

Economic Indicators From Alternative Sources of Data

New Data in an Open Data World
APDU, Sep 2012

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Economic Indicators

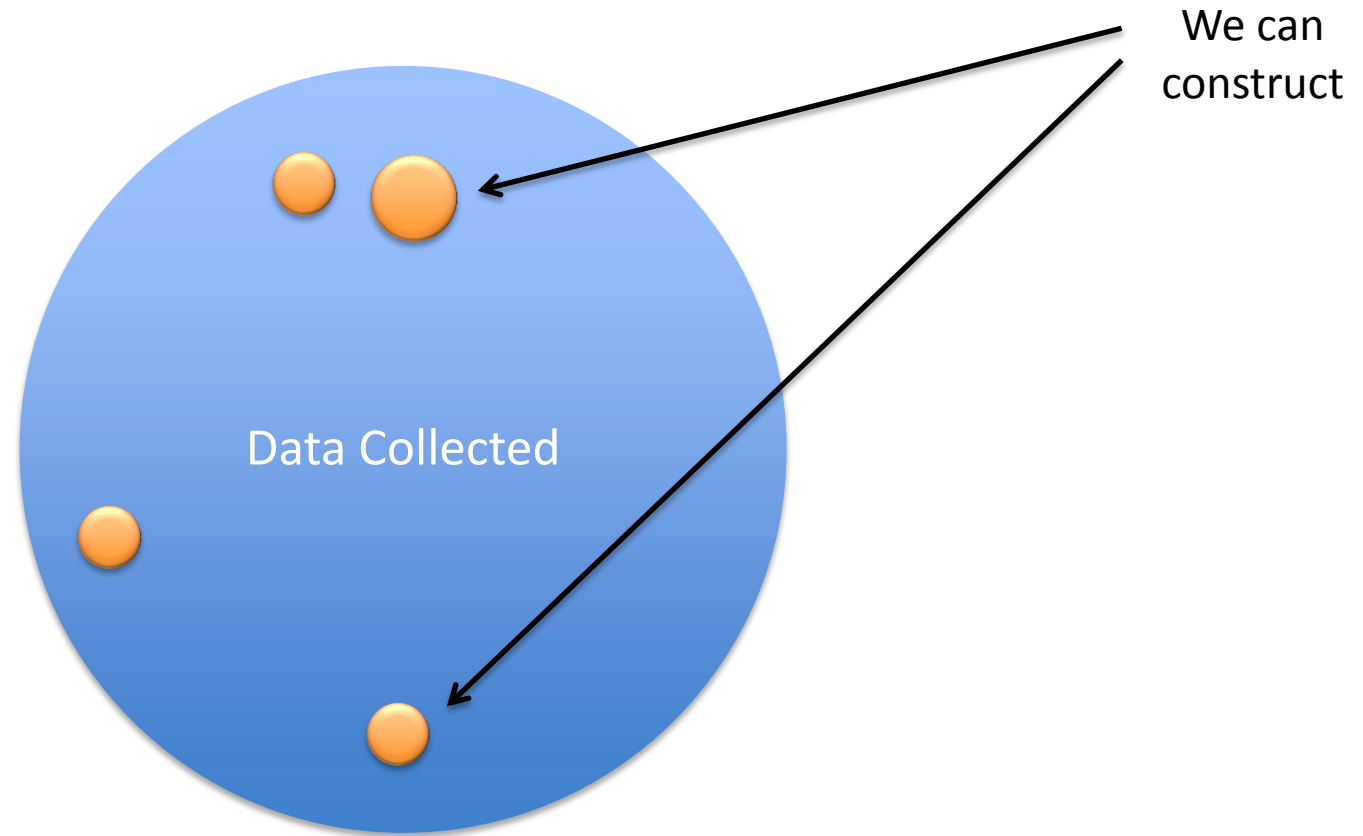
- Transactions
 - Transaction is not observed
 - Transaction is observed but not documented
 - Transaction is observed and documented
- Data
 - What is the purpose of the data collected?
 - Accounting, regulation, and industry standards
 - Economic indicators need a purpose!

Economic Indicators

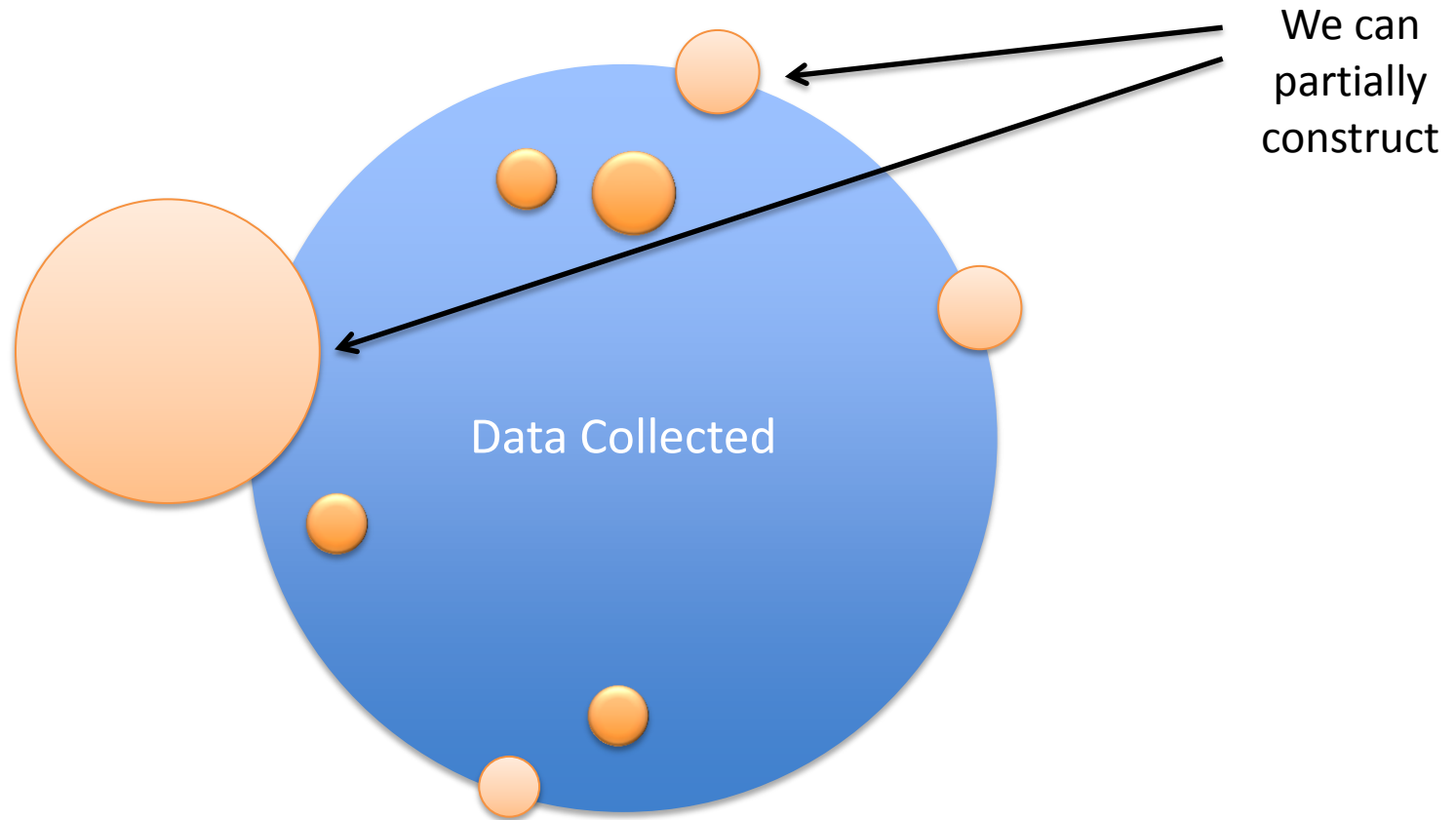


Data Collected

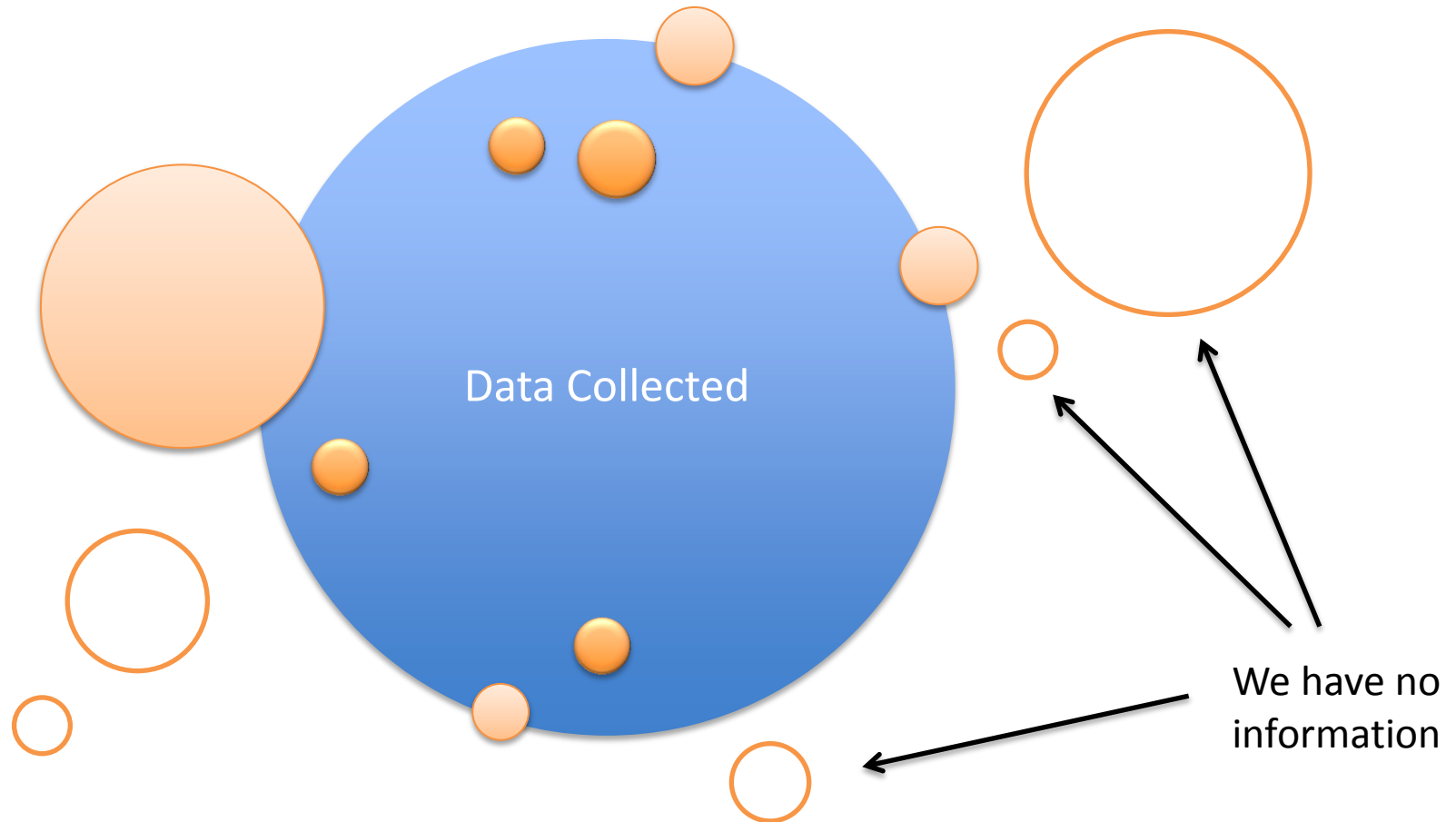
Economic Indicators



Economic Indicators



Economic Indicators



Online information Challenges

- Extremely Large and Disorganized
- Pull versus Push
- Searches versus Postings
- Web terms and conditions

- From Data to Information
 - Stores behavior
 - Product Life Cycle

Pull versus Push

- Very important distinction.
- Depending on the objective you want one or the other.

- Where to buy cheaper? PUSH
- What is the average price? PULL

What are we doing?

- Collect data/information from public sources that are extremely difficult to aggregate
 - Prices, catalogs, and ads.
 - Postings
 - Transactions
- Construct economic indexes
 - Inflation indexes
 - Economic Activity
 - Employment
 - Real Estate

Online Information and Indexes

Our Approach to Daily Inflation Statistics

1

Use scraping technology



2

Connect to thousands of online retailers every day



3

Find individual items



4

Store and process key item information in a database

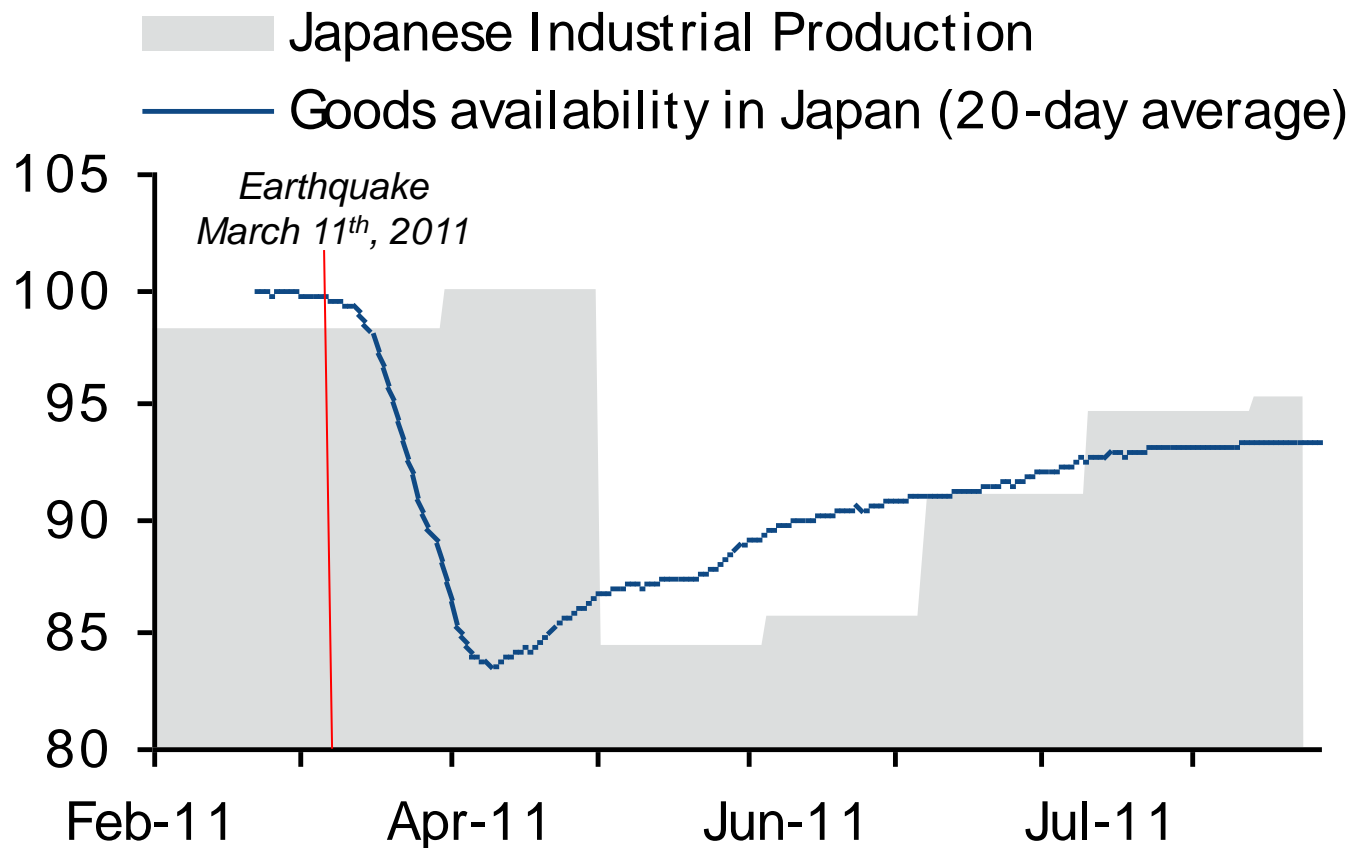
- *Date*
- *Item*
- *Price*
- *Description*

5

Develop daily inflation statistics for ~20 countries



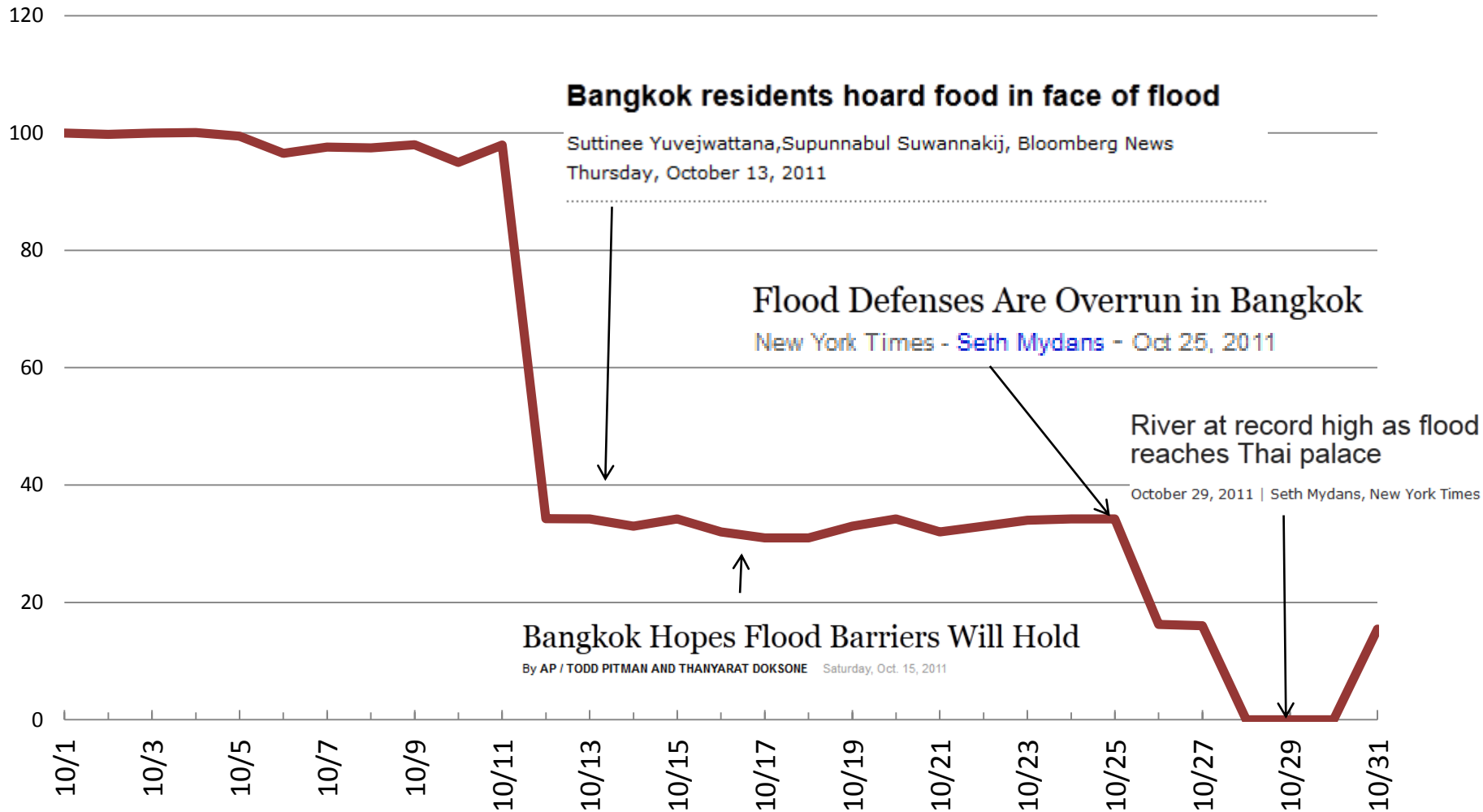
Japan: Economic Activity after earthquake



Notes: Graph from "Inflation in Focus", September 2001. Product Availability normalized to 100 on 02/01/2011

Thailand: Effects of Floods

Product Availability In Online Retailers



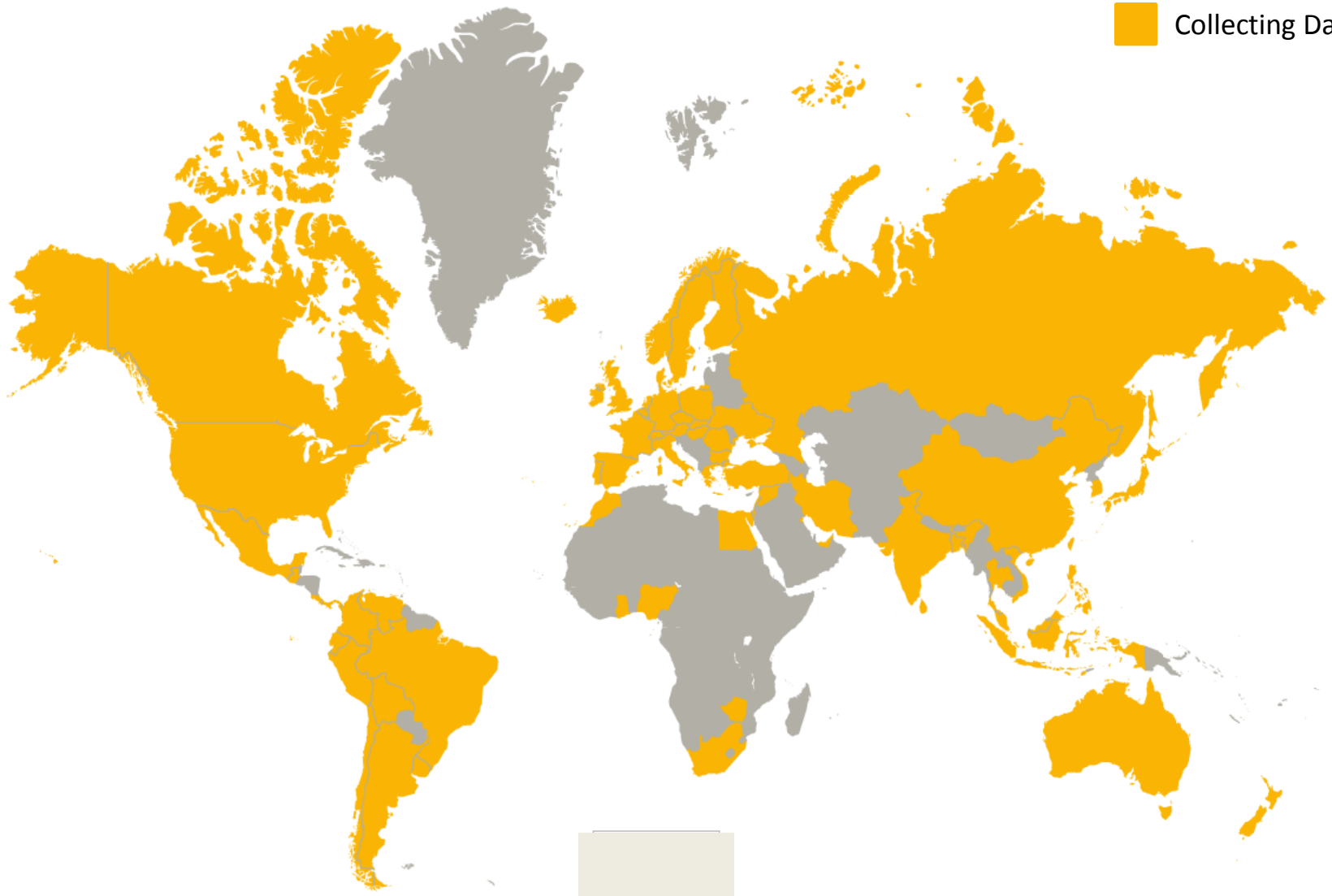
Notes: Product Availability normalized to 100 on 10/1/2011

Information in Online Prices

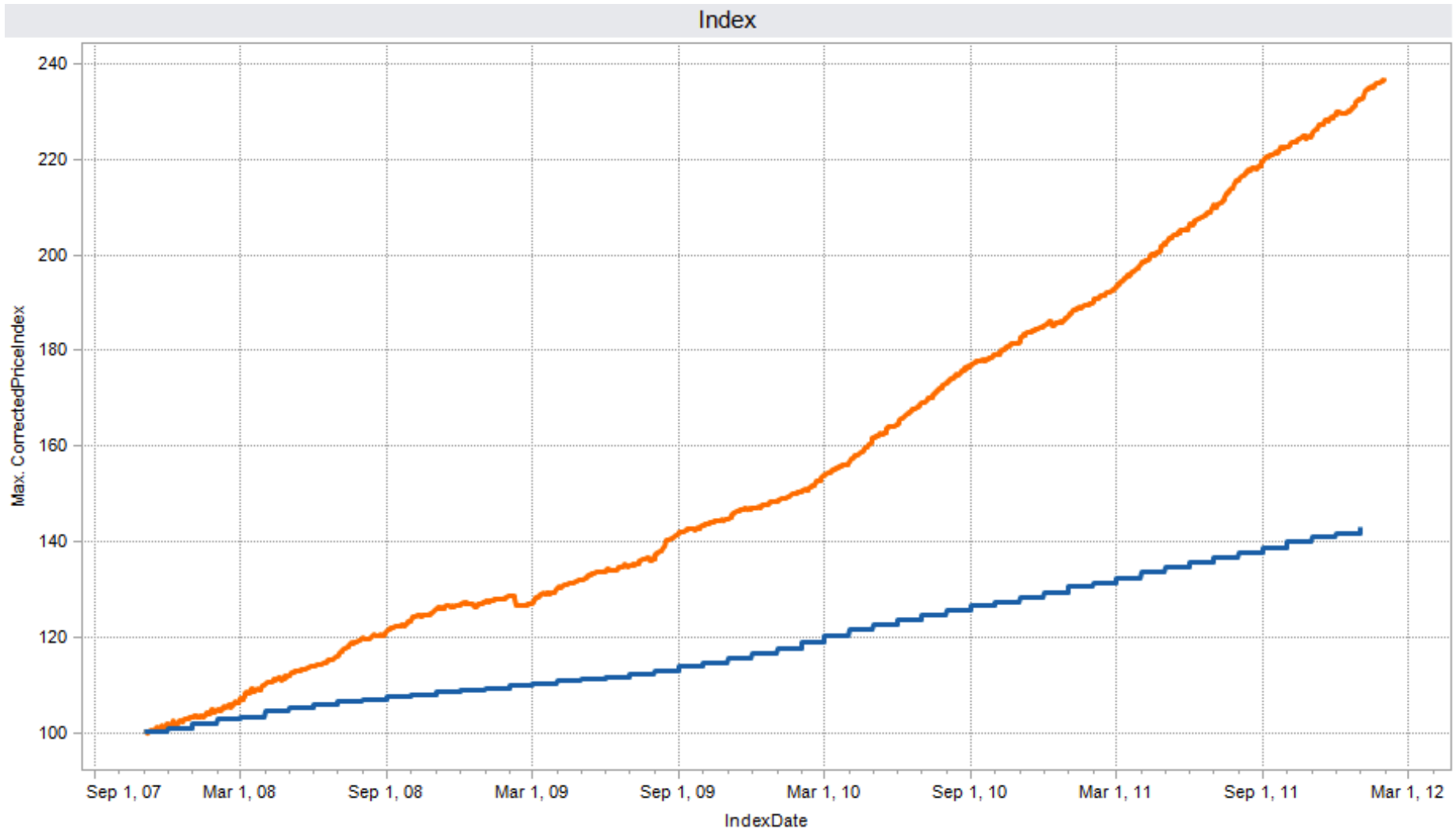
- Anticipation of Official CPI numbers
- Developed Economies
 - Measurement of Demand Conditions
- Developing Economies
 - Measurement of “supply” side shocks (as well)

Economic Indicators

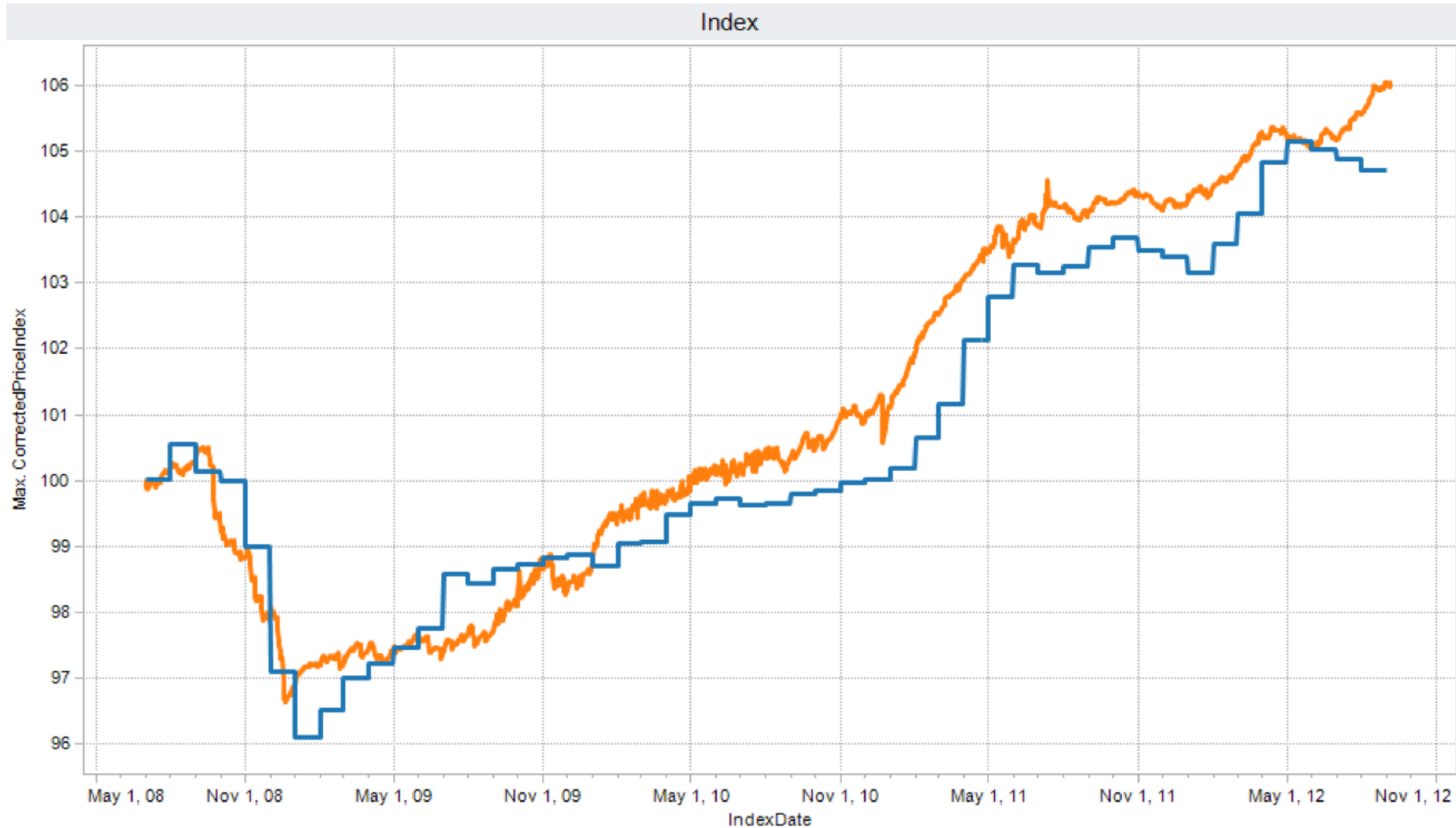
Collecting Data



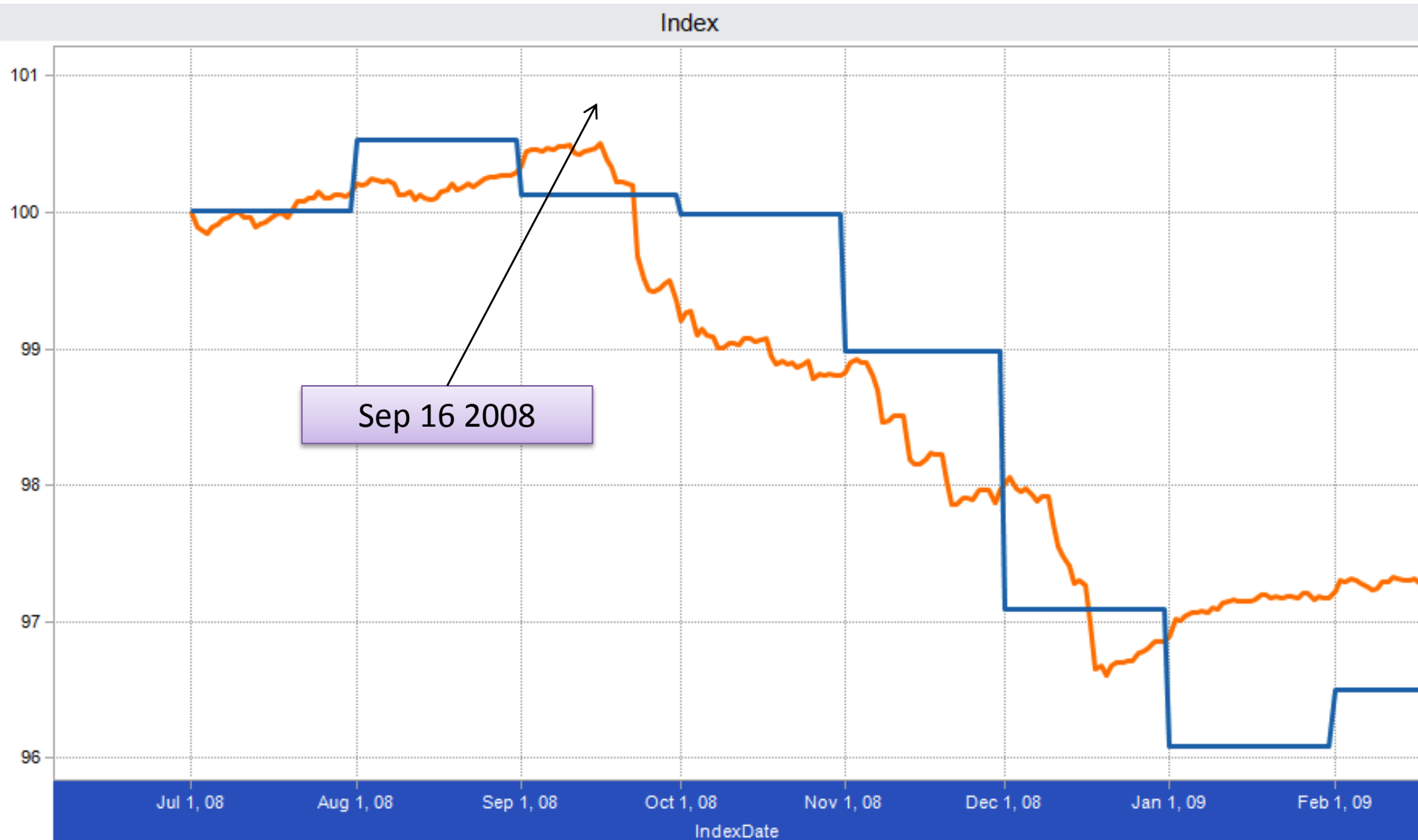
Argentina Price Index



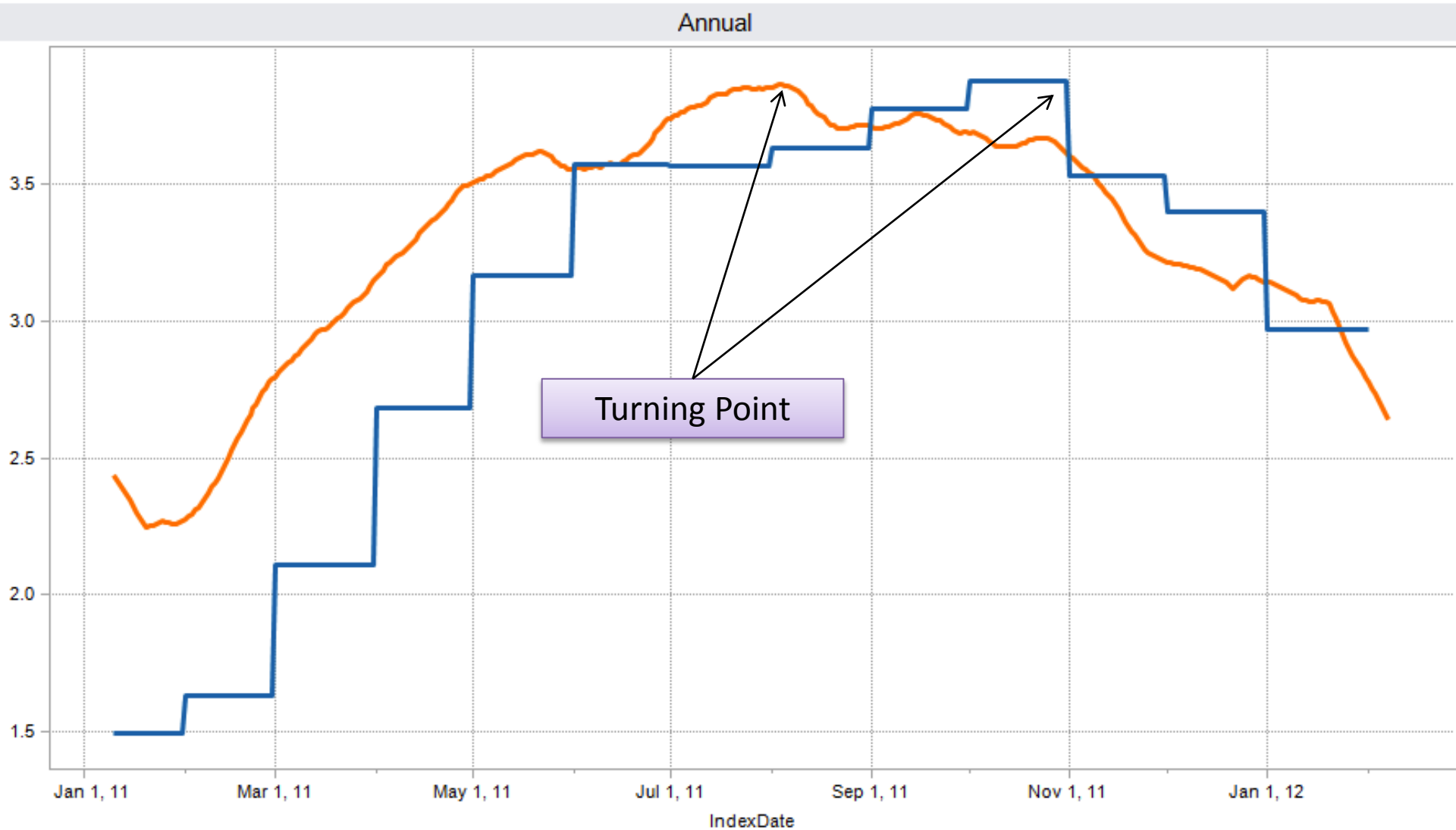
These indices help anticipate major changes in inflation trends



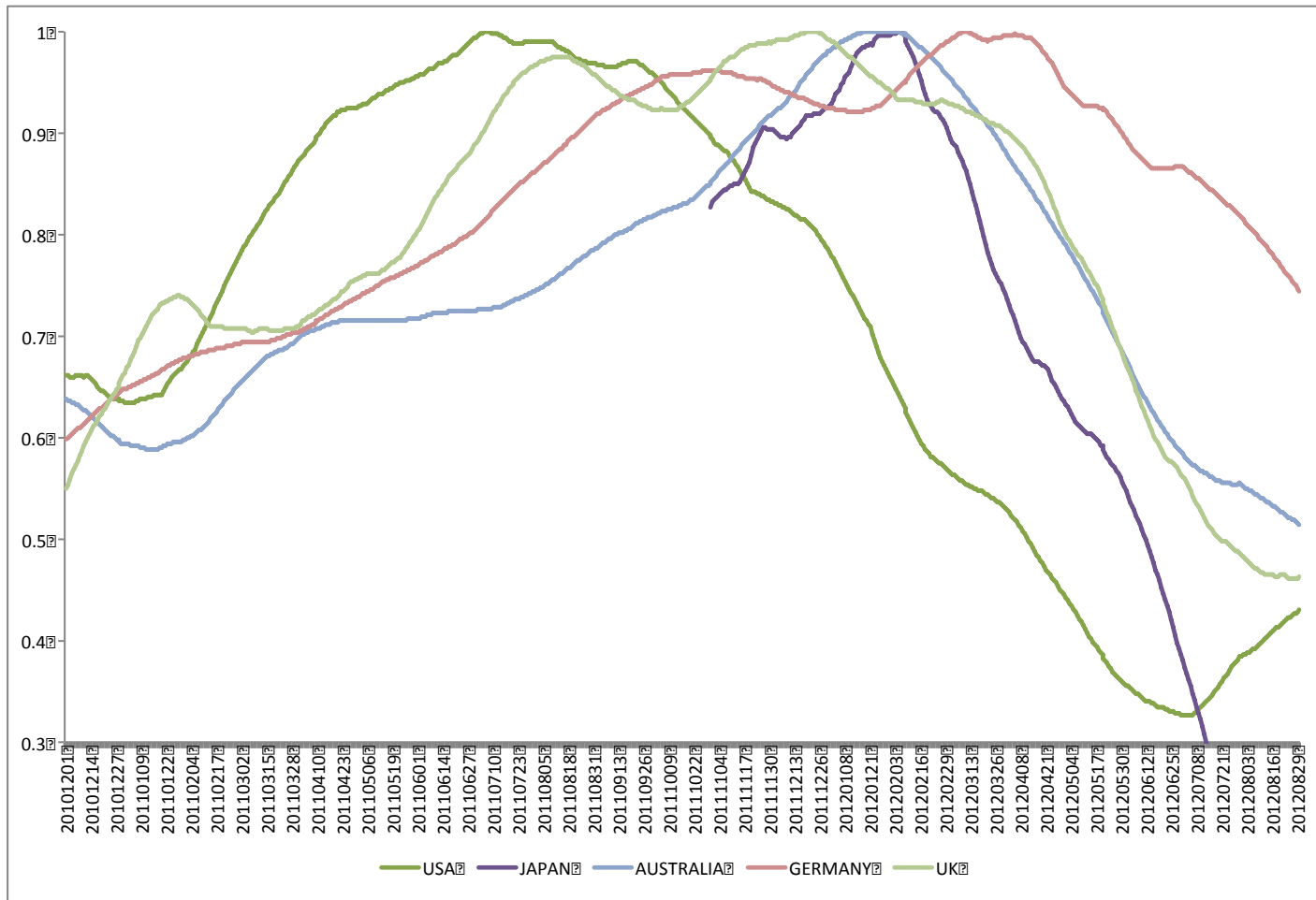
US Recession



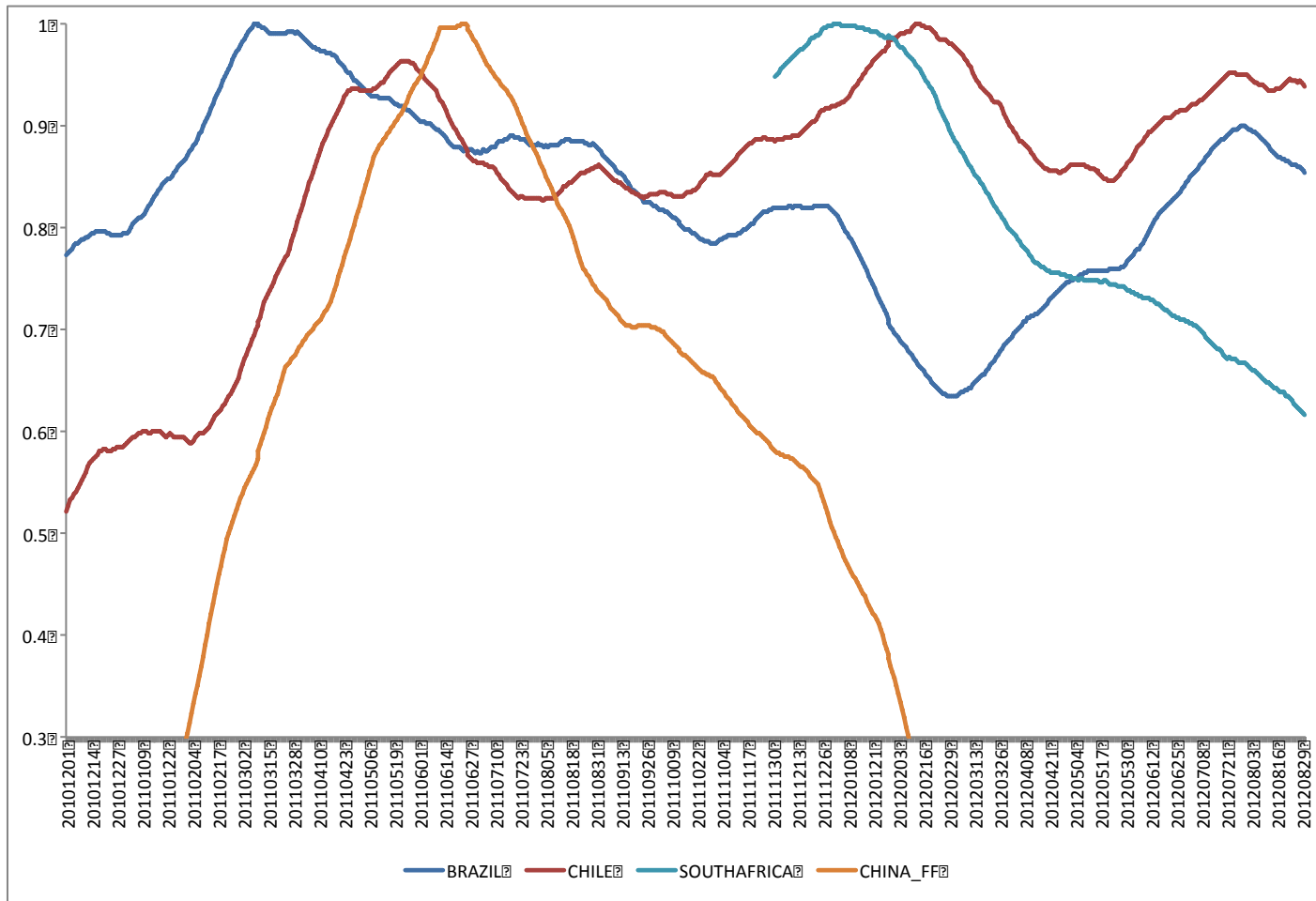
USA Start of the slow down



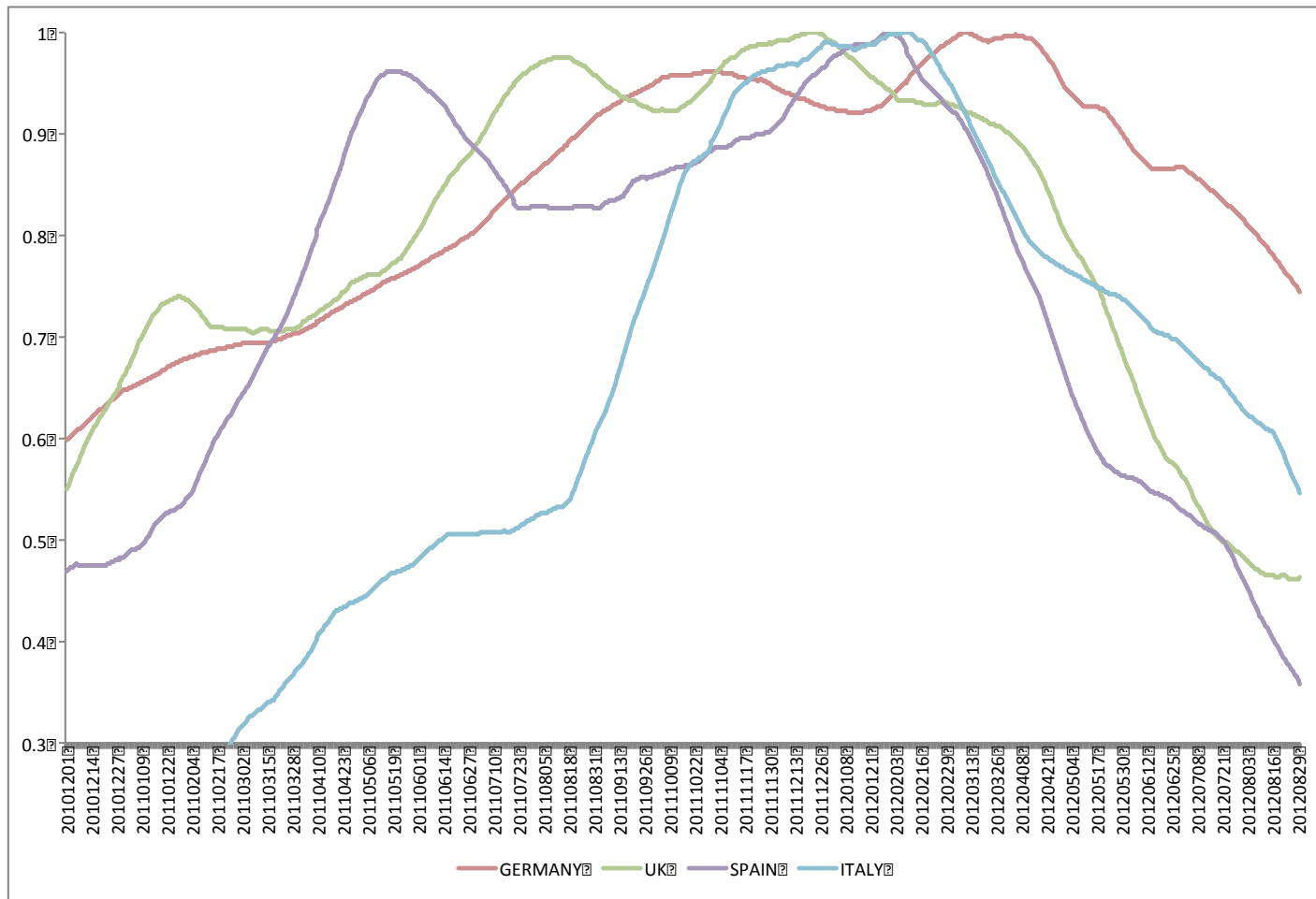
Slow Down since mid 2011



Slow Down since mid 2011



Slow Down since mid 2011



Date of peak

20110307	BRAZIL	6.3%
20110624	CHINA_FF	12.9%
20110707	USA	3.8%
20111222	UK	5.5%
20120101	SOUTHAFRICA	6.2%
20120131	SPAIN	3.8%
20120201	AUSTRALIA	4.2%
20120205	JAPAN	2.0%
20120207	ITALY	5.6%
20120213	CHILE	3.3%
20120310	GERMANY	2.8%

What is happening now with Food?

- Developed
 - Some pass through of commodity prices
 - Inflation still low
- Developing
 - Some change in inflation trend in August – especially on food!
 - Mexico just announced a surprisingly higher inflation
 - Not all countries exhibit this pattern

