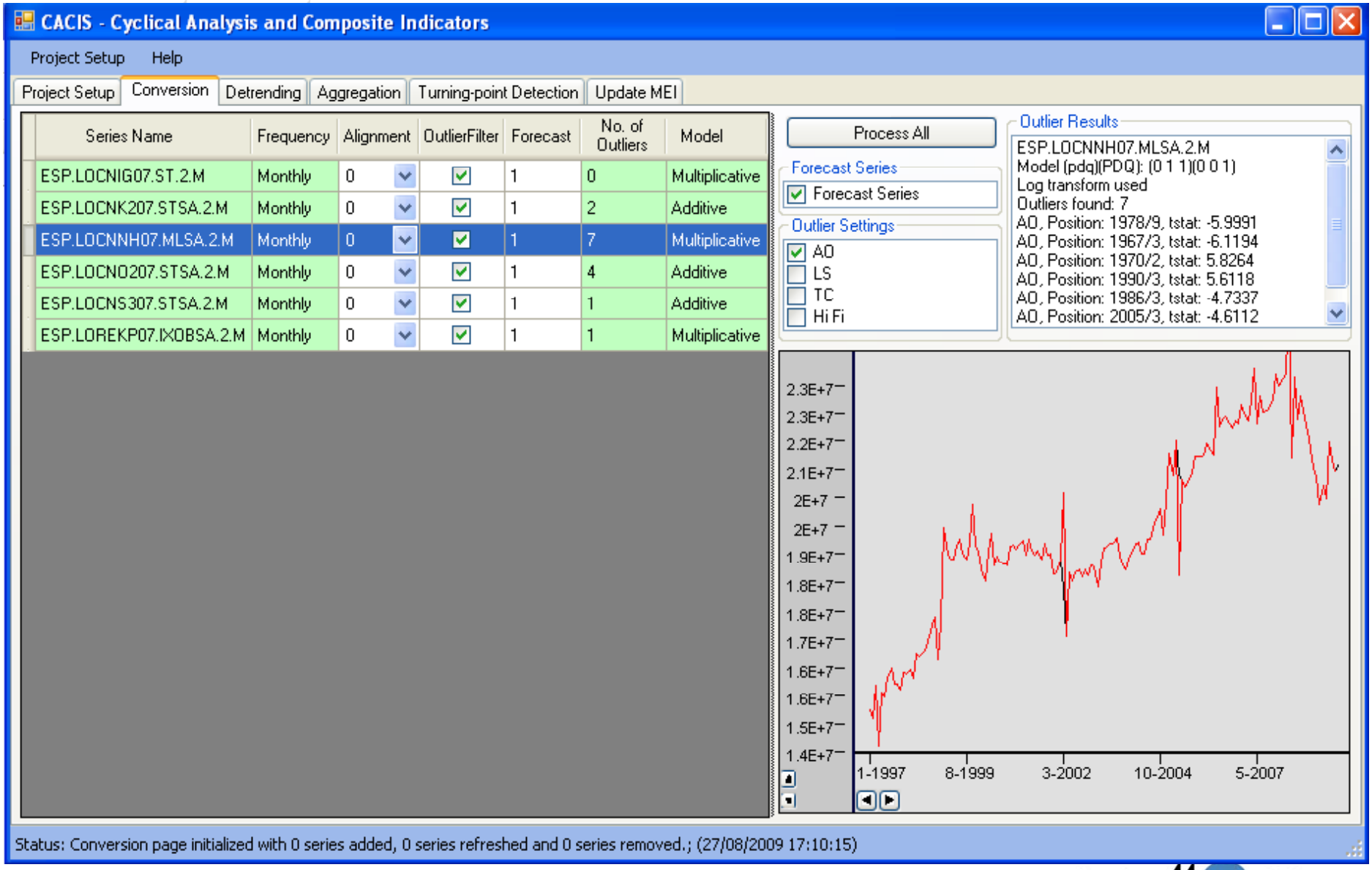

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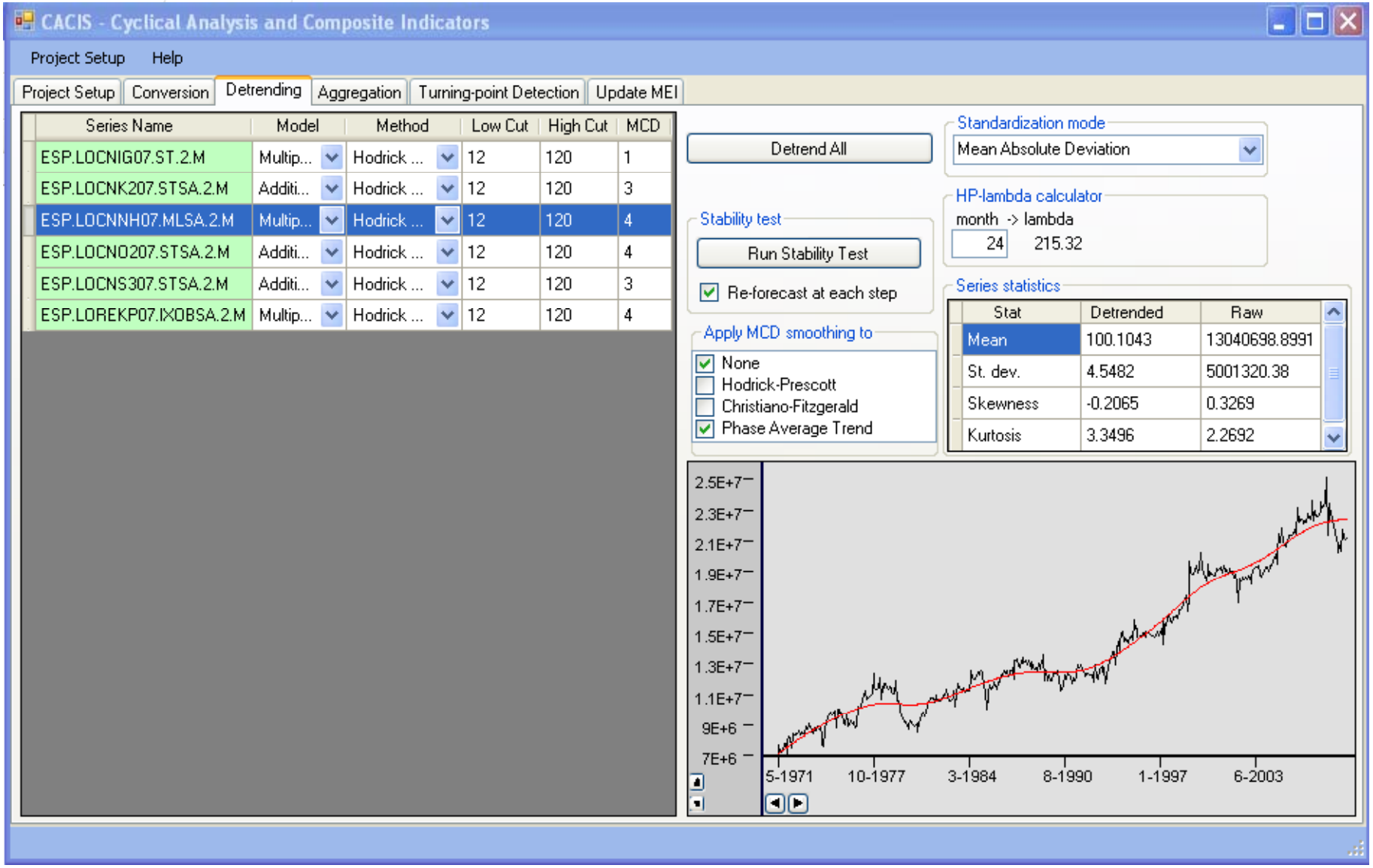

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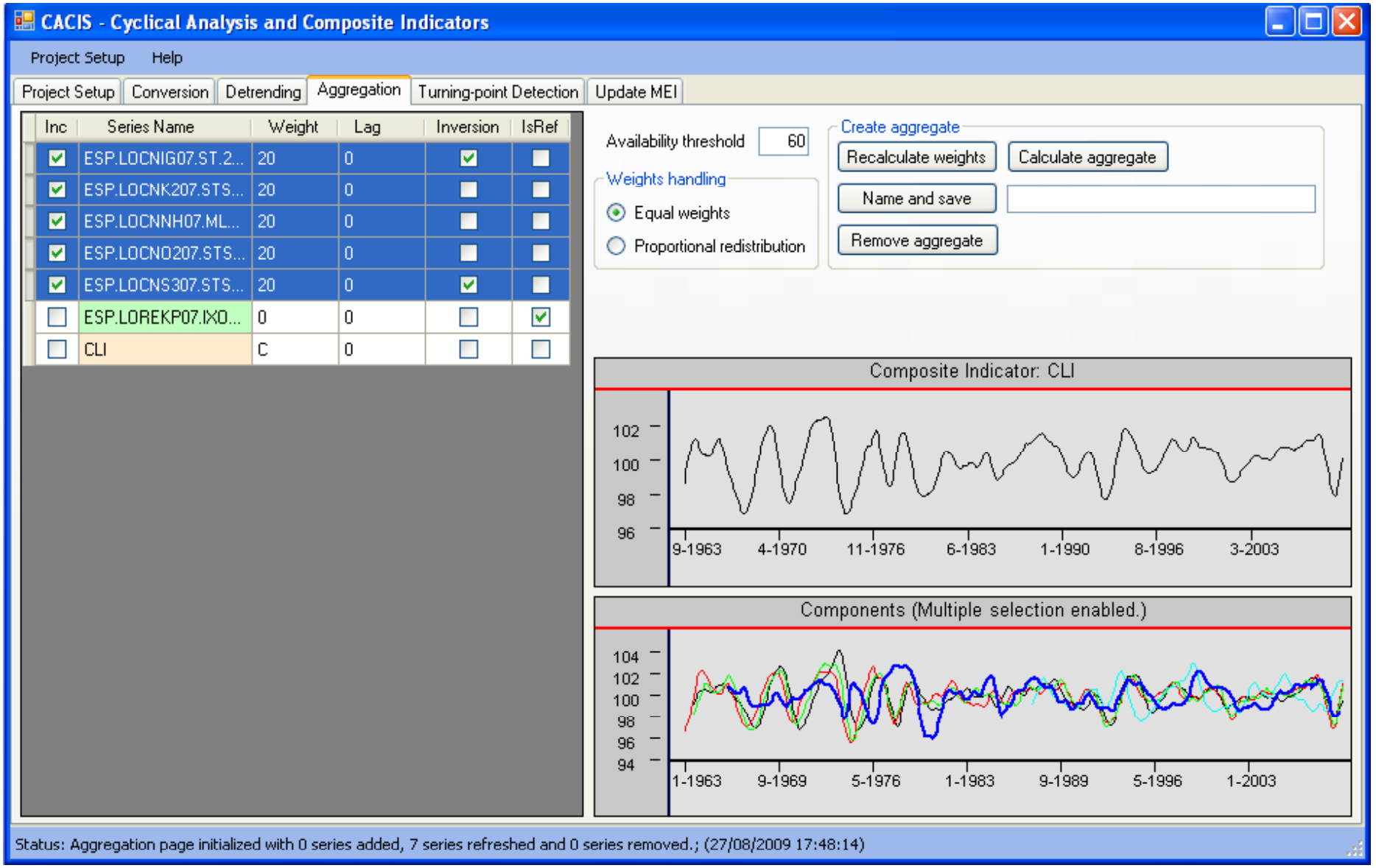

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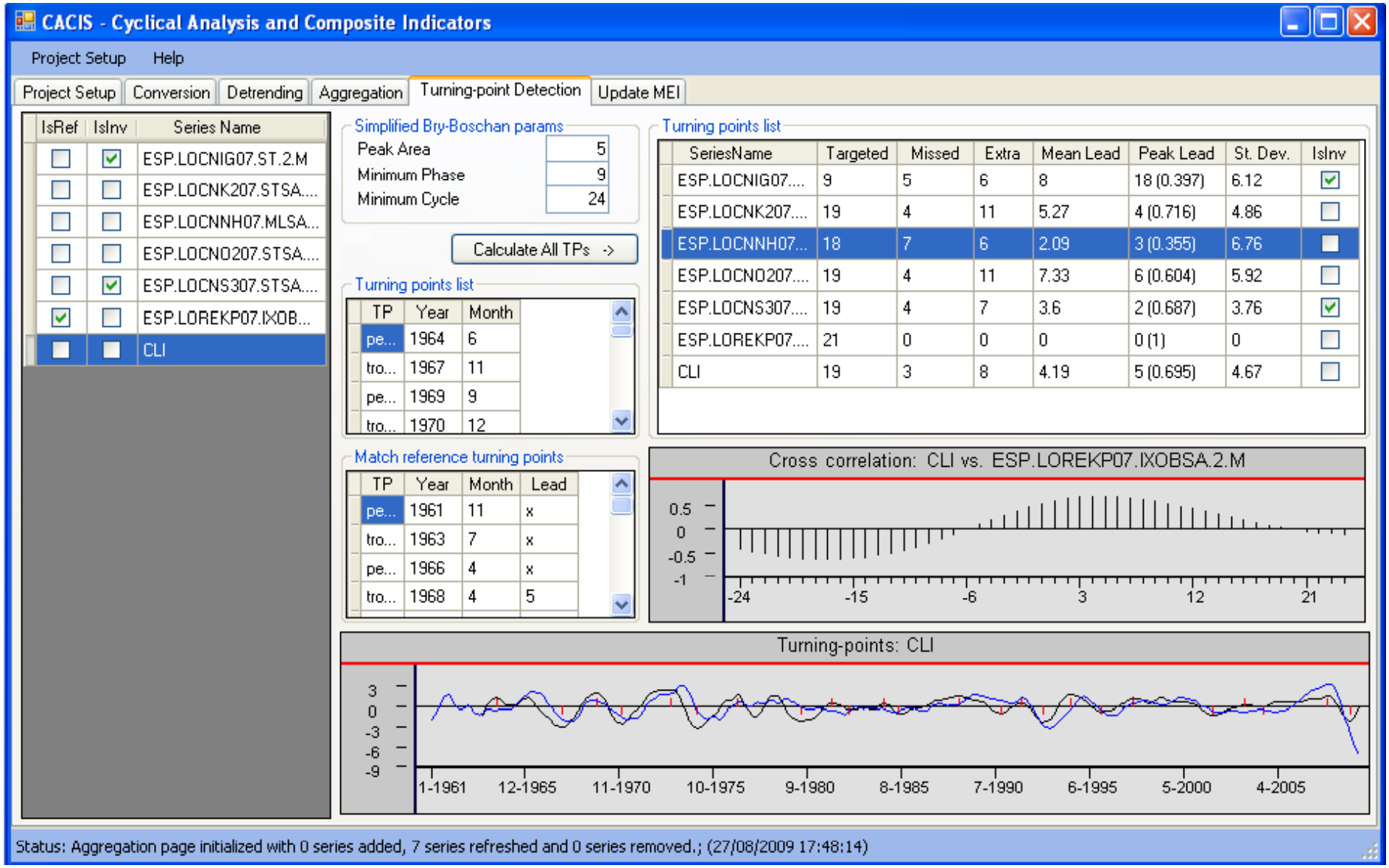

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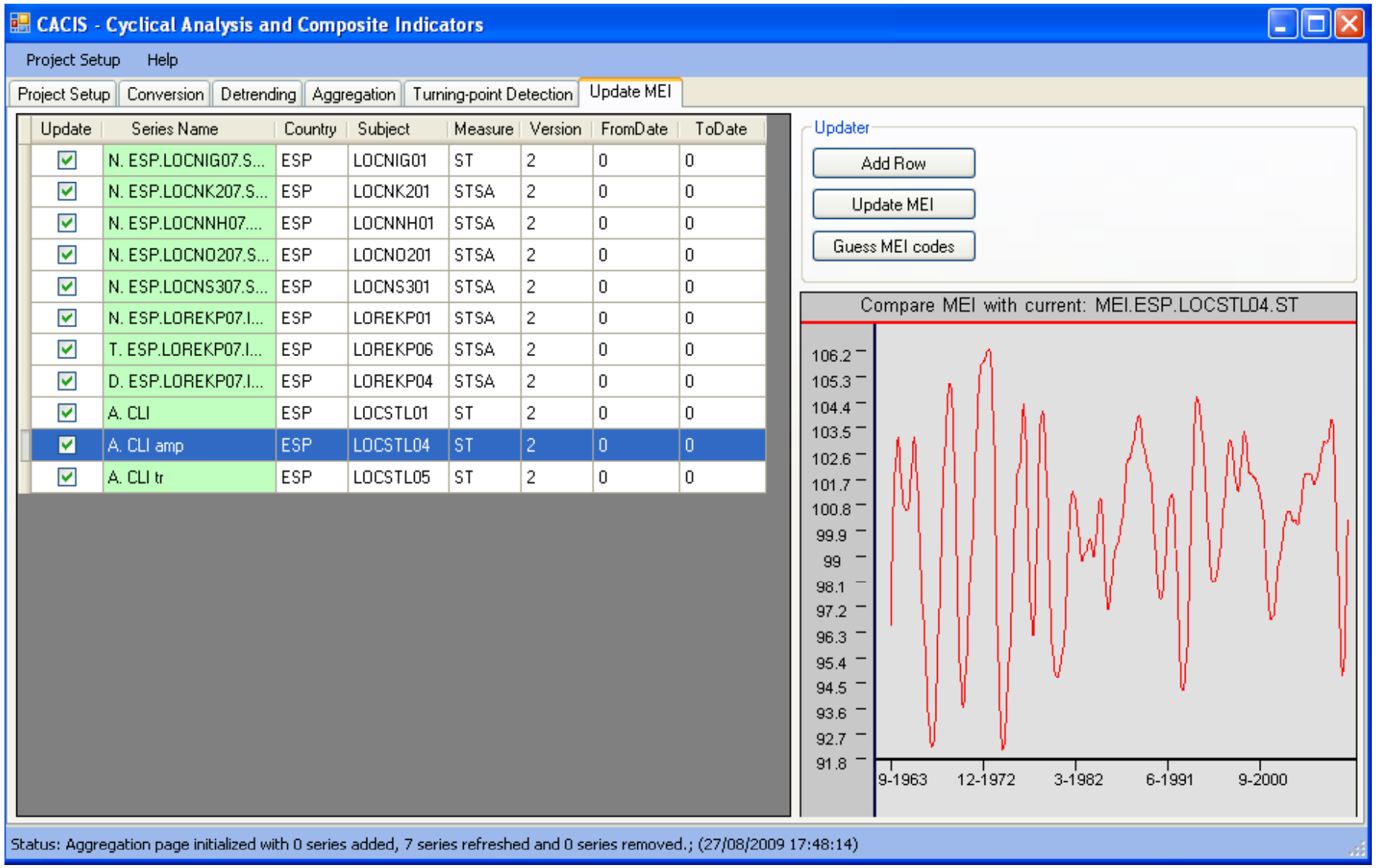

Forecasting with the CLIs

- Targeting the CLI reference series:
  1. Providing turning-point forecasts or turning-point probability forecasts
  2. Quantitative forecasts of the cyclical component of the reference series (univariate/multivariate framework in the time domain or frequency domain techniques.)
- Picking a different target (e.g. GDP growth rate):
  3. Using the corresponding CLI variant (12 month growth rate of the trend restored CLI) to build a univariate forecasting equation

Forecasting scenarios