Real Time Detection of Turning Points
The OECD Experience

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OECD
BETTER POLICIES FOR BETTER LIVES

Overview

Methodology

Two goals for one qualitative indicator

1) anticipate turning points (event)

OECD GDP (Cycle)

CLI

2) inform on future direction of cyclical fluctuations

1998   2001   2004   2007   2010   2013   2016
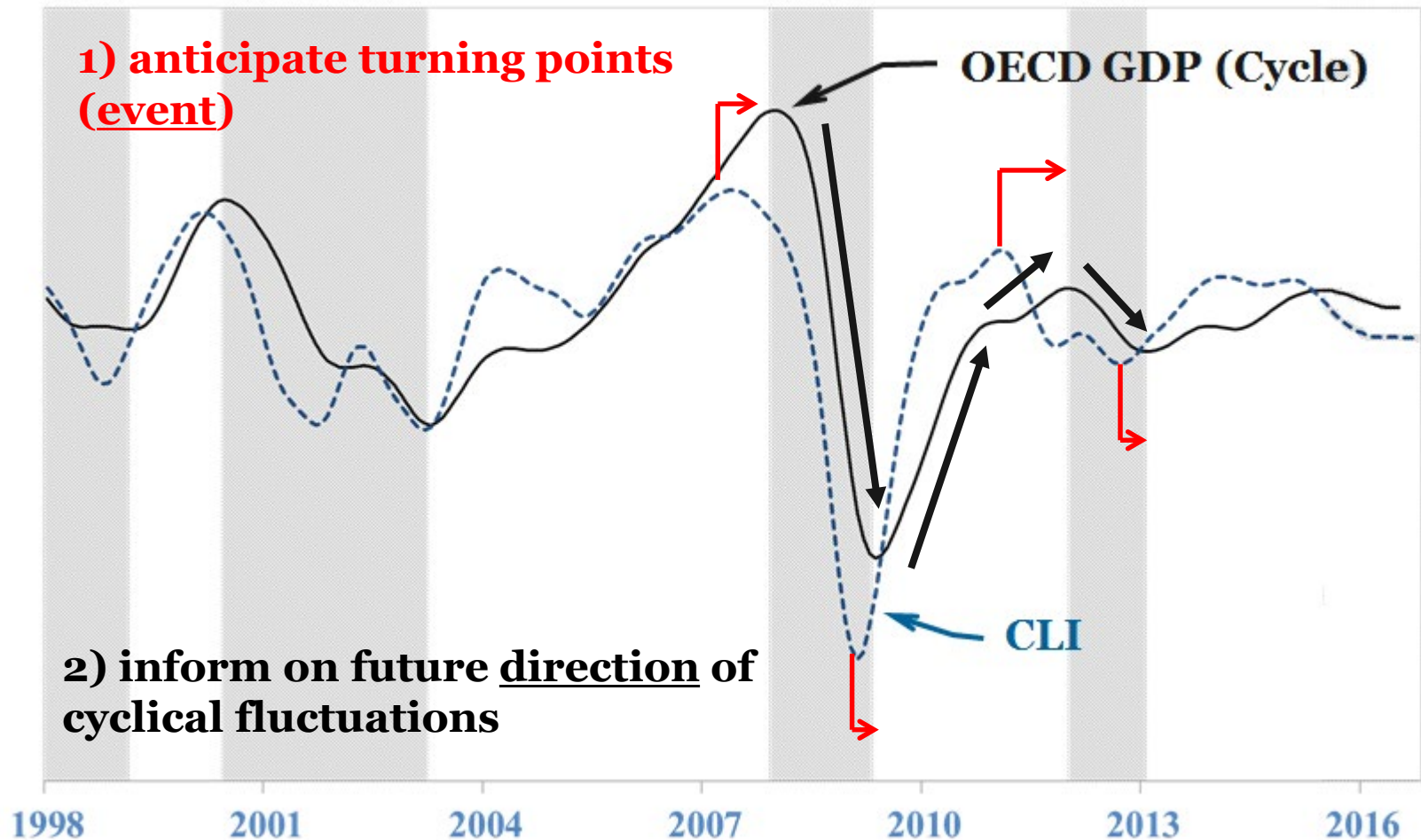
Reference series & CLI components

Reference series (economic activity)

- **Quarterly GPD** (except China: value added of industry)

    33 OECD countries

    +BRIICS + zones (OECD, euro area, G7, major 5 Asia)

Main categories of CLI components

1. **Real indicators and Prices**

2. **Financial monetary and indicators**

3. **Business Tendency and Consumer Surveys**.

4. **Trade Statistics**

5. **Employment**

Criteria for the selection of the components

- **Economic significance**

- **Practical consideration** (e.g. timeliness, length, revisions)

- **Performance**

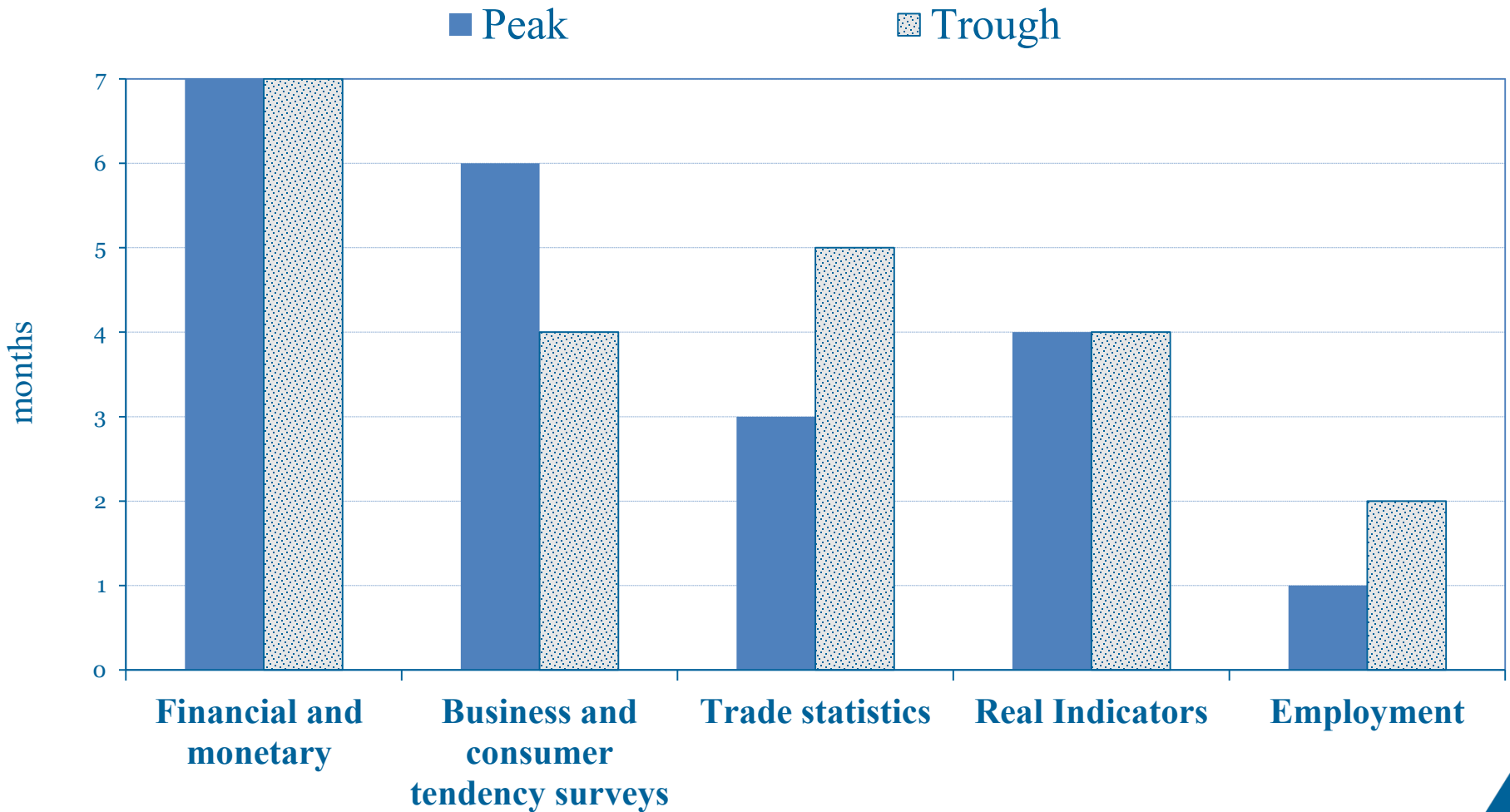 Classical NBER approach *(full sample)*
  - Lead at TP: average, median and standard deviation
  - Number missed/extra turning points
  - Cross-correlation

  Evolution of the performance (*rolling analysis*)
  - Rolling Cross-correlation
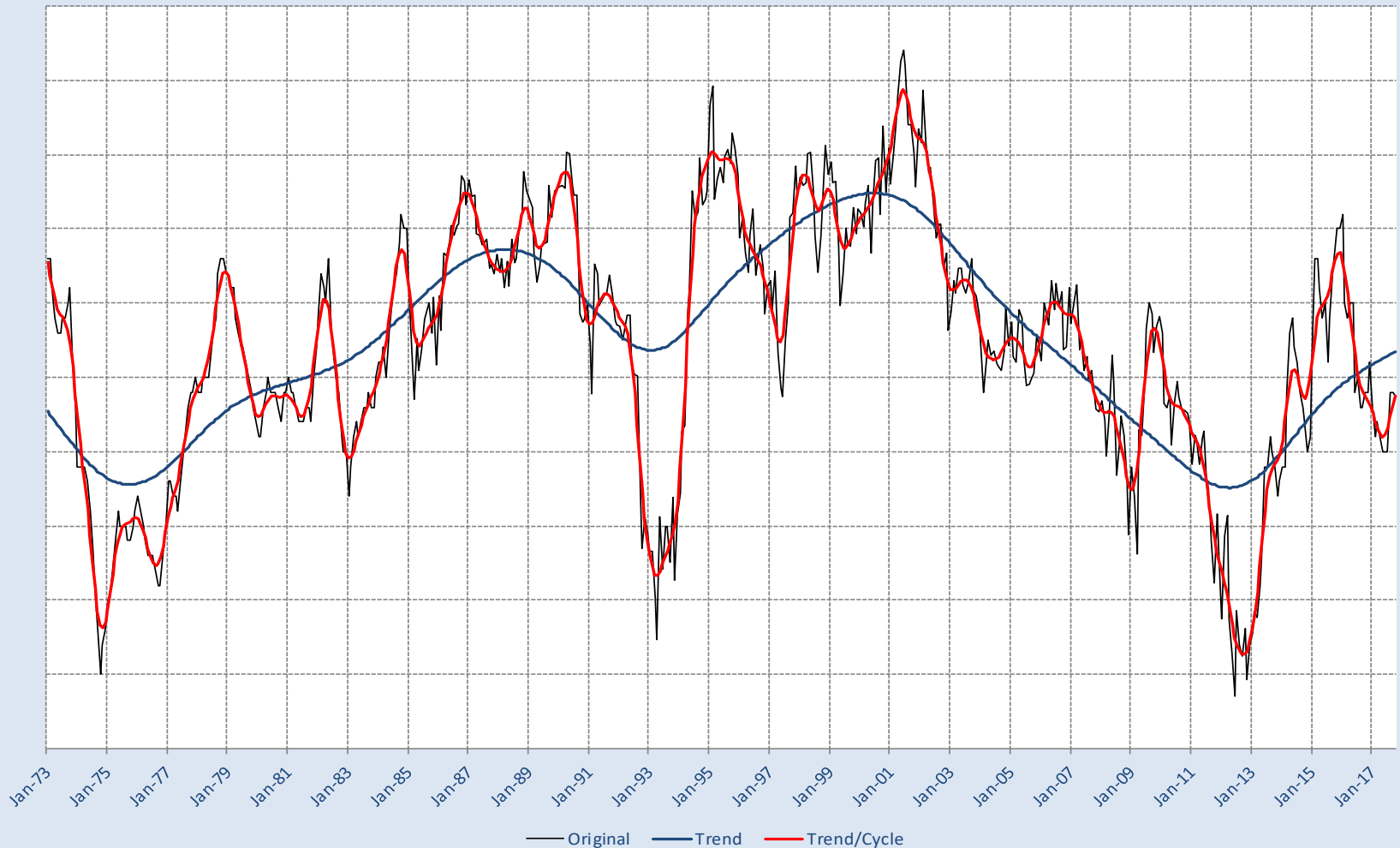 - Rolling Harding-Pagan leading Index
  - Rolling Granger causality

Indicators' average lead

Univariate double Hodrick-Prescott filter
De-trending/smoothing

Main points

- The CLI is a <u>qualitative indicator</u>

  - Optimised to detect turning points (***event*** *forecast*)

  - Provides a broad indication of the future evolution of the economic activity (***directional*** *forecast*)

  - No information on future GDP levels or growth rate (*point forecast*)
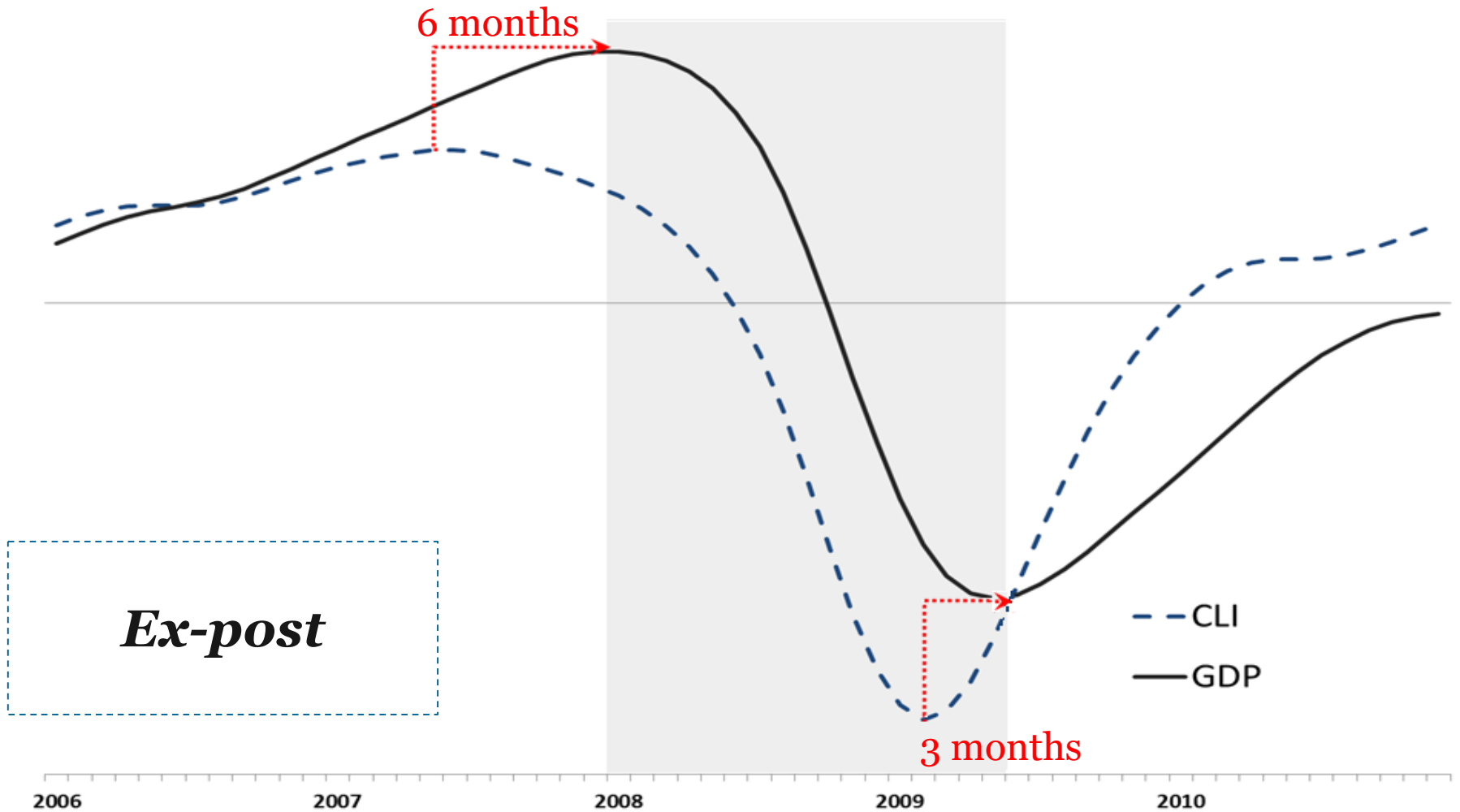
- Monthly disseminated

Performance

OECD as a whole: CLI leads GDP
at the time of the Great Recession

6 months

Ex-post

3 months

- - - CLI

——— GDP

2006   2007   2008   2009   2010

CLIs headlines

OECD News Release   October 2007

OECD CLIs signal a weakening outlook for most major global economies

OECD News Release   Novembe 2008

OECD CLIs signal a deepening slowdown in OECD area

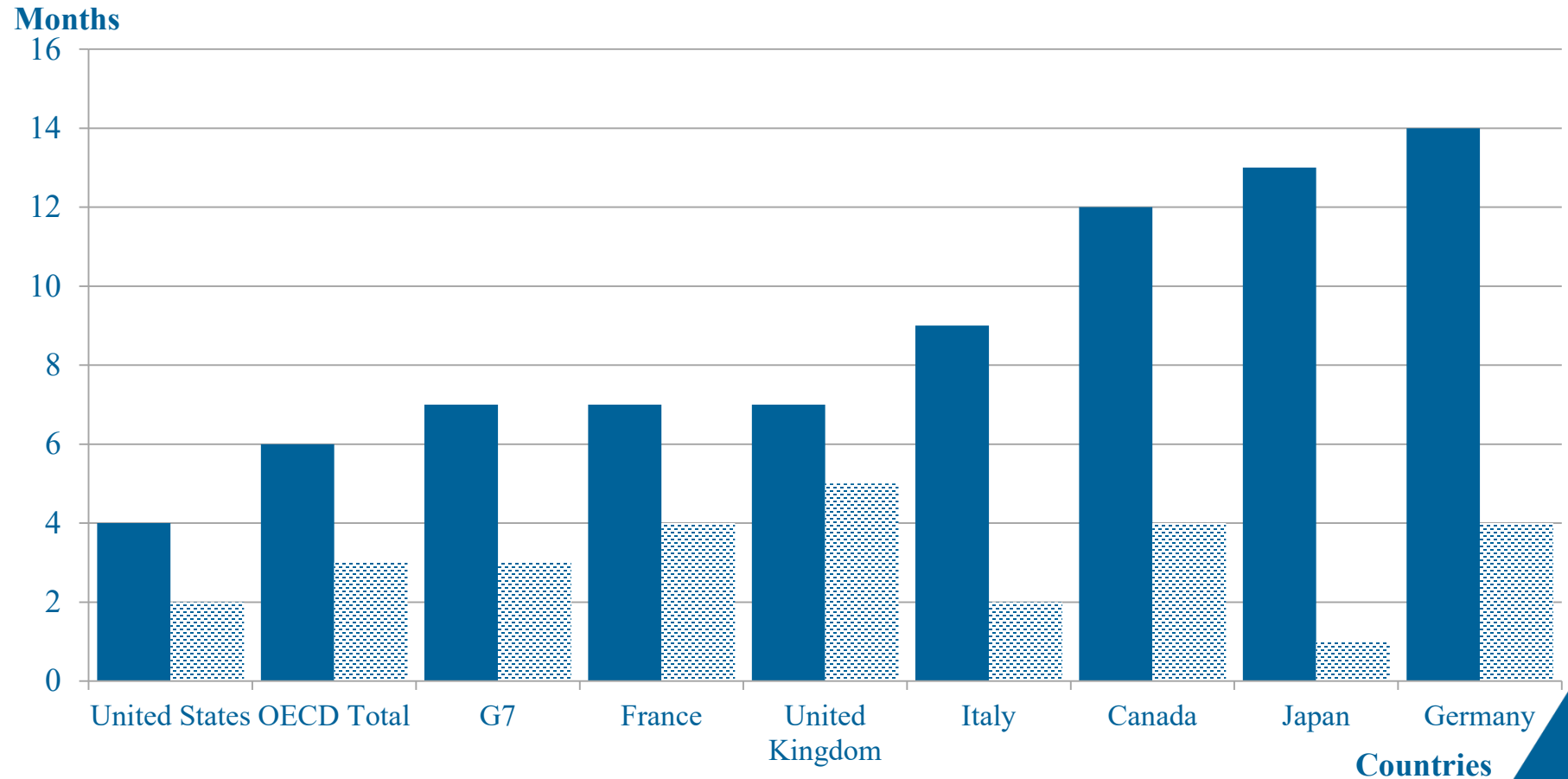**OECD News Release**   June 2009

… OECD CLIs point to a reduced pace of deterioration in most of the OECD economies …
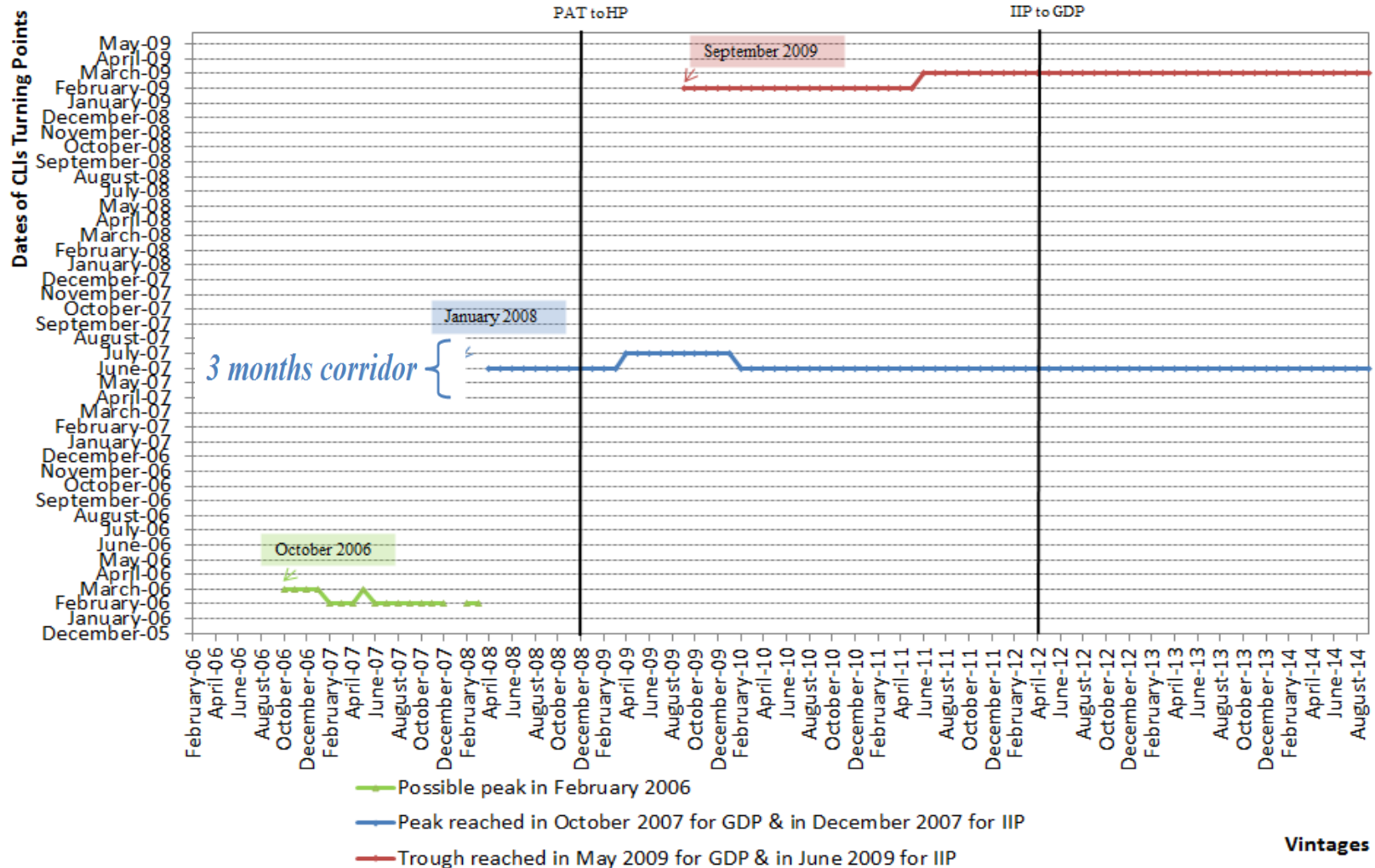
CLIs for G7 countries at the time of the Great Recession

Legend: ■ Lead (in months) with respect to the peak in GDP   ▨ Lead (in months) with respect to the trough in GDP

Y-axis: Months (0 to 16)

Country	Lead with respect to peak	Lead with respect to trough
United States	4	2
OECD Total	6	3
G7	7	3
France	7	4
United Kingdom	7	5
Italy	9	2
Canada	12	4
Japan	13	1
Germany	14	4

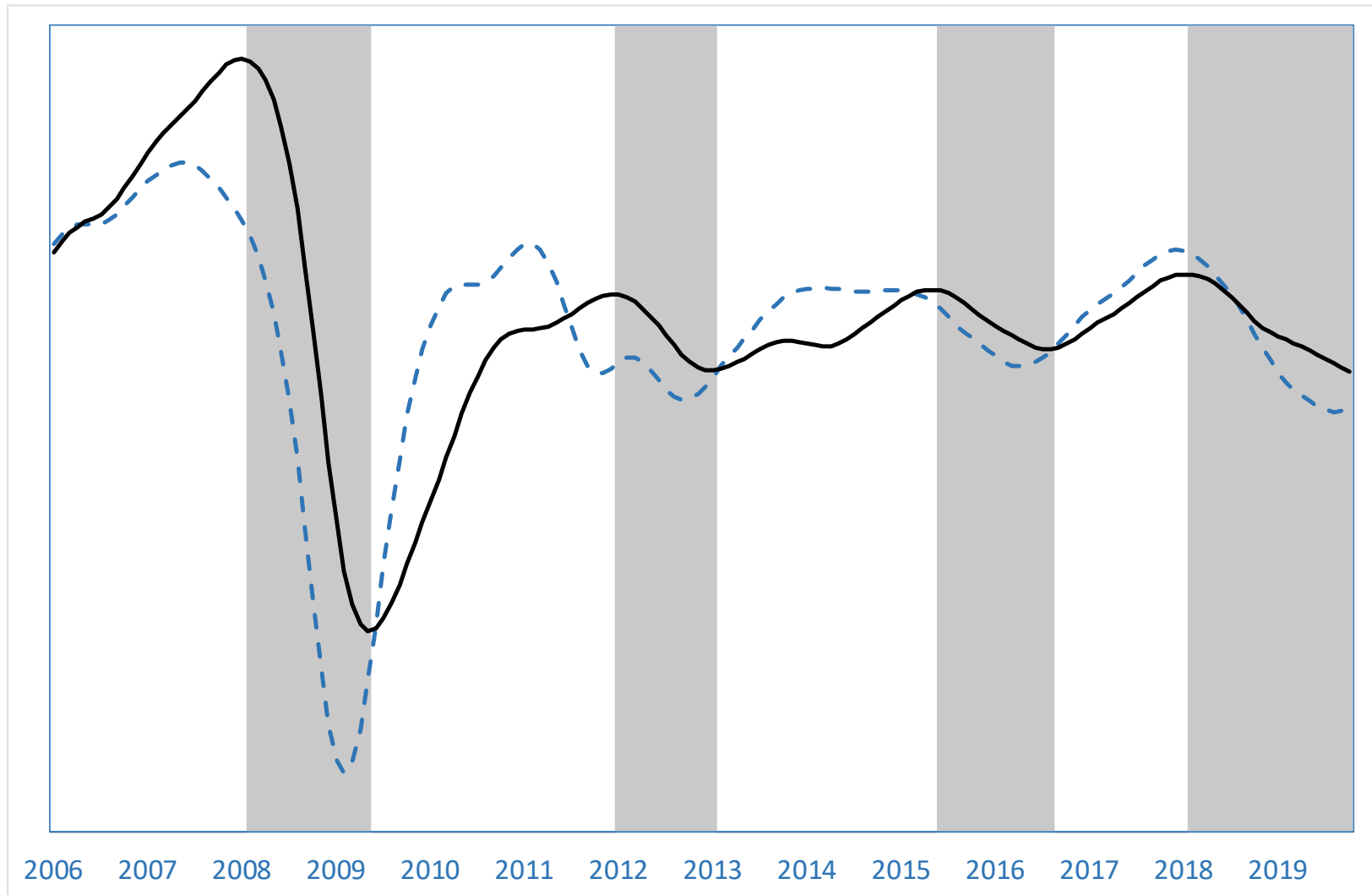X-axis: Countries

... and after the crisis
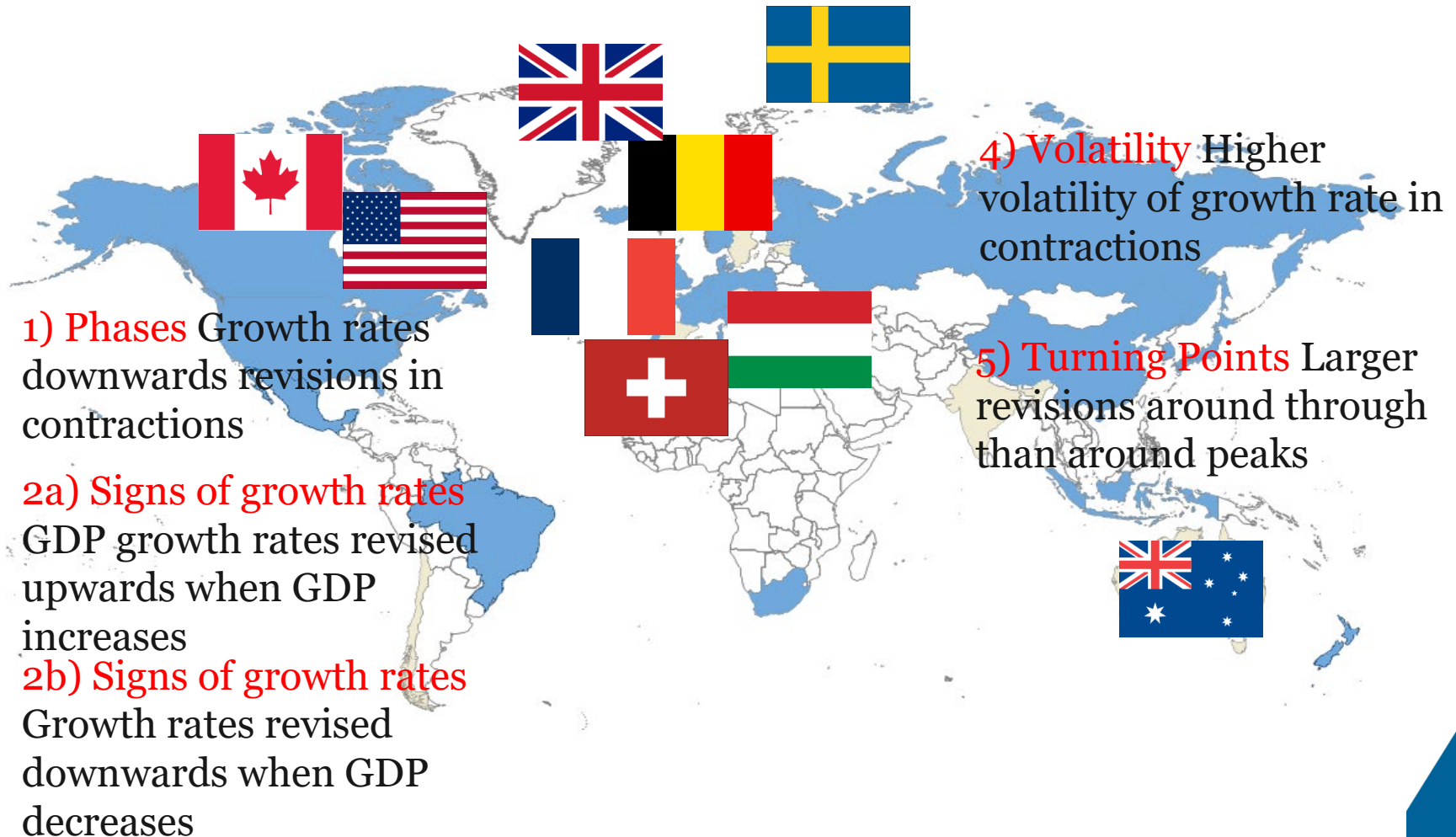## CLI for the OECD as a whole

Can information on business cycle be of use when nowcasting macroeconomic variables?

Are revisions influenced by the business cycle? Sparse evidence

1) Phases Growth rates downwards revisions in contractions

2a) Signs of growth rates GDP growth rates revised upwards when GDP increases

2b) Signs of growth rates Growth rates revised downwards when GDP decreases

4) Volatility Higher volatility of growth rate in contractions

5) Turning Points Larger revisions around through than around peaks

Caution: further investigation is required

- Studies are not fully comparable
  - Methodology, sample, definitions of the business cycle
- Studies tend to focus on headlines indicators
  - GDP rather than its components or STS
  - No investigation of the causes
    - (s.a., temporal disaggregation, forecasting)
- Possible use of CLIs to be investigated

Conclusions

Conclusions

- The CLI is a qualitative indicator (regularly disseminated)

  – event & directional forecast, no point forecast

- CLIs anticipated both the peak and the through of the Great Recession

  – Current performance is quite good

- Nowcasting GDP/IIP

  – Non-conclusive evidence of links between revisions business cycle

  – Possible use of CLIs? More investigation is required.

Thank you for your attention

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